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The Jockey Club CPS Limited

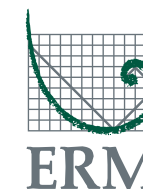
## Central Police Station Conservation and Revitalisation Project

*EIA Report:  
Volume I - Main Text*

January 2011

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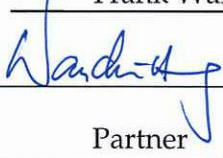
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*EIA Report: Volume I – Main Text*

13 January 2011

For and on behalf of ERM-Hong Kong, Limited
Approved by: <u>Frank Wan</u>
Signed: <u></u>
Position: <u>Partner</u>
Date: <u>13 January 2011</u>

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## 1 INTRODUCTION

### 1.1 BACKGROUND

The Chief Executive (CE)'s 2007-2008 Policy Address highlighted revitalization as the guiding principle of heritage conservation and the Project was among one of the specific proposals put forward by the CE in the same Policy Address. At the meeting of the Executive Council (ExCo) on 15 July 2008, the ExCo advised and the CE ordered that Government should enter into a partnership with the Hong Kong Jockey Club (HKJC) in the form of an agreement (or agreements) to take forward the conservation and revitalization of the Central Police Station (hereafter "the Project") based on various guiding parameters.

The Project comprises the conservation and revitalisation of three Declared Monuments designated under the *Antiquities and Monuments Ordinance* in 1995. They are:

- Central Police Station;
- Former Central Magistracy; and
- Victoria Prison Compound.

They are collectively named the Central Police Station (CPS).

ERM-Hong Kong Ltd (ERM) has been commissioned by the Jockey Club CPS Limited ("the CPS Ltd") to undertake the Environmental Impact Assessment (EIA) Study in accordance with the EIA Study Brief (No. ESB-205/2009) issued under the *Environmental Impact Assessment Ordinance* (EIAO). The cultural heritage impact assessment was prepared by the conservation architect Purcell Miller Tritton LLP.

Since the issue of the EIA Study Brief, the HKJC has informed the Director of the Environment that the name of the Project has changed from "Central Police Station Compound Conservation and Revitalisation" to "Central Police Station Conservation and Revitalisation Project" and the name of the Applicant has changed from "The Hong Kong Jockey Club Charities Trust" to "The Jockey Club CPS Limited". The scope of work described in the EIA Study Brief remains unchanged.

This EIA Report addresses the nature and extent of the potential environmental impacts associated with the construction and operation of the Project.

### 1.2 OBJECTIVE OF THE EIA STUDY

The Project is within a site of cultural heritage, and therefore is classified as a designated project under Item Q.1 in Schedule 2 of the EIAO and therefore the construction and operation of the Project will require an Environmental Permit.

The overall objectives of the EIA Study are to provide information on the nature and extent of environmental impacts arising from the construction and operation of the Project; to recommend appropriate mitigation measures to control the potential environmental impacts so that it complies with

the requirements of the *Technical Memorandum on Environmental Impact Assessment Process of Environmental Impact Assessment Ordinance* (EIAO-TM); and to confirm the environmental acceptability of the Project.

The specific objectives of the EIA Study described in the *EIA Study Brief* are listed below:

- (i) to describe the Project and associated works together with the requirements for carrying out the Project;
- (ii) to identify and describe elements of community and environment likely to be affected by the Project and/or likely to cause adverse impacts to the Project, including natural and man-made environment and the associated environmental constraints;
- (iii) to provide information on the consideration of alternatives to avoid and minimize potential environmental impacts to the site of cultural heritage and its environs; to compare the environmental benefits and dis-benefits of each of the different options; to provide reasons for selecting the preferred option(s) and to describe the part environmental factors played in the selection of preferred option(s);
- (iv) to identify and evaluate any potential cultural heritage impacts and to propose measures to mitigate these impacts;
- (v) to identify and evaluate any potential landscape and visual impacts from the Project, particularly from any new structure to be erected, including glare interference, and to propose measures to mitigate these impacts;
- (vi) to identify and evaluate noise, air and water pollution and waste generation and determine the significance of impacts on sensitive receivers and potential affected uses;
- (vii) to propose the provision of mitigation measures so as to minimize pollution, environmental disturbance and nuisance during construction and operation of the Project;
- (viii) to investigate the feasibility, practicability, effectiveness and implications of the proposed mitigation measures;
- (ix) to identify, predict and evaluate the cumulative effects and the residual environmental impacts (i.e. after practicable mitigation) expected to arise during the construction and operation phases of the Project in relation to the site of cultural heritage, the sensitive receivers and potential affected uses, taking into account nearby concurrent project(s);
- (x) to identify, assess and specify methods, measures and standards, to be included in the detailed design, construction and operation of the Project which are necessary to mitigate these environmental impacts and cumulative effects and reduce them to acceptable levels;
- (xi) to investigate the extent of the secondary environmental impacts that may arise from the proposed mitigation measures and to identify constraints associated with the mitigation measures recommended in the EIA study, as well as the provision of any necessary modification; and

- (xii) to investigate, and where found necessary and justified, design and specify environmental monitoring and audit requirements to ensure the effective implementation of the recommended environmental protection and pollution control measures.

As specified by the *EIA Study Brief*, the EIA Study will address the following key environmental issues due to the construction and operation of the Project:

- potential environmental impacts to the site of cultural heritage of the Project during its construction and operation stages;
- potential landscape and visual impacts, particularly from any new structure to be erected, including glare interference, to nearby sensitive receivers from the Project during its construction and operation stages;
- potential construction dust, water quality and noise impacts to nearby sensitive receivers as well as waste management implications from the Project; and
- potential operation water quality and other impacts to nearby sensitive receivers from the Project.

A table summarizing the key assessment assumptions, limitation of assessment methodologies and related prior agreement(s) with the Director is contained in *Annex D*.

### 1.3 ORGANISATION OF THE REPORT

The remainder of this report is organized as follows:

- *Section 2* presents a description of the need of the Project, the alternative design and construction methods and sequences of works considered and the key Project element;
- *Section 3* presents the cultural heritage impact assessment;
- *Section 4* presents the landscape and visual impact assessment;
- *Section 5* presents the noise impact assessment
- *Section 6* presents the construction air quality assessment
- *Section 7* presents the water quality impact assessment
- *Section 8* presents the waste management implications;
- *Section 9* describes the requirements for environmental monitoring and audit; and
- *Section 10* summarizes the environmental impact associated with the Project.

## 2 PROJECT DESCRIPTION

### 2.1 INTRODUCTION

In accordance with the requirements of Section 3.3 of the EIA Study Brief, this Section describes the need of the Project and the consideration of different design options. The consideration of alternatives also includes alternative construction methods and work sequences.

### 2.2 SITE DESCRIPTION

The location of the Project Site is shown in *Figure 2.1*. The Site is bounded by Hollywood Road to the north, Arbutnot Road to the east, Chancery Lane to the south and Old Bailey Street to the west.

The Site comprises three Declared Monuments designated under the *Antiquities and Monuments Ordinance* in 1995. They are:

- Central Police Station;
- Former Central Magistracy; and
- Victoria Prison Compound.

They are collectively named the Central Police Station (CPS). *Figure 2.2* shows the location of the Declared Monuments within CPS and the buildings of the Declared Monuments.

### 2.3 SITE HISTORY

The CPS first came to life in 1841 when the British Royal Navy took possession of Hong Kong Island. To maintain law and order more efficiently, the Site was selected as the centre for law and order, with the police station, magistracy and jail located close together.

In 1864, the first barrack block was built and, between 1910 and 1925, other blocks were added to accommodate the swelling numbers of policemen stationed there. However, after World War II, a new Police Headquarters was constructed in Wan Chai and, as a result, the reliance on the CPS began to decline. The Central Magistracy was closed in 1979 and, though Victoria Prison remained open till 2005 and the compound still functioned as Police Headquarters on a regional and district level for another 25 years, these too were closed or relocated in 2006. The CPS has since been closed to the public.

### 2.4 NEED FOR THE PROJECT

The Chief Executive (CE)'s 2007-2008 Policy Address highlighted revitalisation as the guiding principle of heritage conservation and the Project was among one of the specific proposals put forward by the CE in the same Policy Address. At the meeting of the Executive Council (ExCo) on 15 July 2008, the ExCo advised and the CE ordered that Government should enter into a partnership with the HKJC in the form of an agreement (or agreements) to take forward the conservation and revitalisation of the CPS

project based on various guiding parameters. The Project is now being undertaken in partnership with the Development Bureau of the HKSAR Government. The HKJC has taken on board the decision at the ExCo meeting and further investigated the design and implementation of the Project.

#### 2.4.1 Contemporary Arts Needs in Hong Kong

Throughout the design and planning of the Project, the need for providing a contemporary art hub at the CPS was identified.

Contemporary art plays an increasingly recognised and important role in the development of Hong Kong as a vibrant 'World City'. Compared to the performing arts, however, contemporary visual art has received less support and attention from funding bodies and therefore from the general public as well. Considering the importance of contemporary art as a strategic cultural initiative and future plans for investment in large-scale contemporary arts venues, such as the future West Kowloon Cultural District, there is an urgent need for increased support for contemporary art. This support includes expanded art education, increased funding for art activities, and additional studio and exhibition space for artists and art organizations. The need for increased space includes the necessity to establish an independent, high-quality, professionally operated, medium-size contemporary art space.

#### *Justification for an Art Hub at CPS*

With its myriad small galleries and antique shops, the Hollywood Road area is already Hong Kong's premier visual arts quarter. The CPS development is a logical consolidation and acknowledgement of this long established use as well as an inspired preservation and revitalisation of a crucial part of the Central district's built heritage that is in keeping with the changed circumstances and needs of today.

The CPS presents a unique opportunity to transform a moribund, decaying site for vital cultural, educational and leisure use by providing a wide range of medium sized, high quality visual arts/performance related spaces that fill the gap between the pre-existing small galleries on Hollywood Road and the planned West Kowloon Cultural District. It is intended that the CPS will create a dynamic cultural synergy in the centre of the city by housing (at cost) successful existing Hong Kong arts organisations, by providing facilities and displays for learning about Hong Kong's heritage and visual culture, as well as contemporary art more generally, and by initiating and presenting exhibitions and other events that are of local, regional and international importance.

The revitalised CPS would not only provide an internationally visible platform for artists, creators and arts organisations from Hong Kong and the Pearl River Delta but would also enable some of the very best art and exhibitions that are currently being made world-wide to be widely seen in Hong Kong. The lack of such a facility in the centre of the city has been an impediment to the development, practice and broader appreciation of visual culture and related cultural industries in both Hong Kong and the region. In terms of the cultural facilities available in other world class cities, the absence of such a medium sized high quality space has been a serious and long-standing weakness in Hong Kong's cultural infrastructure as well as in the portfolio of public spaces, heritage interpretation areas, arts and other attractions the city is able to offer.

The CPS offers a wide variety of options for arts related uses which include the presentation of exhibitions of art, design, photography, film, fashion, video, music and performance, the making available of study areas

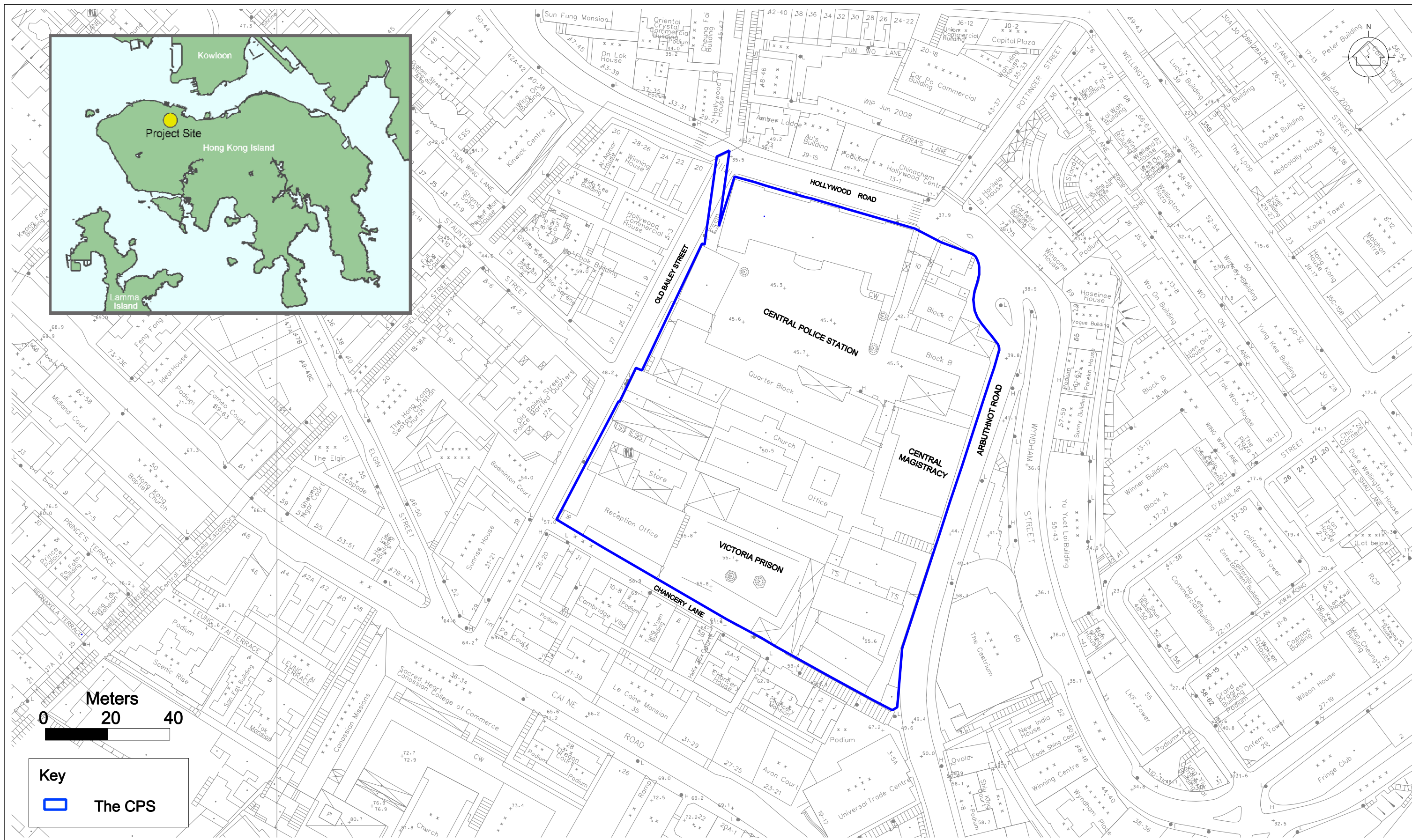
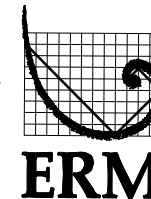


Figure 2.1

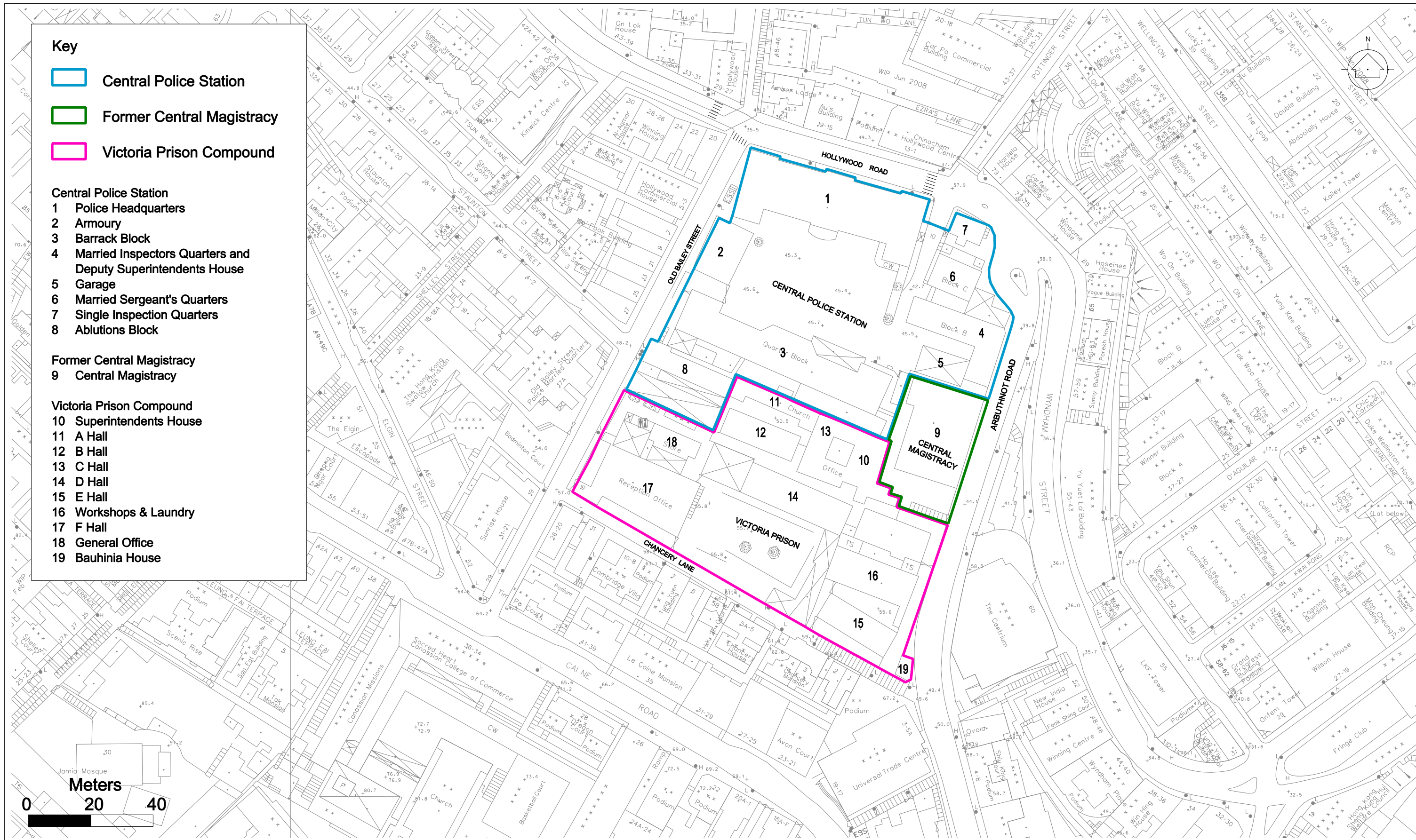
Project Location

Environmental  
Resources  
Management



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and reading rooms on modern and contemporary art, design etc, flexible teaching, conference, performance and event spaces and accommodation for leading existing Hong Kong-based arts organisations.

This unique opportunity for creating synergy on the CPS by bringing together new and established Hong Kong arts organisations which can occupy, with adaptive reuses and minimal changes, pre-existing office, library and potential exhibition spaces in the heritage buildings only makes sense if these facilities are supplemented by purpose built international quality exhibition and education/performance spaces that will provide a broad attraction for both visitors and members of the Hong Kong public and will ensure that the highest quality of exhibitions and events can be presented.

However, due to the architectural limitations of most of the buildings on the Site, to accommodate a medium-sized art space, the possibility of a new building or creative, even significant, renovation of an existing building that respects the integrity of the Site have been explored.

#### 2.4.2 Vision of the Project

The vision of the Project embraces three major principles:

##### 1. Heritage:

- to set the Hong Kong benchmark for excellence in the restoration, revitalisation and adaptive reuse of historic structures; and
- to be the focal attraction in the Government's Conserving Central project.

##### 2. Visual Arts:

- to establish an international reputation for organising art exhibitions;
- to attract a high quality cluster of arts organisations;
- to create a programme and arts facility that will appeal to a wide cross section of the people of Hong Kong;
- to complement the visual arts with a lively and varied performing arts schedule;
- to provide an international platform for Hong Kong and Pearl River Delta creative talent;
- to attract international talent to Hong Kong through exhibitions and artists' residency programmes; and
- to provide a practical training base for Hong Kong and China based arts professionals.

##### 3. History:

- to provide a unique and informative interpretative experience;

- to relay the history and stories of the Site to students, local visitors and tourists; and
- to explain the role of law and order in the context of Hong Kong's development.

The Project aims to transform a cluster of Declared Monuments into a thriving cultural and historic centre which is financially supported by suitably compatible commercial activities.

#### 2.4.3 Scenario Without the Project

Without the Project, the CPS will remain closed to the public and the opportunity to provide a cultural and leisure space in the heart of Central will be forgone. Moreover, without immediate remedial work and long term maintenance, the condition of its historical buildings will deteriorate.

### 2.5 CONSIDERATION OF ALTERNATIVE DESIGN OPTIONS

#### 2.5.1 Overall Design

To bring the CPS to life and to achieve the vision set out in *Section 2.4.1* for revitalising the CPS as an arts hub in the centre of the city, a new medium-sized exhibition space that can house international high value loans and similarly scaled multi-purpose space, complemented by supporting educational and commercial facilities will have to be provided. With reference to established international examples, the exhibition space should have a c.6m clearance from floor to ceiling with a minimum floor space of c.1,500 m<sup>2</sup>. The clearance of c.6m means that significantly sized paintings and three dimensional objects can be displayed well in the space without a sense of constriction or confinement. Ever since the 1950s, the international trend has been for artists to create increasingly large paintings. This has been born out by the recent wave of Chinese Cynical Realists such as Fang Lijun or Yue Minjun. Examples include: Hayward Gallery, London (historical building with an exhibition space of 1,500 m<sup>2</sup>), La Caixa, Madrid (historical building with an exhibition space of 1,720 m<sup>2</sup>) and Museum del Kultur, Basel (historical building with an exhibition space of 2,340 m<sup>2</sup>). To accommodate a variety of talks, conferences, performances and concerts, a medium sized multi-purpose space seating up to 200 people will be required. Examples include: Parrish art Museum, Southampton (new building with a multi-purpose space of 250 seats); La Caixa, Madrid (historical building with a multi-purpose space of 250 seats). Some appropriate commercial outlets will also be necessary in the CPS not only to provide funding for the conservation of the historical buildings, but also for the operation of the public facilities as well as for part of the costs of the visual and other arts programmes.

A number of different design options have been identified and examined. The option of only utilising the existing buildings for adaptive use was initially examined. There are a number of larger spaces within the existing buildings (the Old Gymnasium in the Police Headquarters; the two courtrooms in the Magistracy; some of the upper floor dormitory rooms in the Barrack Block) and these were considered as potential spaces for the multi-purpose space and for the art galleries. They were, however, all ruled out as either not being large enough for the proposed uses, requiring substantial intervention or for other difficulties described below.

The Old Gymnasium is double-height with an area of approximately 200m<sup>2</sup>. This will be opened up and used as an intimate dance/performance space. It is, however, too small to serve as the medium-sized multi-purpose space and there are considerable difficulties in providing suitable access for deliveries to this space. Similarly, the two courtrooms are also too small for this purpose. The large courtroom could only seat 80/100 people for a lecture or a recital – half the size needed. The second courtroom is smaller and will also be used for historical interpretation of the Site and teaching.

The larger open spaces in the Barrack Block were considered for a variety of uses, particularly as to whether this could fulfil the function of the art gallery. Requirements for security, fully controllable lighting with blackout, stable environmental conditions and code requirements for floor loadings and escape ruled this out. In addition, the floor area and height of the space were simply too restricted for a public arts amenity on the professional scale envisaged. If this block were to be used for this purpose, the interiors would have to be completely stripped out in order to provide the necessary security, climate and display conditions. While this approach would not require the construction of any new buildings, and has been adopted by art museum developments in a number of heritage sites around the world, it was rejected because it could only be achieved at the expense of demolishing all the interiors and retaining only the facades, thereby deviating from the prime aim of retaining, conserving and adapting the interiors of the heritage buildings for suitable reuse.

The CPS Ltd is mindful that there is a need to strike a balance to achieving both the “heritage” and “visual arts” aims in its vision of the Project and felt that limited new building was the best way of providing accommodation for international quality exhibitions and conferences/ events/ performance/education space as well as for the necessary machinery and plant to service the whole site. The modestly dimensioned new buildings will enrich the CPS immeasurably by providing added flexibility, function and cultural use to the site while preserving the existing heritage buildings and making them accessible to the public. This is in line with many other examples of heritage buildings worldwide that have been converted for modern/contemporary visual arts use but that need new buildings added to them to adequately fulfil their role <sup>(1)</sup>.

(1) Examples: Tate Modern Phase II [Herzog de Meuron architects, in progress]; Moderna Museet, Stockholm, 1998 [purpose built addition to the 19th century naval; gymnasium and barrack buildings (now the adjacent Architecture Museum) by Raphael Moneo for the Swedish National Museum of Modern Art, situated in a nature conservation area in the middle of the city]; Museum of Modern Art New York [1930s classical modernist core surrounded in 2006, in the last extension of the museum, by two wings and a remodelled sculpture garden designed by Yoshio Taniguchi]; Museum of Contemporary Art Sydney Phase II in progress [new build to improve internal communications, facilities and visitor flow.]. Sentral Istanbul [early 20th Century German-built power station in which central plant and switchgear is retained with new build of Museum quality gallery space, c. 2,000 sq m, and Bilgi University sub-campus on surrounding land. Art Gallery of New South Wales [undistinguished, but heritage, late 19th century museum space with multiple additions in various architectural styles to the present].

The only open spaces within the CPS that would allow the construction of new buildings are the lower courtyard (the Parade Ground) between the Police Headquarters and the Barrack Blocks, and the upper courtyard (the Prison Yard) within the Victoria Prison Compound (see *Figure 2.2*). However, both the courtyards are significant spaces in terms of cultural heritage and it was decided not to compromise these spaces by building within them.

A Conservation Management Plan <sup>(2)</sup> (CMP) for the CPS was prepared in 2008, which concluded that there were only two potential sites where new buildings could be inserted. These sites were on the west side of the Prison Yard where the General Office is located (consisting of some modern single storey office buildings, some small brick single storey stores and the modern single story asbestos roofed extension on the west end of ‘D’ Hall) and on the east side of the Prison Yard (consisting of the Laundry Yard, the single storey work shed and adjacent lavatories) (see *Figure 2.2*). Both these sites have very limited heritage value. The structure of the Laundry Yard has been substantially altered in the past and is not viable for modern loadings and none of the proposed structures to be removed constitute a significant loss in heritage terms. The benefit to the rest of the whole Site by replacing them with purpose built new facilities far outweighs the benefits of any possible adaptive re-use.

Therefore, the conclusion was reached that in order to provide museum-quality exhibition space and a flexible venue for performances/concerts/lectures and events at the CPS, and minimising intervention in the existing historic buildings by housing the cooling plant at a new centralised location, as well as to make it both culturally and financially viable, new buildings would be needed, potentially taking the footprint of the General Office and the Laundry Yard.

## 2.5.2 Design of the New Building

### Scale of the New Building

The height of the new buildings conforms to the imposed height limit of 80 mPD for any new buildings on the upper platform area in the *Draft Sai Ying Pun and Sheung Wan Outline Zoning Plan (OZP) S/H3/24*. The new buildings are intended to house facilities such as gallery, multi-purpose space, as well as food and beverage (F&B) outlets. Two design schemes have been identified:

**Scheme A** – Under this scheme the F Hall is used for gallery space, gallery support and the new building to the north of F Hall contains gallery space and the support facilities, including part of the central plant rooms, (such as cooling towers and chiller plant, which provide chilled water to the whole Site (see *Figure 2.3*). This scheme envisaged the retention but modification to the Laundry Yard steel structure with the yard used as a multi-purpose space and the upper open deck at the level of the Prison Yard used as a sculpture exhibition area.

**Scheme B** – Under this scheme, the F Hall is used for gallery space, gallery support and some portions would be retained for interpretation of its former role as a reception area of the Prison. The new building to the north of F Hall (the Old-Bailey Wing) provides the main gallery spaces and a new art themed restaurant (see *Figure 2.4*). The old Laundry Yard is used as a site for another new building (the Arbuthnot Wing) to be

(2) Purcell Miller Tritton (2008) The Old Central Police Station and the Victoria Prison Conservation Management Plan.

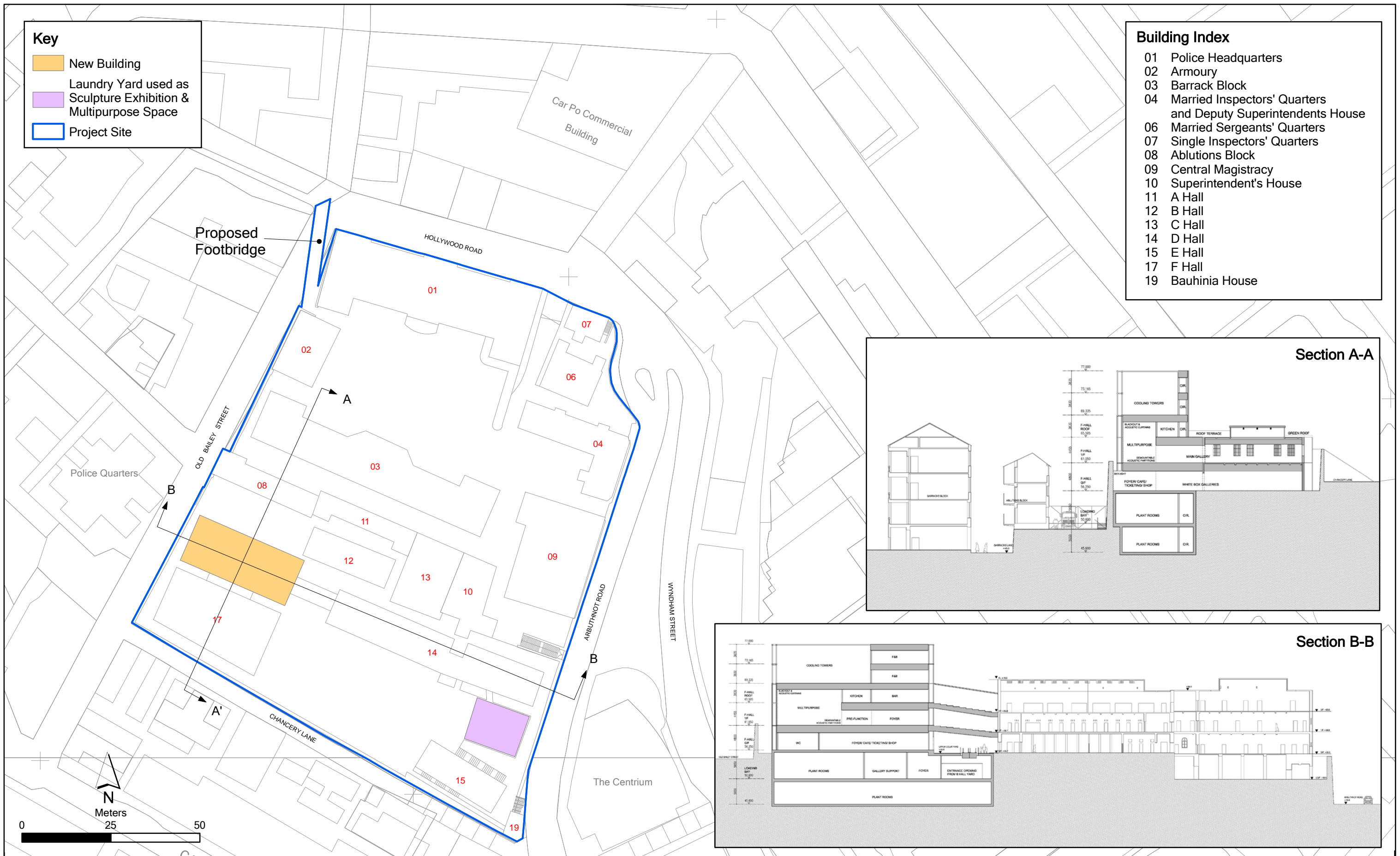


Figure 2.3

Key Features of Scheme A

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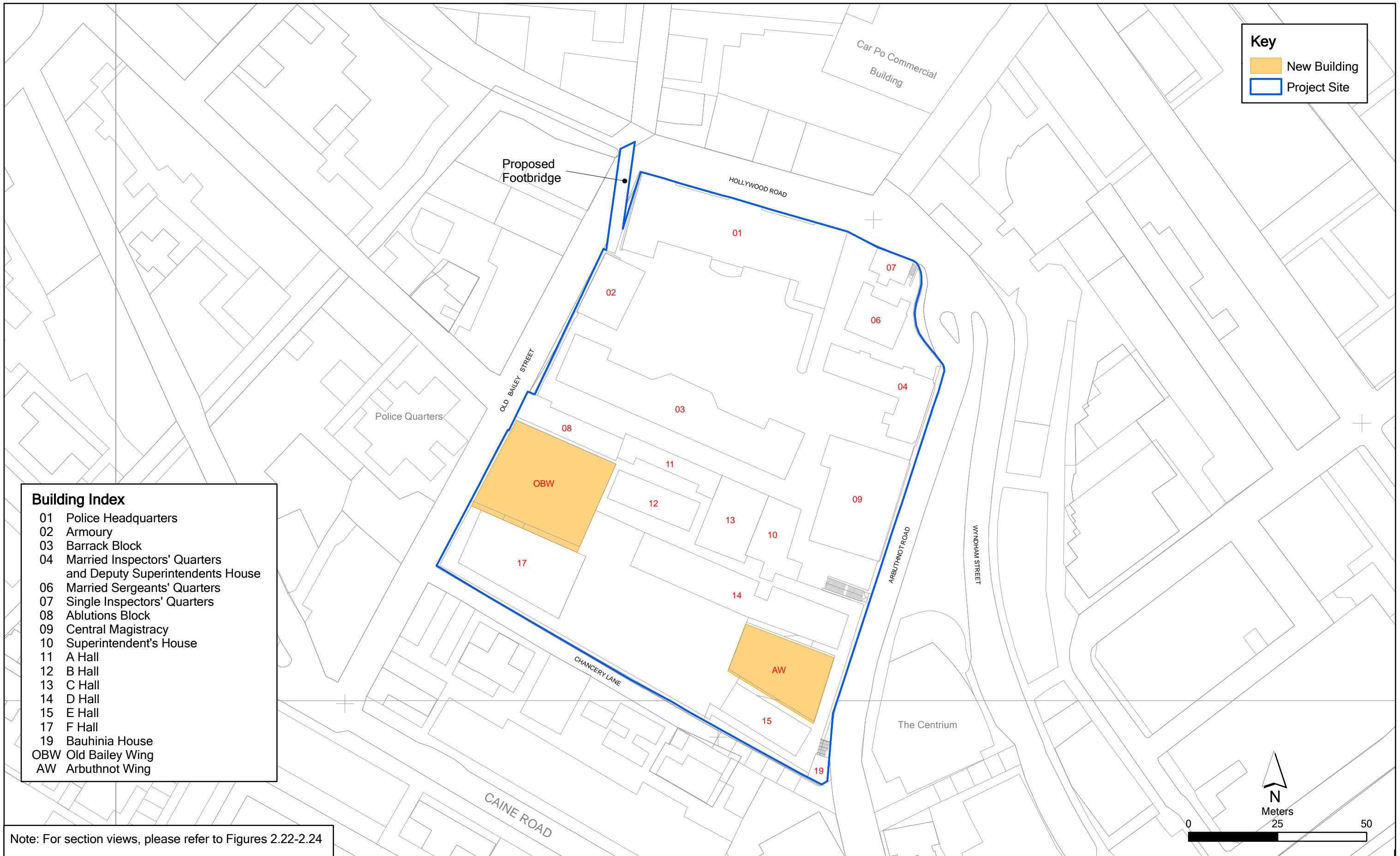
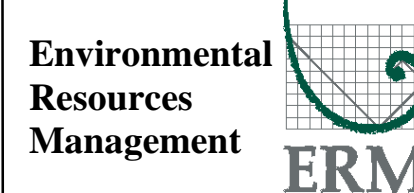


Figure 2.4

Key Features of Scheme B

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used as a new multipurpose space/hall, which acts as a proper introduction/linkage to the arts educational/ arts related facilities in D/E Halls. The top floor of Arbuthnot Wing also accommodates the major space for central plant rooms to serve the overall Site.

These schemes were evaluated taking into account their ability to satisfy the demand for the cultural and mechanical plant spaces needed, the level of intervention at the existing historic buildings, integration with other buildings at the upper courtyard, engineering constraints and the potential environmental impacts. Although the scale and building mass of Scheme A is smaller than that of Scheme B, Scheme A is shortcoming in the following aspects:

- The new gallery space to be provided, by modifying but respecting the existing configuration of F Hall was very limited in size and clear headroom to function as a top international gallery space. From precedent cases, the minimum clear headroom in the major gallery space should be about 6m; whereas the F Hall will only be able to provide 4.25m under the downstand beams. Technically, such space would demand a high standard of security; environmental control; structural; and logistics. All these criteria imply that if F Hall is to be taken alone to function as a top international gallery, drastic alterations that would compromise its heritage value would be needed.
- The Laundry Yard would again require extensive architectural and structural alterations and strengthening to make it a minimally workable multi-purpose space; that little would be left of the original structure. Even with major alterations it would be a compromise in terms of height and column-free areas.
- The space on top of the new building in this scheme was found to be insufficient for the necessary cooling towers and chillers to provide the chilled water for the whole Site, noting that there is no sensible location for cooling towers, which require a clear headroom of 7m, in or on any of the existing buildings and no desirable place in either the Prison Yard or the Police Parade Ground.

On the other hand, Scheme B offers the following merits:

- The new building along Old Bailey Street (the Old Bailey Wing) will have a bulk size substantially effective to meet multiple demands that is vital to the revitalisation and long term sustainability of the Site. This would be achieved with an increased massing above the historical revetment walls by a cantilever structure over the delivery yard. This allows for the insertion of a new purpose-built top-lit gallery of an architectural and technical standard that could attract and accept any international exhibition. This scheme allows for controlled natural daylighting of the gallery space which gives maximum flexibility in use as well as being efficient in energy terms.
- The Arbuthnot Wing provides an excellent multi-purpose space.
- The Arbuthnot Wing allows a complete deck of plant space for cooling towers and chillers. This provides an adequate facility for the whole Site and puts the cooling towers in the optimal position to minimise nuisance to neighbouring existing buildings.
- The Arbuthnot Wing will work well with the D and E Halls. The new stair and lift core in this new wing will be shared with E Hall. By providing this necessary alternative escape route in the new

structure, the degree of intervention to the E Hall could be minimised. The scheme also integrates with D Hall allowing the spaces in the upper floors of D Hall to work in conjunction with the new multi-purpose space. Under this scheme, both D and E Halls would benefit from its integration and close complementary relationship with the uses in Arbuthnot Wing.

With regard to the cultural heritage impact of the new buildings on the existing buildings, the design of the new buildings under both schemes will set back from the existing buildings to ensure least impact to the existing buildings and no building of heritage significance will be demolished. The insufficient space for accommodating all cooling towers and chillers under Scheme A means that some of these plants have to be provided at the existing buildings, meaning more intervention at the existing buildings and thus more significant impact on cultural heritage point of view. Although Scheme B will require the demolition of the Laundry Yard, as discussed above, all associated alteration for upgrading the Laundry Yard structures (as in Scheme A) to current safety and services standard would also already be a compromise against its heritage value. Moreover, the structures to be removed are not considered as a significant loss in heritage terms. Hence, in terms of minimising potential heritage impact, both schemes perform similarly.

In terms of potential environmental impacts associated with both schemes, both schemes require the same extent of demolition to existing structure but Scheme A being in smaller scale will cause less nuisance in terms of dust and noise impact during superstructure work construction. Having said that, both dust and noise impact can be mitigated to compliance level for both schemes. As Scheme A involves the construction of one building only, the visual impact would be less than Scheme B. From the landscape point of view, the footprint identified for the construction of new buildings is currently occupied by buildings and structures and will not encroached into the Prison Yard. Hence, there will be no net loss of open space under both schemes. Depending on the design of the buildings, both schemes could perform equally in terms of providing more open space extending from the Prison Yard.

In terms of potential glare interference, the extent of impact will depend on the mass of the building as well as the façade material to be chosen. While Scheme B will involve the erection of one more building, the design intention of using non-reflective material for the façade will help to minimise potential glare interference (see discussion below).

Hence, having considered and balanced the demand for the cultural space needed, the level of intervention within the existing historic buildings, integration with other buildings at the upper courtyard, engineering constraints and the potential environmental impacts while achieving the vision of the Project, the implementation of Scheme B is more preferable. The design philosophy of Scheme B (including the discussion of refining the massing, configuration and façade treatment to minimise heritage and visual impact) is further elaborated in *Section 2.6*.

#### *Architectural Style and Massing of the New Building*

The architectural style to be adopted could broadly take either a historical or a modern approach. The use of a modern approach over a historical approach has been recommended for the following two key considerations:

- Firstly, it is a well-established concept in conservation, that new interventions, whether they are internal alterations in an historical building, or whole new buildings on an historical site, should be “of their time”.

This is because all generations of people have expressed their culture through their buildings (among other things), and to copy a style of the past would be to devalue it, and indeed the culture of today. By constructing new buildings that speak of today, another chapter in the biography of the site is added. This then can be viewed by later generations and understood within the context of the site and its history.

- Secondly, it follows from *Section 2.5.1*, that if the existing buildings cannot accommodate the new uses, any new building cannot be made to look like an historical one within the current footprint. The forms of historical building would require more ground area than is available at the CPS Site unless one was to build on the Parade Ground or Prison Yard.

The massing and style of the new buildings was dictated by the zoning envelope and height restriction set for potential new buildings under the OZP and the internal space (floor area and ceiling height) needed for the proposed uses. The design takes the approach to set back from the maximum building envelope so as to minimise disturbance to the adjacent historic buildings and leave them intact. All facades of the new buildings have allowed approximately 1.5m setback from all the adjacent historic buildings. Hence, in terms of the massing of the building, it is compatible in terms of both visual and cultural heritage perspective. The design philosophy of the new buildings is further elaborated in *Section 2.6*.

#### *Façade Treatment of the New Building*

Different façade treatments have been considered for the new building. These include a fully glazed façade, a corten metal panel façade, a polished aluminium metal panel façade and a cast aluminium unitized façade. A fully glazed façade was considered but rejected because of the apparent lack of association with the immediate building material fabric as well as the potential to pose glare impact. A corten metal panel façade was also considered but rejected because of concerns weather-related premature aging. A polished aluminium metal panel façade was also considered but rejected over the potential for glare impact. A cast aluminium unitized façade system has been considered suitable for the new building. Such proposal was the results from a study of existing site material textures and scales, such as porous masonry, traditional brick and granite wall constructions (see *Figure 2.5*). The versatility of aluminium in terms of texture, malleability, light weight, lifecycle and general aesthetic makes it the preferred material for the distinctive integration of new construction within the historical heritage compound. The composition of the new building façades will register their respective interior layout and general façade technical requirements. Further elaboration on compatibility of the recommended façade design is contained in *Section 2.6*.

#### **2.5.3 Adaptive Reuse in the Existing Buildings**

It is the aim of the Project to bring all the buildings on the Site back into beneficial use. The general experience is that, with very few exceptions, buildings need to have a use to ensure their long term future. This inevitably means that alterations must be made to make the buildings safe and to comply with current building codes.

In the CPS, all the buildings will need to be fitted with some modern services and with improved fire compartmentation and fire escape provisions. Many will need floors strengthening to accommodate

greater floor loads than they were designed for. With these overall concerns in mind, the attempt has been made to find uses that can be accommodated in the existing buildings with the minimum of disturbance and alteration. Generally the uses attempt to work with the existing room sizes and circulation patterns. Where walls or other features are proposed for removal, these are later additions of lesser significance.

The range of uses chosen (cafes, shops, restaurants, education and interpretation spaces) strives to balance the need for the Site to be financially sustainable with the need to find spaces to interpret the historic site to visitors. There are interpretation spaces in every significant building and two of the blocks of prison cells are being left untouched.

Apart from providing space for cultural and commercial facilities, space is also needed to house the E&M equipment to support the functioning of all facilities and activities on Site. In particular two options have been considered for locating the chillers and cooling towers:

- Option 1: to locate the chillers and cooling towers in individual building;
- Option 2: to locate the chillers and cooling towers in centralised locations in the new building adjacent to the upper courtyard.

Comparing the two options, Option 1 will require more modification works within the existing buildings to ensure that the building structure is capable to handle the extra loading of the plant. Option 2 has the merits in terms of minimising the modification works at many of the existing buildings. In terms of efficiency, the use of centralised plant for cooling will be more energy efficient and environmentally friendly, although the cost of distributing the energy within the Site from a central location will be higher. Hence, Option 2 offers a more sustainable solution and has incorporated into the design of the Project.

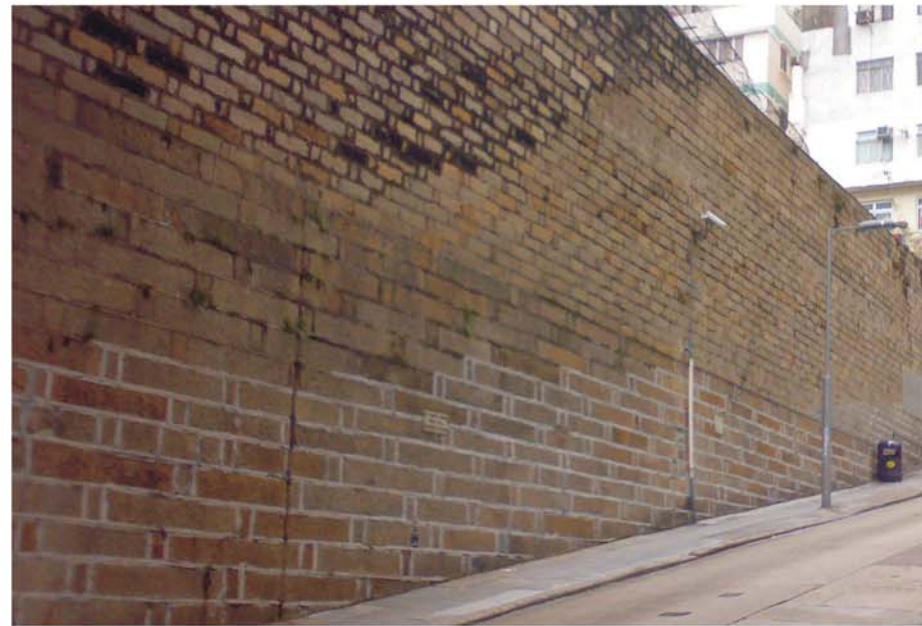
In terms of cooling technology, the use of forced air cooled chillers was considered for the Site but was rejected on the grounds that wet cooling towers are much more efficient and therefore more environmentally sustainable.

#### **2.5.4 Site Circulation**

##### *Site Circulation To/From the Project Site*

The revitalised CPS will not provide any car parking spaces within the Site, partly as a result of physical site constraints, and partly an effort to discourage private mode of transport at this part of the Central District where traffic congestion is sometimes observed. Hence it is of utmost importance to ensure good pedestrian connection and convenient pedestrian access to the CPS. To provide convenient access for pedestrians from different attraction points, such as Lan Kwai Fong, Soho, the Mid-Levels residential area, MTR station, and the bus corridor along Queen's Road Central and Des Voeux Road Central, the design of the CPS revitalisation intends to maximise permeability by providing pedestrian access in a number of locations.

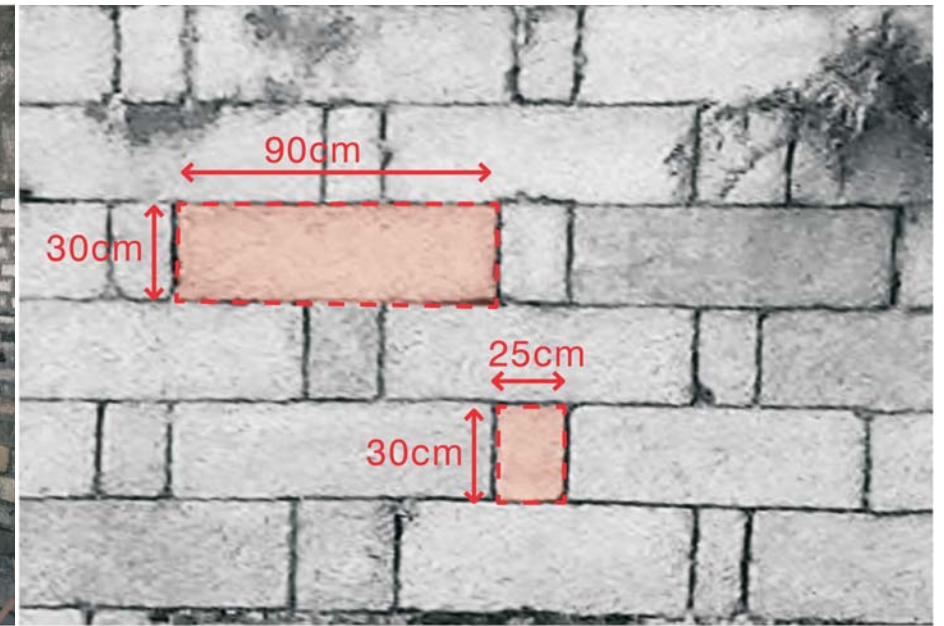
To improve accessibility to the Site, new openings and a footbridge extension linking between mid-levels escalator and the CPS will be needed. To minimise the intervention to the exterior fabric of the CPS, openings at the boundary wall are kept to minimum locations where they are absolutely necessary to comply with safety and site servicing requirements. In order to ease the pedestrian density along the existing



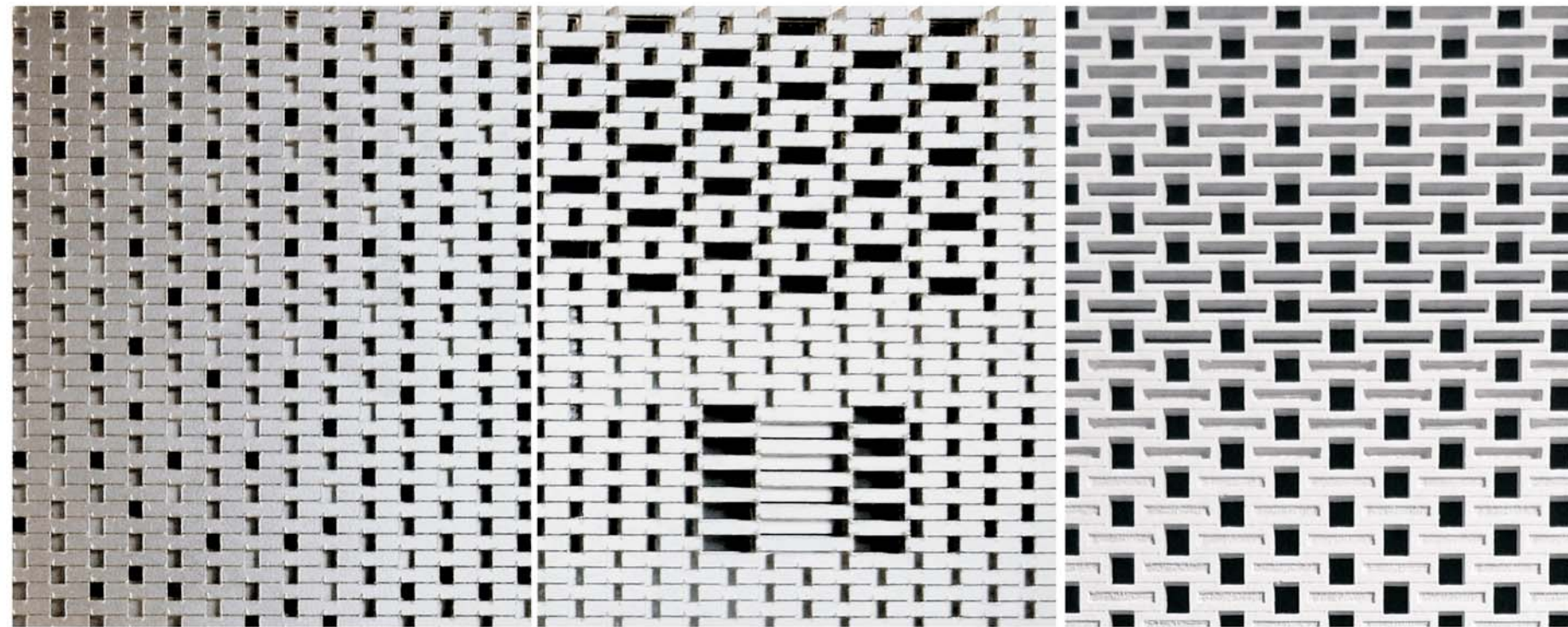
ALONG OLD BAILEY STREET



ALONG LOADING YARD



CPS GRANITE BLOCK - TYPICAL SIZE



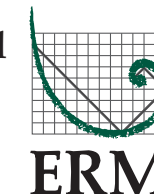
STUDIES ON POROSITY, SURFACE COMPOSITION, TEXTURE & REFLECTIVENESS

Figure 2.5

Study on Existing Site Material for Facade Proposal

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footpath at Hollywood Road and pedestrian crossing across Hollywood Road near its junction with Old Bailey Street, a pedestrian improvement to connect the Site with the existing Mid-Levels Escalator is planned. With the proposed footbridge connection, visitors to the CPS can directly access the Mid-Levels Escalator and minimise the usage of the at-grade pedestrian crossing at the junction of Hollywood Road and Old Bailey Street and the footpath along Hollywood Road. The footbridge extension forms one of the key entrance to the Site as the mid-levels escalator is the key pedestrian route in the vicinity of the Site.

#### Footbridge Design

From the existing junction of where the escalator-bridge turns the corner at Hollywood Road, the proposed footbridge would extend diagonally over the street intersection and directly into the CPS Parade Ground. From a distance, the new footbridge will not only prominently mark a new circulation route but become a distinctive feature redefining the nature of the CPS site. The study of the footbridge design is currently on-going. However, the architectural idea of an open footbridge is the extension of the Parade Ground, which means a simple, minimal slab or platform reaching out to the existing mid-level escalator. The only thing needed in addition to the slab is the handrails on both sides to provide safety. It is also essential to carry through the same hard-paved open-ground character of the Parade Ground. The footbridge design as it is now only provides the minimum width necessary for the public flow to keep the whole structure as simple and as light as possible to minimise potential visual impact. The conceptual design is illustrated in *Figure 2.6*. It is worth to note that the design will be subject to review and approval under the ACABAS as open footbridges require special approval under the current policy.

#### *Site Circulation within the Project Site*

The Site is divided into several terraces and variously interrupted by barriers such as walls, gates and stairs. The success of revitalising the CPS will also rely on convenient access to the Site and good circulation within the Site. To improve the site circulation within the Site, it will require modification and new addition of stairs and walkways between buildings. Within the CPS, a stairway passage provided with disabled access will be constructed to link up the lower courtyard and the upper courtyard, via A Hall and B Hall. The stairway passage is complemented with a historical path, which winds through the side and back of the Barrack Blocks and the prison halls. The stairway passage provides direct access to all the main public spaces of the Site (exterior and interior, old and new). Although modification to the interior and part of the exterior of B Hall will be required, the construction of the stairway passage will minimise the need of adding new staircases and walkway between the buildings thus minimising exterior building modification works at the CPS.

The key pedestrian circulation corridor is shown in *Figure 2.7*.

#### **2.5.5 Construction Methods and Sequence of Works**

In order to understand the structural form and present condition of various construction materials of the existing buildings, a structural survey was conducted on site between April 2009 and September 2009. Information such as material strengths and degree of deterioration obtained from the survey has

been used in the justification for adaptive reuse of these buildings and determined the necessary modification and refurbishment works required.

#### *Modification/Refurbishment Works at the Existing Buildings*

In general, the existing buildings will be repaired or strengthened where necessary to ensure that they will meet current health and safety standards for the proposed uses. Some of the existing building features, such as staircases, do not satisfy current prescriptive fire safety code requirements and would need to be altered if these requirements are to be strictly followed. To minimize intervention to the existing buildings, a fire engineering approach has therefore been adopted to assess the fire safety level of the existing buildings and to propose alteration only in cases where the assessment result fails to meet the fire engineering standard. By adopting this approach, special features with great heritage values can be preserved as much as possible.

#### *Other Construction Works*

Non-percussive piling methods will be adopted for the construction of the foundation for the new buildings and a lateral support system will be used to minimise the potential vibration impact to adjacent historic buildings during construction.

A stringent and comprehensive monitoring scheme will also be proposed within and around perimeter of the CPS during the construction of the new buildings to ensure that any ground/building settlement and vibration will be kept within allowable limits.

The sequence of work has been designed to minimise concurrent activities as far as practicable. This will minimise the potential noise and air impacts during the construction phase. The sequence of work is reflected in the construction programme as shown in *Figure 2.8*.

#### **2.5.6 Selection of Preferred Design Option**

As discussed above, the various design elements of the Project have considered different environmental factors in conjunction with a range of other aspects of the implementation of the Project. Protection of the heritage resources is the key factor considered during the development of the Project design. Visual impact is another important factor that has been considered, especially in the design of the new buildings.

Based on the discussion above, to meet the Project's vision while balancing different consideration aspects, including minimising potential environmental impacts (particular to the historic buildings), Scheme B was chosen as the preferred design of the new buildings at the CPS. Scheme B is more preferable from the conservation point of view as it can minimise intervention at the existing historic buildings by providing sufficient space for the cultural facilities as well as the necessary plant and machinery for the whole site, where Scheme A cannot achieve. It comprises the construction of the Old Bailey Wing and the Arbuthnot Wing, which will be located in the current position of the General Office and Laundry Yard, respectively. The construction of the new buildings will require the demolition of the General Office and the Laundry Yard. The massing of the new buildings respect the height limit imposed by the OZP and their scale is considered to be compatible with the existing historical buildings.

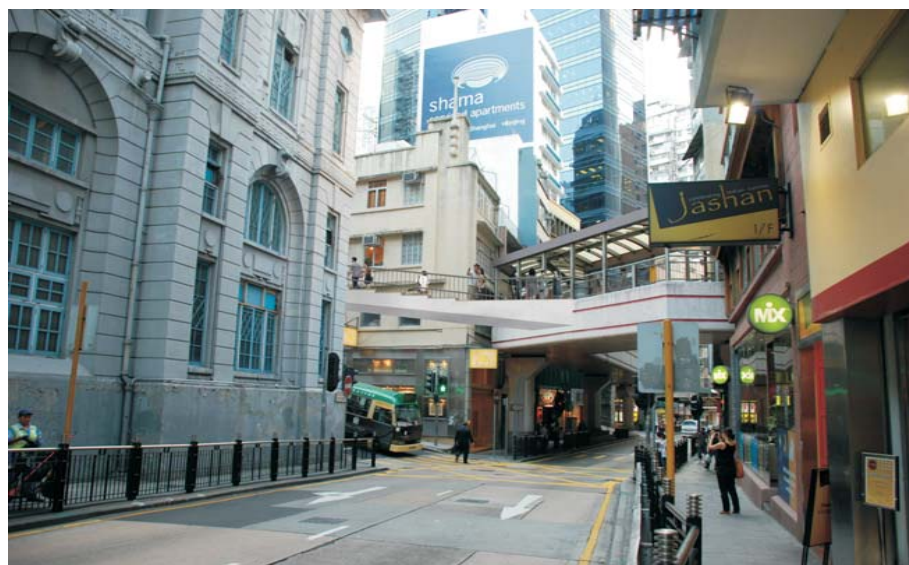
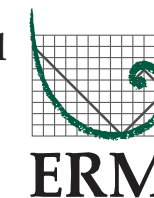


Figure 2.6

Conceptual Design of Footbridge

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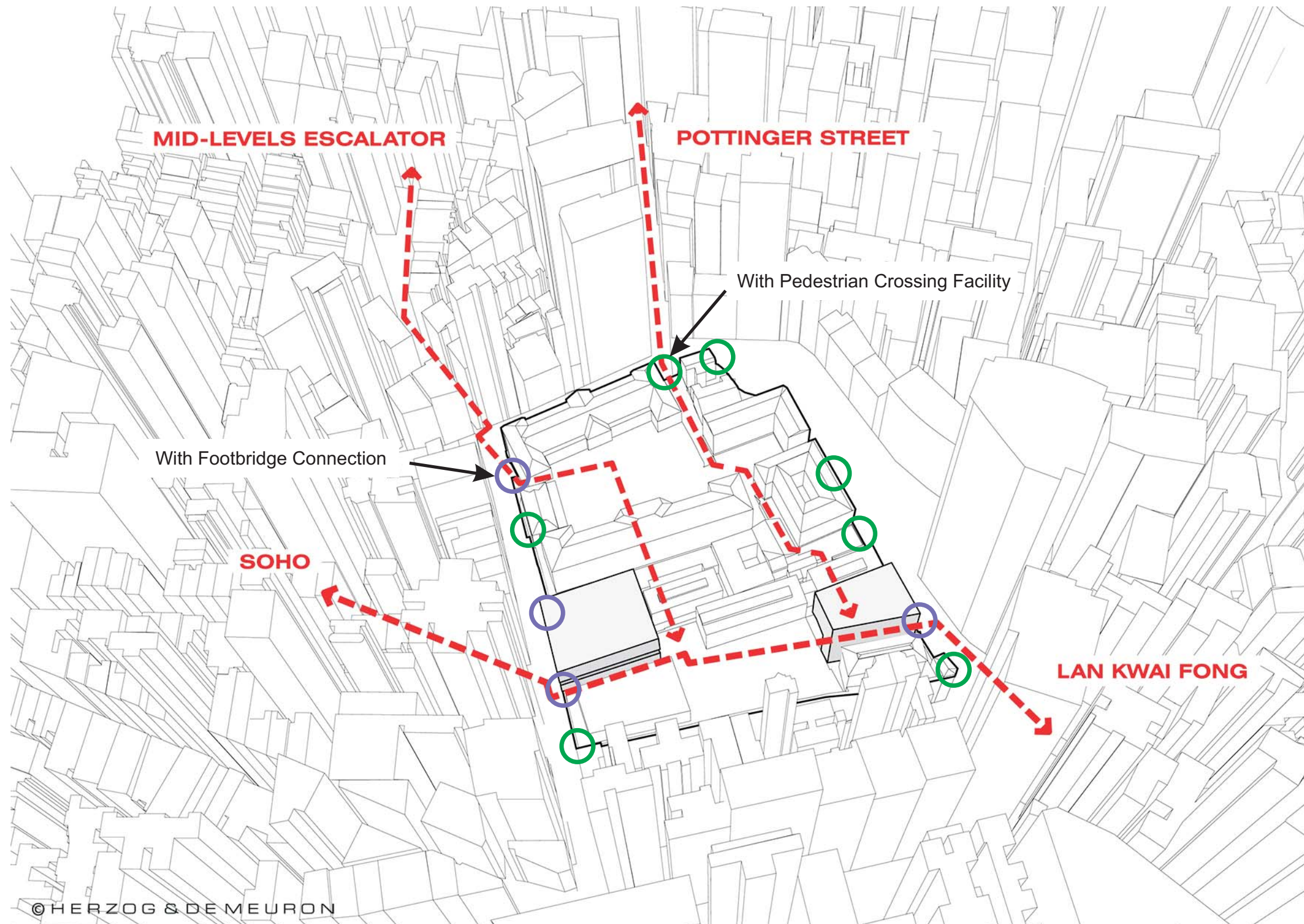
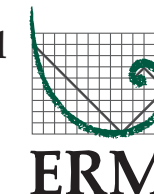


Figure 2.7

Site Connectivity

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**BLOCK PLAN**

- Key**
- Phase 1
  - Phase 2
  - Phase 3
  - Phase 4

- BUILDING INDEX**
- 01 POLICE HEADQUARTERS
  - 02 ARMOURY
  - 03 BARRACK BLOCK
  - 04 MARRIED INSPECTORS' QUARTERS AND DEPUTY SUPERINTENDENTS HOUS
  - 06 MARRIED SERGEANTS' QUARTERS
  - 07 SINGLE INSPECTORS' QUARTERS
  - 08 ABLUTIONS BLOCK
  - 09 CENTRAL MAGISTRACY
  - 10 SUPERINTENDENT'S HOUSE
  - 11 A HALL
  - 12 B HALL
  - 13 C HALL
  - 14 D HALL
  - 15 E HALL
  - 17 F HALL
  - 19 BAUHINIA HOUSE
  - OBW OLD BAILEY WING
  - AW ARBUTHNOT WING

Activities	2012												2013												2014											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Demolition Works (Site Wide Structure)	[Timeline bars]																																			
<b>Repair and A&amp;A Works for Existing Buildings</b>	[Timeline bars]																																			
Phase 1 Construction (Lower Courtyard, Buildings 8, 11, 12)	[Timeline bars]																																			
Phase 2 Construction (Buildings 1, 2, 3, 4, 6, 7)	[Timeline bars]																																			
Phase 3 Construction (Buildings 9, 10, 13)	[Timeline bars]																																			
Phase 4 Construction (Buildings 14, 15, 17, 19)	[Timeline bars]																																			
<b>New Building Works</b>	[Timeline bars]																																			
Foundation	[Timeline bars]																																			
Excavation and Lateral Support	[Timeline bars]																																			
Basement construction	[Timeline bars]																																			
Superstructure Construction	[Timeline bars]																																			
Curtain Wall Installation	[Timeline bars]																																			
Application and Inspection for OP/FS	[Timeline bars]																																			
Post OP Fitting Out Works / Installation of Equipment	[Timeline bars]																																			

Figure 2.8

Tentative Construction Programme

In fact, the new buildings approach but do not impinge on the surrounding historic buildings. As a result of thoughtful design and a careful choice of materials the new buildings will clearly stand out as modern interventions without taking away any of the interest or visual impact of the historic buildings and without affecting the Upper Courtyard, ie compatible from the visual and cultural heritage angles. The new buildings will only really be seen from the upper part of the Site and from the adjoining roads. They will be more or less invisible from the Lower Courtyard and will have no impact whatsoever on any of the buildings around this part of the Site. Whilst there is some visual impact on the buildings around the upper (southern) part of the Site there is nothing that will diminish the cultural heritage significance of this area of the Site as a whole.

Regarding the proposed adaptive reuses in the existing buildings, a concerted approach has been taken to find uses that can be accommodated in the existing buildings with the minimum of disturbance and alterations. For example, the option of centralising the E&M facilities in a few locations is preferred as this will minimise modification works at many of the existing buildings as well as being more energy efficient.

The preferred scheme will keep modification of the existing fabric to a minimum by limiting the openings at the boundary wall.

The modification/refurbishment works at the existing buildings are kept to a minimum by carefully assigning appropriate uses to fit in the spaces and adopting a fire engineering approach to minimise alteration while complying with fire safety requirements. For the construction of the new buildings, non-percussive piling method will be adopted to minimise the potential environmental impacts and in particular vibration impact on the historic buildings.

Hence, the preferred design has environmental benefits in most of the key aspects of the design. Where environmental impacts are unavoidable, especially during the construction stage, these impacts will be localised and transient and can be mitigated by the implementation of appropriate control measures. The environmental benefits and dis-benefits of the key design aspects are summarised in *Table 2.1*.

**Table 2.1** *Environmental Benefits and Dis-Benefits of Key Design Aspects*

Design Aspect	Options Considered	Environmental Benefits	Environmental Dis-benefits	Other Factors Considered	Conclusions
Overall Design	Without new buildings	<ul style="list-style-type: none"> <li>• Less modifications at the Victoria Prison Compound</li> <li>• Minimise nuisance associated with the construction of the new buildings</li> <li>• Avoid landscape and visual impact due to erection of new buildings</li> </ul>	<ul style="list-style-type: none"> <li>• Significant modifications in the historic buildings to create adequate space to house the multi-purpose and exhibition space, as well as the cooling plants, yet still cannot fully achieve the space required</li> </ul>	<ul style="list-style-type: none"> <li>• No space to accommodate a medium sized multi-purpose space and exhibition space up to international standard</li> </ul>	<ul style="list-style-type: none"> <li>• This option was not preferred because it cannot achieve the vision of the Project by providing a medium sized multi-purpose space and exhibition space up to international standard, even with the need for significant intervention at the existing buildings.</li> </ul>
	With new buildings	<ul style="list-style-type: none"> <li>• The new buildings can accommodate the multipurpose and exhibition space needed and strategic location for site cooling plants, hence avoid significant alteration at the existing historic buildings</li> </ul>	<ul style="list-style-type: none"> <li>• Generate nuisance during the construction of the new buildings, but this should be transient and mitigatable (see Sections 3,5 and 6 for mitigation on heritage resources, noise and air quality impacts)</li> <li>• Additional structure will create landscape and visual impact, but the massing of the building has already taken into account the building height restriction and zoning envelop for potential new buildings imposed by the OZP and set back from the existing buildings to minimise disturbance, hence compatible from visual and cultural heritage point of view</li> </ul>	<ul style="list-style-type: none"> <li>• Opportunity to provide better connection of the Victoria Prison Compound to the lower courtyard</li> <li>• Improved communications across the Site between Old Bailey Street and Arbuthnot Road</li> </ul>	<ul style="list-style-type: none"> <li>• This option was preferred since it has the merits of providing adequate space for the new medium sized multi-purpose space and exhibition space and improves the site circulation within the CPS</li> <li>• Minimising intervention at the existing historic buildings so that the interior heritage aspects can be conserved.</li> <li>• Nuisance associated with the works of the new buildings will be transient and can be mitigated by good site practices.</li> <li>• Compatible from visual and cultural heritage point of view as the new buildings will respect the OZP requirement and set back from existing buildings</li> </ul>
New Buildings	Scheme A	<ul style="list-style-type: none"> <li>• Smaller scale construction work and hence will minimise environmental nuisance (in particular dust and noise)</li> <li>• Less landscape and visual (including glare) impact since only one building will be constructed</li> <li>• Building set back from existing buildings and demolition of existing buildings of heritage significance is avoided</li> </ul>	<ul style="list-style-type: none"> <li>• The location of the chillers and cooling towers are surrounded by the residential sensitive receivers and thus may cause noise impact</li> </ul>	<ul style="list-style-type: none"> <li>• The quality of the exhibition space will not be able to house top international exhibitions</li> <li>• Not enough space to house the chillers and cooling towers meaning that some of these facilities will have to be housed at the existing buildings, which means more intervention at the existing buildings.</li> </ul>	<ul style="list-style-type: none"> <li>• This option was not preferred due to the space constraint to provide international exhibition space and site cooling equipment.</li> <li>• More intervention at the existing buildings to create space for the cultural uses (yet still not enough) and the cooling equipment</li> </ul>
	Scheme B	<ul style="list-style-type: none"> <li>• The location of the chillers and cooling towers are surrounded by less residential sensitive receivers and thus minimising the noise impact</li> <li>• Building set back from existing buildings and demolition of existing buildings of heritage significance is avoided</li> </ul>	<ul style="list-style-type: none"> <li>• Slightly more landscape and visual (including glare) impact since two buildings will be constructed</li> <li>• Slightly larger scale construction work compared with Scheme A but yet the overall scale of work is small and the potential environmental impact can be mitigated and hence will not generate significant environmental nuisance (see respective technical sections for environmental impacts and mitigation measures)</li> </ul>	<ul style="list-style-type: none"> <li>• Adequate exhibition and multi-purpose space that can meet international standards</li> <li>• Adequate space to house the chillers and cooling towers avoiding the need for further intervention for space at the existing buildings</li> </ul>	<ul style="list-style-type: none"> <li>• This option was preferred because the requirements for adequate multi-purpose and exhibition space for art educational facility can be met. It also provides equipment space for central cooling towers of the whole Site avoiding the need for further intervention for space at the existing buildings.</li> </ul>

Design Aspect	Options Considered	Environmental Benefits	Environmental Dis-benefits	Other Factors Considered	Conclusions
Adaptive Reuse	Full utilisation of all spaces	-	<ul style="list-style-type: none"> <li>More modification works will be required</li> </ul>	<ul style="list-style-type: none"> <li>The adaptive reuse should also ensure the operation of the CPS be financially sustainable without the need for public subsidy</li> </ul>	<ul style="list-style-type: none"> <li>This option was not preferred as modification works will be more extensive.</li> </ul>
	Partial utilisation of spaces	<ul style="list-style-type: none"> <li>Minimise modification works required</li> <li>Leave space for interpretation of the Site</li> </ul>	-	<ul style="list-style-type: none"> <li>The adaptive reuse should also ensure that the operation of the CPS be financially sustainable without the need for public subsidy</li> </ul>	<ul style="list-style-type: none"> <li>This option was preferred since it can balance the need for modification works and interpretation space.</li> </ul>
Chillers and Cooling Towers	Located in individual buildings	-	<ul style="list-style-type: none"> <li>Modification works required in individual building and will affect more historic buildings</li> </ul>	<ul style="list-style-type: none"> <li>Less energy efficient</li> <li>Lower cost for distributing energy within the Site</li> </ul>	<ul style="list-style-type: none"> <li>This option was not preferred due to the extensive modification works required for the historic buildings and yet being less energy efficient</li> </ul>
	Located in centralised locations	<ul style="list-style-type: none"> <li>The facilities are centralised in the new building and hence minimise the potential impacts on the historic buildings</li> </ul>	-	<ul style="list-style-type: none"> <li>More energy efficient</li> <li>Longer distance for distributing energy within the Site</li> </ul>	<ul style="list-style-type: none"> <li>This option was preferred as it will minimise the impacts to existing historic buildings and yet being more energy efficient</li> </ul>
Site Circulation	Without stairway passage	<ul style="list-style-type: none"> <li>Minimise internal modification to historic buildings</li> </ul>	<ul style="list-style-type: none"> <li>Greater visual impact since there will be a need to construct additional exterior pathways or stairs, if without the passage through the interior of the building.</li> </ul>	<ul style="list-style-type: none"> <li>Connection between the lower and upper courtyards will be indirect</li> <li>Lower construction cost</li> </ul>	<ul style="list-style-type: none"> <li>This option was not preferred due to the indirect connection between the lower and upper courtyards and the potential visual impacts with more staircases outside the historic buildings</li> </ul>
	With stairway passage	<ul style="list-style-type: none"> <li>Minimise visual impact as the stairway passage will go through the interior of the building</li> </ul>	<ul style="list-style-type: none"> <li>More modification works required in A Hall and B Hall due to the construction of the stairway passage structure. Please refer to <i>Table 2.3</i> for details.</li> </ul>	<ul style="list-style-type: none"> <li>Enhance site circulation by providing convenient connection between the lower and upper courtyards</li> <li>The distinctions between new intervention and old building fabric are made very clear</li> <li>Higher construction cost</li> </ul>	<ul style="list-style-type: none"> <li>This option was preferred since it will be visually less intrusive and can effectively enhance site circulation</li> </ul>
Modification/Refurbishment Works	Adhere to prescriptive fire safety code requirements	-	<ul style="list-style-type: none"> <li>Significant modification works will be required</li> </ul>	-	<ul style="list-style-type: none"> <li>This option was not preferred since significant modification works to the historic buildings will be required</li> </ul>
	Adopt fire engineering approach	<ul style="list-style-type: none"> <li>Less modification works will be required yet achieving the required fire safety standard</li> </ul>	-	-	<ul style="list-style-type: none"> <li>This option was preferred since less modification works to the historic buildings will be required. The fire engineering approach will allow for better integration of fire protection in the historic buildings.</li> </ul>
Other Construction Work	Percussive piling	-	<ul style="list-style-type: none"> <li>More noise and vibration impacts</li> </ul>	-	<ul style="list-style-type: none"> <li>This option was not preferred due to the generation of more noise and vibration impacts</li> </ul>
	Non-percussive piling	<ul style="list-style-type: none"> <li>Less noise and vibration impacts</li> </ul>	-	-	<ul style="list-style-type: none"> <li>This option was preferred since there will be less noise and vibration impacts</li> </ul>

## 2.6 PROJECT DESCRIPTION

### 2.6.1 Design Philosophy of the Project

#### *New Build*

The intention is to use the new buildings as a magnet to draw people to the more enclosed and remote southern part of the Site – the old Prison area. The Old Bailey Wing needs to be large enough to accommodate international touring exhibitions and the Arbuthnot Wing not only has to accommodate a major multi-purpose performance space but is also being used as the location for the cooling systems that will serve the whole Site – this makes it essential to use the space available to the best effect. Another major concern is to ensure that there is circulation across the Site.

The two new buildings have been designed to suit the scale of the Site, and to make maximum use of the available space without dominating the surrounding buildings nor the open space of the Upper Courtyard. The new buildings will have a clear and close relationship with the existing historic structures and this is necessary as the new buildings share staircases, lifts and other facilities with the adjacent historic buildings. The new buildings will bring the existing buildings to life and make them accessible in a way that would be difficult with no new structure.

#### Design Style and Massing

The new buildings will be assertive in their difference to the historic buildings. There is no intention to take any of the existing finishes (granite, brick, and painted render) in an attempt to work with them. Rather the proposed cladding of textured metal will pick up the rhythm and scale of the granite walls and will offer a dialogue with the adjacent buildings whilst remaining entirely distinct. This is a well recognised approach to the insertion of new buildings on significant heritage sites. It is generally regarded as a poor solution to have buildings which are a simple pastiche of the adjacent historic buildings. This can lead to confusion in interpretation and tends to diminish rather than enhance the character and quality of the original buildings. Well designed new buildings which are thoughtful in their scale and relationship to the existing buildings and yet have their own contribution as architecture of their own time are widely accepted as the ideal solution to this sort of intervention. The new buildings can be exciting and act as a focus for the visitor without detracting in any way from the significance of the historic buildings, and very importantly in this case, without encroaching on the Prison Yard.

Each new building's basic massing begins as a full measure of the zoning regulations. They are created as offsets from the historical buildings and rise to +80.0 mPD in height. Distinctive spaces are carved out of the new volumes at the ground level, resulting in generous protected places for gathering. At the same time, these voids shape the direction of pedestrian flow connecting Arbuthnot Road and Staunton Street through the Old Prison Yard. The massing and volume definition of the new buildings are illustrated in *Figure 2.9*.

#### Façade – Pattern and Expression

The proposed cast aluminum unit system is the result of several primary considerations:

- The unit system references existing masonry block elements on site in terms of *scale* and *proportion* (eg: the bordering granite revetment wall), thus establishing a certain contextual relationship (See *Figure 2.5*).
- The use of aluminum as a material provides a distinctive architectural expression and materiality, setting the new buildings apart as new and modern insertions amongst the collection of historical masonry blocks.
- A unitized system allows for a certain level of homogenous surface expression in terms of scale and proportion while differences in each unit block can still accommodate specific functional requirements.

The more specific patterning and expression of the façade units are informed by programmatic and environmental requirements of the uses within:

- A fully solid façade covers areas where no direct light and views are required. These would include certain gallery, mechanical and support spaces.
- A semi-perforated façade covers areas where some light and views are desired. These would include public circulation and foyer areas and select zones within the galleries.
- A fully open façade covers primarily the main plant space which requires at least 50% in porosity and no weather enclosure.

Visually, the roofs of both Old Bailey Wing and Arbuthnot Wing will also be extremely prominent to those in surrounding taller buildings. As such, the roof of each building will be treated as a fifth façade, covered similarly by the system of aluminum façade units. In Old Bailey Wing, the façade units serve as a significant layer within the gallery skylight diffusing direct sunlight as it enters the building. In Arbuthnot Wing, the units will help to provide an even façade surface while accommodating the need for a porous screen that will allow air to circulate through to the plant room equipment below.

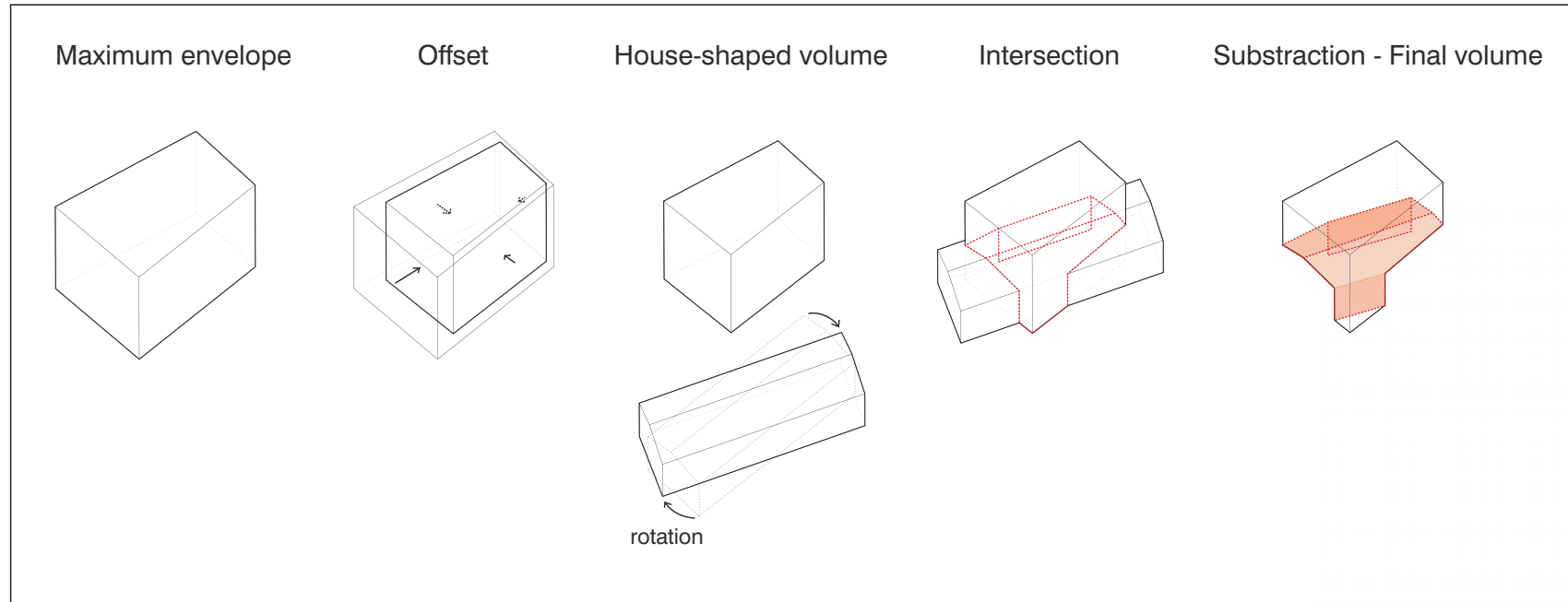
#### Façade – Materiality and Texture

As a material, aluminum is malleable, light weight, recyclable and easy to control in manufacturing processes. This versatility allows the unit to be optimally engineered to address issues such as structural support, sun shading, and rain protection in Hong Kong's subtropical climate. As opposed to a material like stainless steel where the finish is usually highly reflective, the materiality of the cast aluminum units will have a distinctive roughness and texture. Together with their materiality, the unit blocks also serve to break down the façade surface adding to the reduction of reflectivity and glare, especially important during the daytime. At night, light emitted from the building will be partially screened by the façade units, creating a balance between being able to express the life of the buildings within while also being able to reduce light pollution. The most open area within the new buildings at night is the public restaurant which is located on the north end of Old Bailey Wing and away from the row of residential buildings directly to the south.

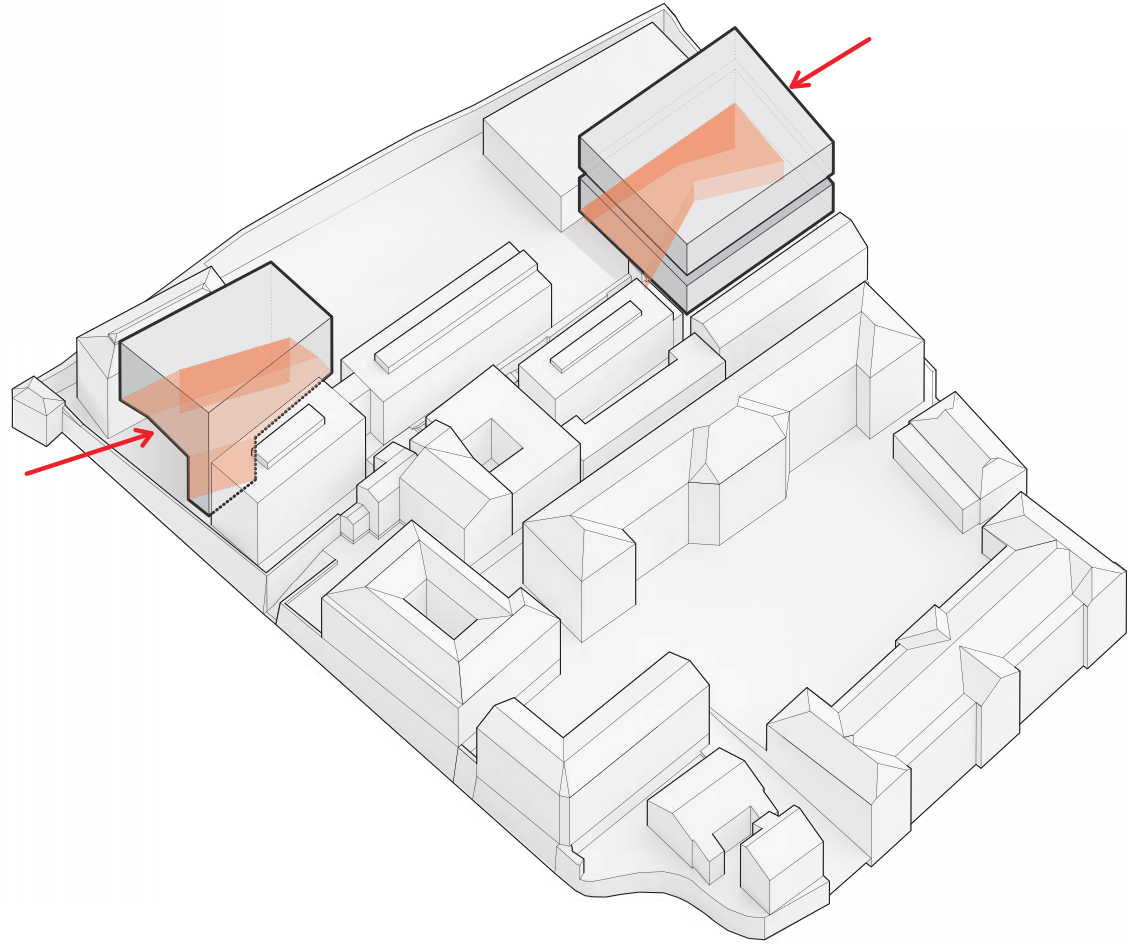
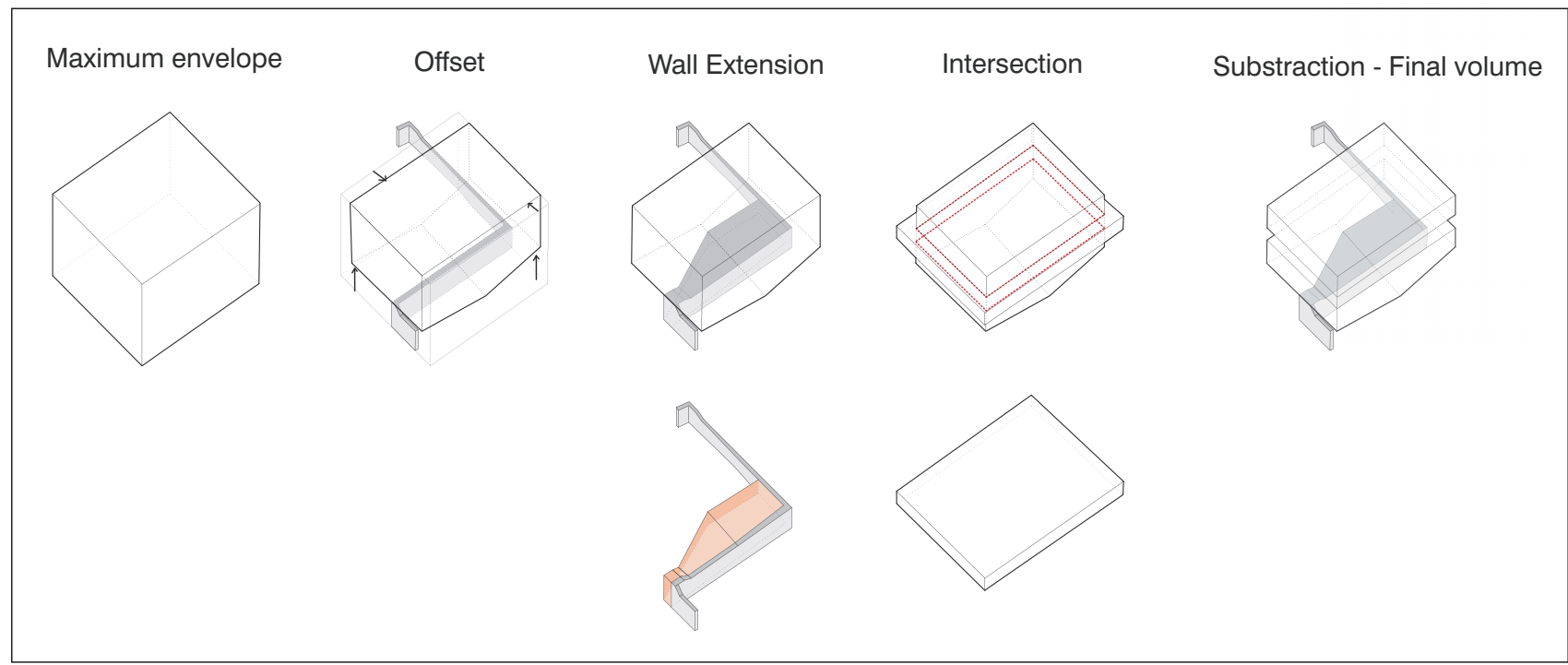
The design of the new buildings and the Upper Courtyard is illustrated in *Figure 2.10*.



**ARBUTHNOT WING**



**OLD BAILEY WING**



**NEW BUILD MASSING**

Figure 2.9

Massing and Volume Definition of New Buildings

FILE: 0095646w1  
DATE: 28/12/2010

Environmental  
Resources  
Management



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Figure 2.10

Design of New Buildings and Upper Courtyard

FILE: 0095646b4  
DATE: 29/12/2010

Environmental  
Resources  
Management



ERM



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### The Courtyards

One of the main components of the design intention is to preserve the openness of both the Upper and Lower Courtyards and re-activate them for public use as a new type of urban found space. They will define the Site both physically and programmatically as places of gathering, leisure and respite. The Lower Courtyard will be surrounded on each side by several of the Site's most historic buildings, resulting in a formal open space with generous room for public recreation, organised events, direct access to restaurant and retail attractions as well as smaller scale cultural and educational spaces. The Upper Courtyard will be more thoroughly transformed from a rough and forbidding area to a new open public space with an emphasis on cultural venues. It will be less formal than the Lower Courtyard, with significant existing trees preserved and the rear prison wall enhanced with new green planting.

### Site Connections

With three different ground levels and a prison wall around, the Site is currently hard to navigate and access. The main entrance will remain at the extension of Pottinger Street, with new openings added on the East and West sides to improve the Site's porosity. A new footbridge connected to the Mid-levels escalator system will provide short direct access to the Lower Courtyard, and also publicise the Site's changes at the key corner of Hollywood Road and Old Bailey Street. An opening in the prison wall along Old Bailey Street, close to Staunton Street, will create a new Western entrance that will be matched on the opposite Eastern side with another wall opening towards Arbuthnot Road. The Bauhinia House will be rehabilitated as a new gatehouse linking Arbuthnot Road to the Old Prison Yard. Together, these openings create an important new East-West route through the upper level of the compound.

To link the new pedestrian network of public spaces within the Site, two main circulation paths running North-South are proposed. A meandering historical path will include re-opened doors and passages, supplemented by a few carefully-crafted new incisions and insertions through existing buildings and walls. New stairs and lifts will provide a more direct path to link the Parade Ground and the Old Prison Yard.

The connectivity of the Site is illustrated in *Figure 2.7*.

### Footbridge

With the opening up of the CPS site, it is important to take advantage of the escalators' proximity to create a real physical connection, providing an ideal opportunity for pedestrians to easily access the site. From the existing junction of where the escalator-bridge turns the corner at Hollywood Road, the proposed footbridge would extend diagonally over the street intersection and directly into the CPS Parade Ground. From a distance, the new footbridge will not only prominently mark a new circulation route but become a distinctive feature redefining the nature of the CPS site. The design of the footbridge has been described in *Section 2.5.4*. Holding up the bridge at the base is a wall minimally shaped to provide both lateral and vertical loading support while creating the least amount of intrusion onto the adjacent footpath. The proposed footbridge is an indispensable element in ensuring the connectivity of the CPS site to the rest of the city.

### 2.6.2 Site Layout and Proposed Uses

The Site Plan is shown in *Figure 2.11*.

Public access to the Site will be via the existing and new gates along Hollywood Road, Old Bailey Street and Arbuthnot Road and via the new footbridge. In addition, there will be an additional access point to the loading area along Old Bailey Street.

A combination of cultural and commercial uses is proposed within the CPS. The proposed uses in each building are listed in *Table 2.2* and shown in *Figures 2.12* to *2.21*. Spaces for interpretation of the architectural and historical features of the existing historic buildings have also been allowed. The commercial facilities include a wide range of restaurants and F&B outlets, shops selling souvenirs, as well as displaying Hong Kong's own designers in the arts, fashion and jewellery industries. There are also multi-purpose spaces which are capable of hosting a wide range of events/activities. These are supplemented by various venues that will be available to the public to hire whether it will be for cocktail parties to host the launch of a new play or product, or conduct a workshop or conference to further the growth of Hong Kong's economy and its role as a major tourism and growing art hub in the region.

The courtyards within the CPS will remain as open space for general public use. Occasional cultural events may take place in both courtyards.

Cross-sectional plans of the upper courtyard showing the new buildings and the stairway passage are presented in *Figures 2.22* to *2.24*.

**Table 2.2 Proposed Uses in CPS**

Location	Proposed Uses
Police Headquarters	<ul style="list-style-type: none"><li>• Interpretation room</li><li>• Multipurpose <sup>(b)</sup> and ancillary support</li><li>• F&amp;B and ancillary support</li><li>• Retail and ancillary support</li><li>• Public circulation</li><li>• Toilet</li><li>• Site Management Office and Store Room</li></ul>
Armoury and Store	<ul style="list-style-type: none"><li>• Retail and ancillary support</li><li>• Toilet</li></ul>
Barrack Block	<ul style="list-style-type: none"><li>• Interpretation room</li><li>• F&amp;B and ancillary support</li><li>• Retail and ancillary support</li><li>• Public circulation</li><li>• Toilet</li></ul>
Married Inspectors Quarters and Deputy Superintendent's House	<ul style="list-style-type: none"><li>• Interpretation room</li><li>• Arts related support space <sup>(a)</sup></li><li>• Retail and ancillary support</li><li>• Public circulation</li><li>• Toilet</li></ul>



Figure 2.11

Site Plan

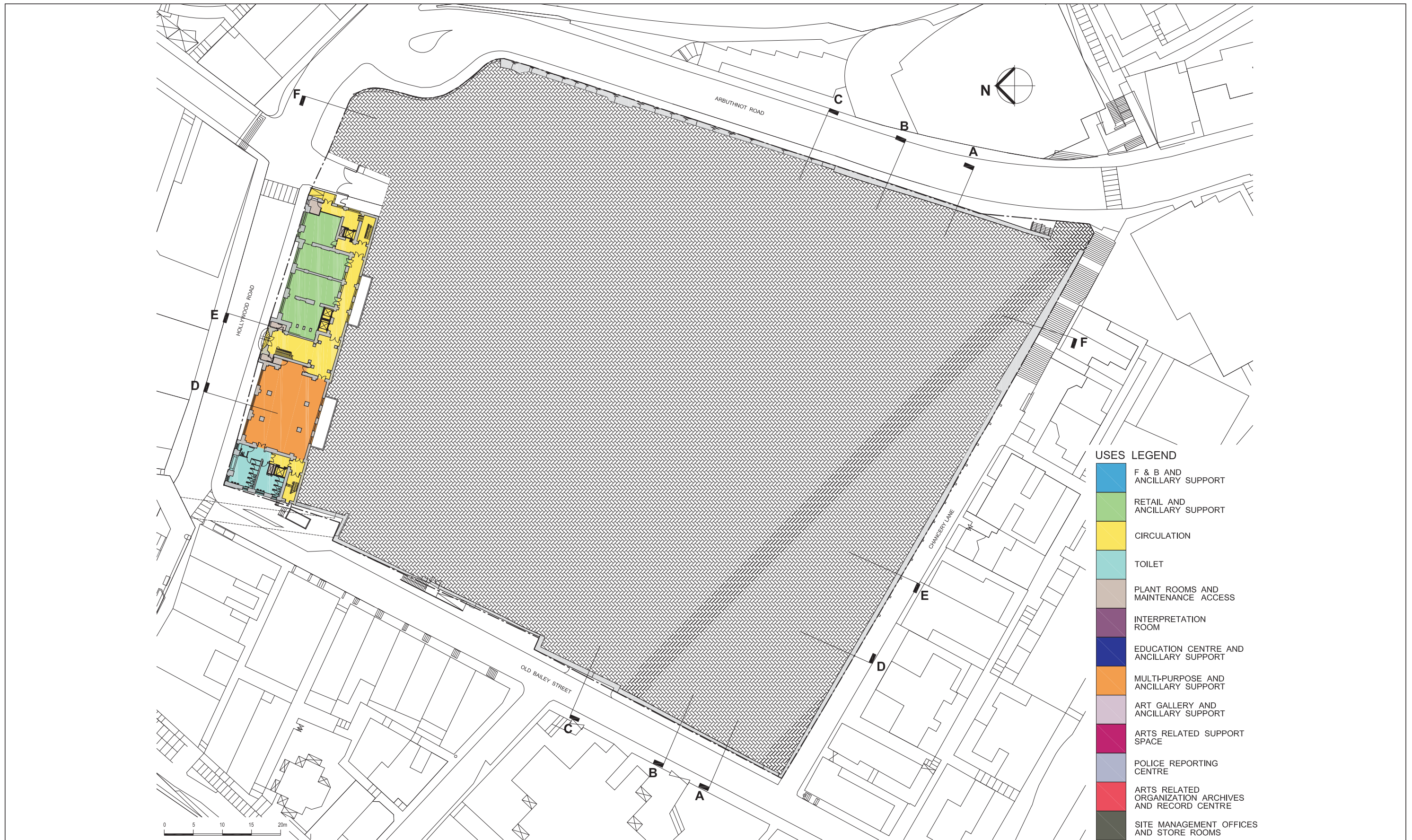


Figure 2.12

Proposed Master Layout  
Level 31.6 to 41.6

FILE: 0095646w2  
DATE: 29/12/2010

Environmental  
Resources  
Management



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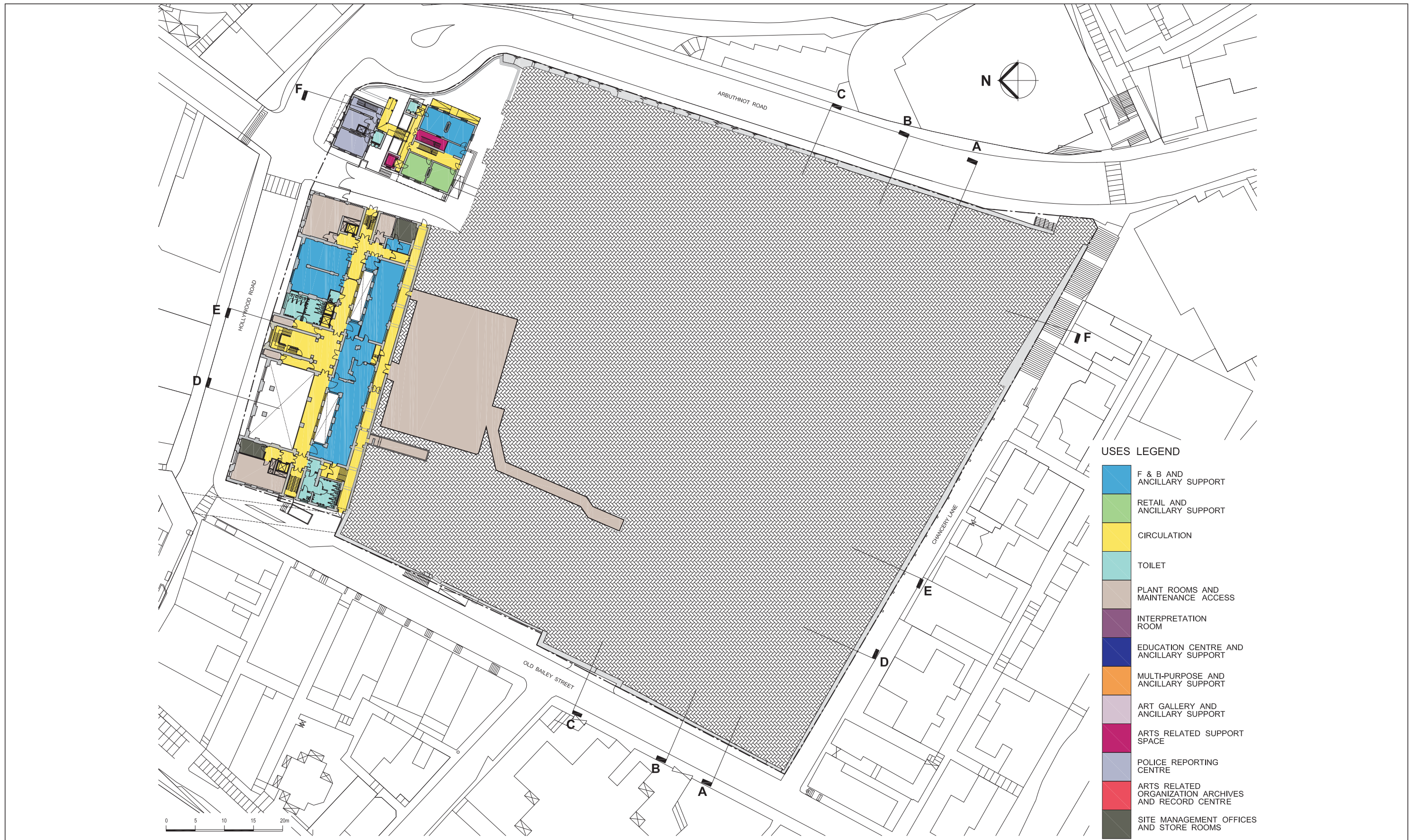


Figure 2.13

Proposed Master Layout  
Level 41.6 to 45.3

FILE: 0095646w3  
DATE: 29/12/2010

Environmental  
Resources  
Management



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Figure 2.14

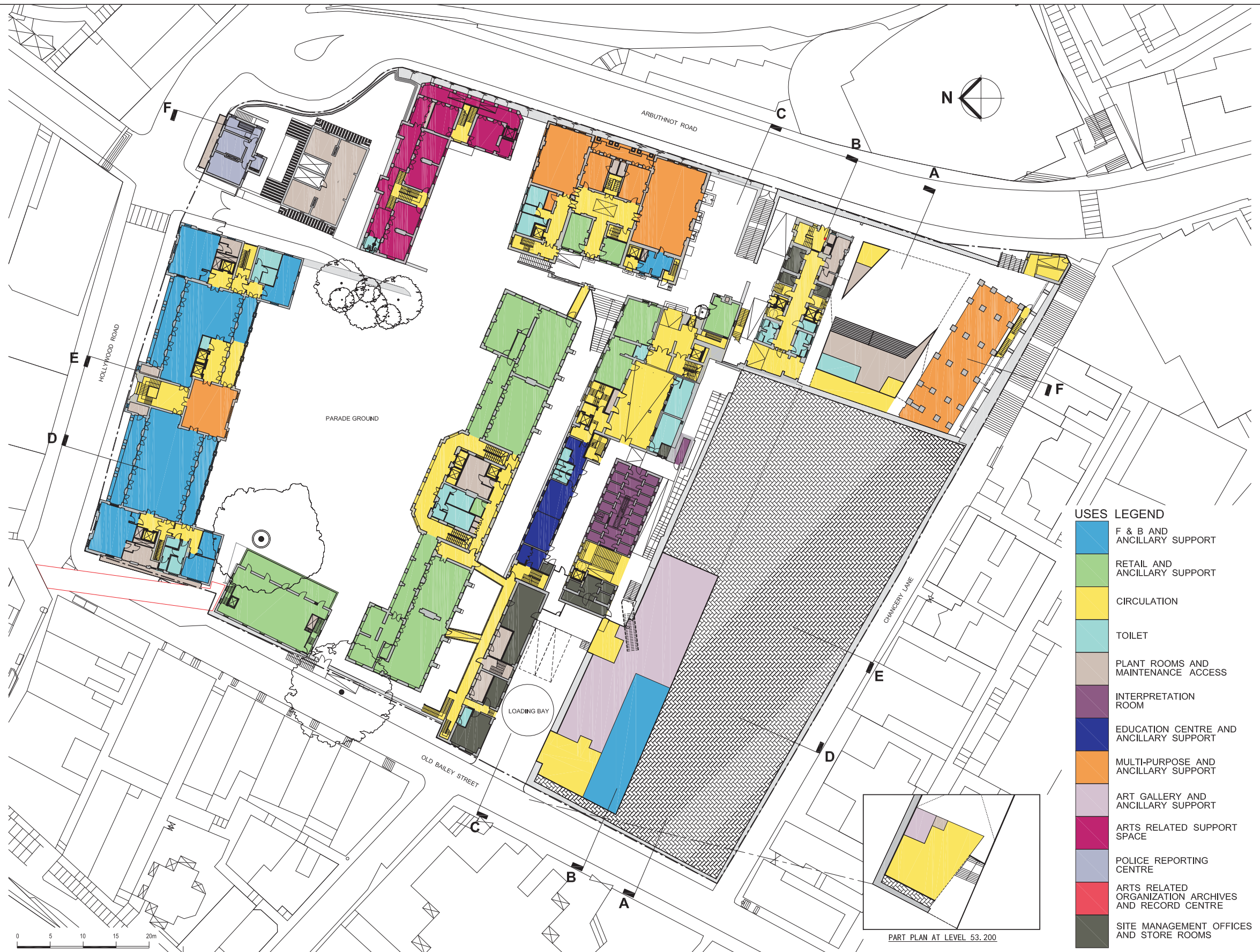
Proposed Master Layout  
Level 45.3 to 48.6

FILE: 0095646w4  
DATE: 29/12/2010

Environmental  
Resources  
Management



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**USES LEGEND**

[Blue]	F & B AND ANCILLARY SUPPORT
[Green]	RETAIL AND ANCILLARY SUPPORT
[Yellow]	CIRCULATION
[Light Blue]	TOILET
[Brown]	PLANT ROOMS AND MAINTENANCE ACCESS
[Purple]	INTERPRETATION ROOM
[Dark Blue]	EDUCATION CENTRE AND ANCILLARY SUPPORT
[Orange]	MULTI-PURPOSE AND ANCILLARY SUPPORT
[Pink]	ART GALLERY AND ANCILLARY SUPPORT
[Magenta]	ARTS RELATED SUPPORT SPACE
[Grey]	POLICE REPORTING CENTRE
[Red]	ARTS RELATED ORGANIZATION ARCHIVES AND RECORD CENTRE
[Dark Grey]	SITE MANAGEMENT OFFICES AND STORE ROOMS

Figure 2.15

Proposed Master Layout  
Level 48.6 to 52.4

FILE: 0095646w5  
DATE: 29/12/2010

Environmental  
Resources  
Management



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Figure 2.16

Proposed Master Layout  
Level 52.4 to 57.1

FILE: 0095646w6  
DATE: 10/01/2011

Environmental  
Resources  
Management



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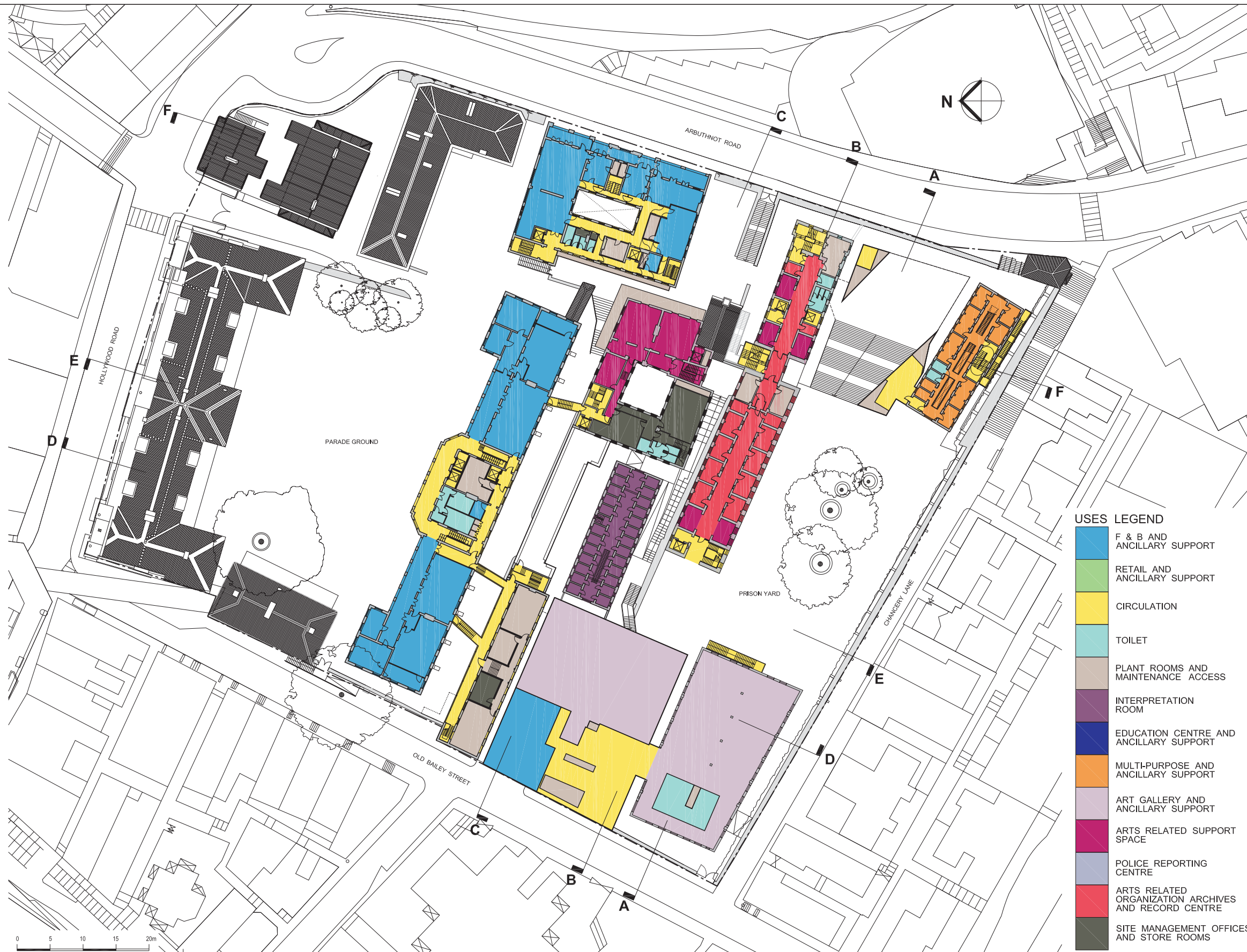
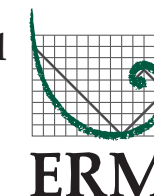


Figure 2.17

Proposed Master Layout  
Level 57.1 to 61.3

FILE: 0095646w7  
DATE: 29/12/2010

Environmental  
Resources  
Management



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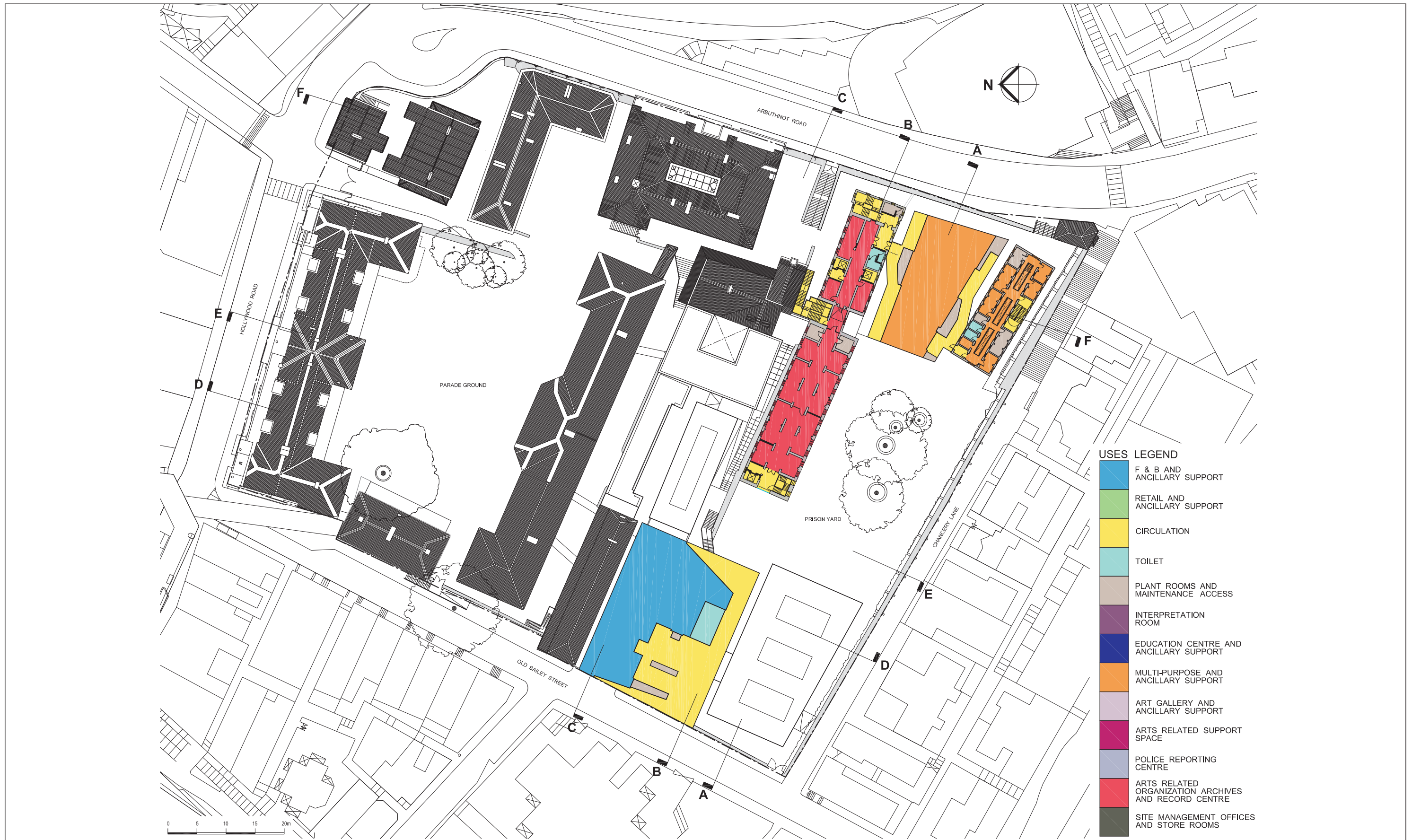


Figure 2.18

Proposed Master Layout  
Level 61.3 to 68.0

FILE: 0095646w8  
DATE: 29/12/2010

Environmental  
Resources  
Management



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Figure 2.19

Proposed Master Layout  
Level 69.335

FILE: 0095646w9  
DATE: 29/12/2010

Environmental  
Resources  
Management



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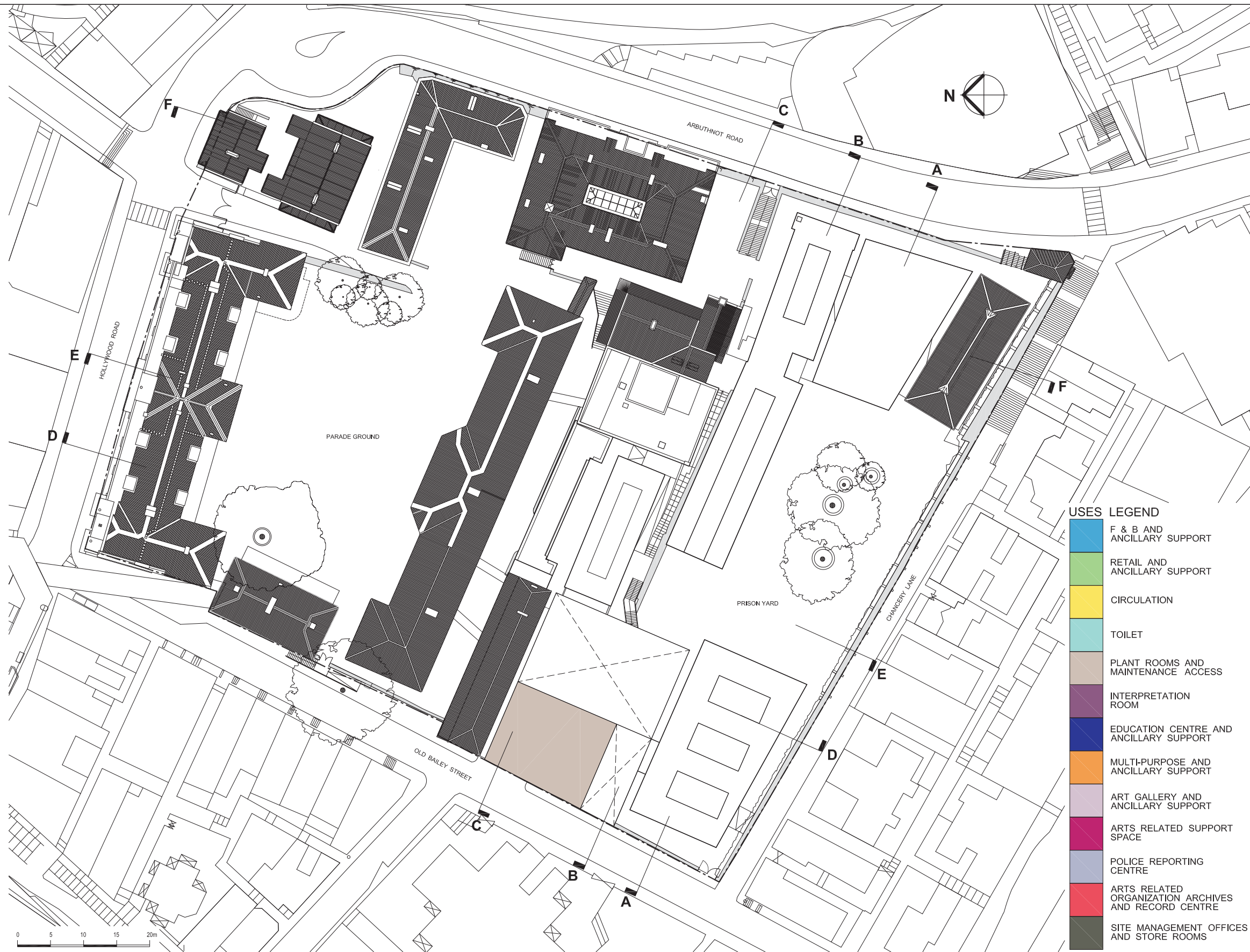
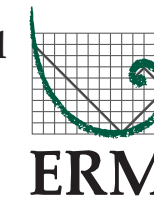


Figure 2.20

Proposed Master Layout  
Level 73.165

FILE: 0095646w10  
DATE: 29/12/2010

Environmental  
Resources  
Management



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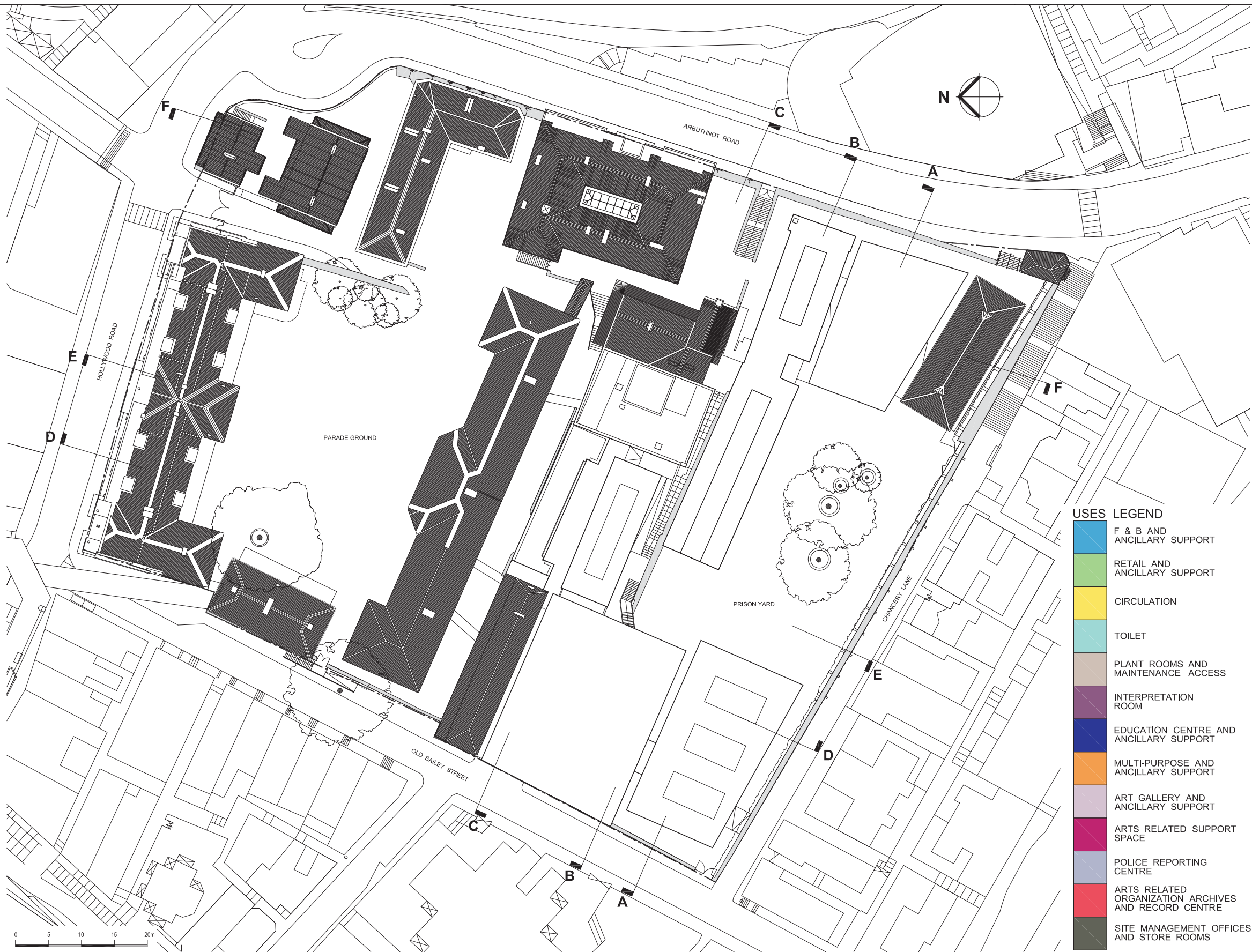


Figure 2.21

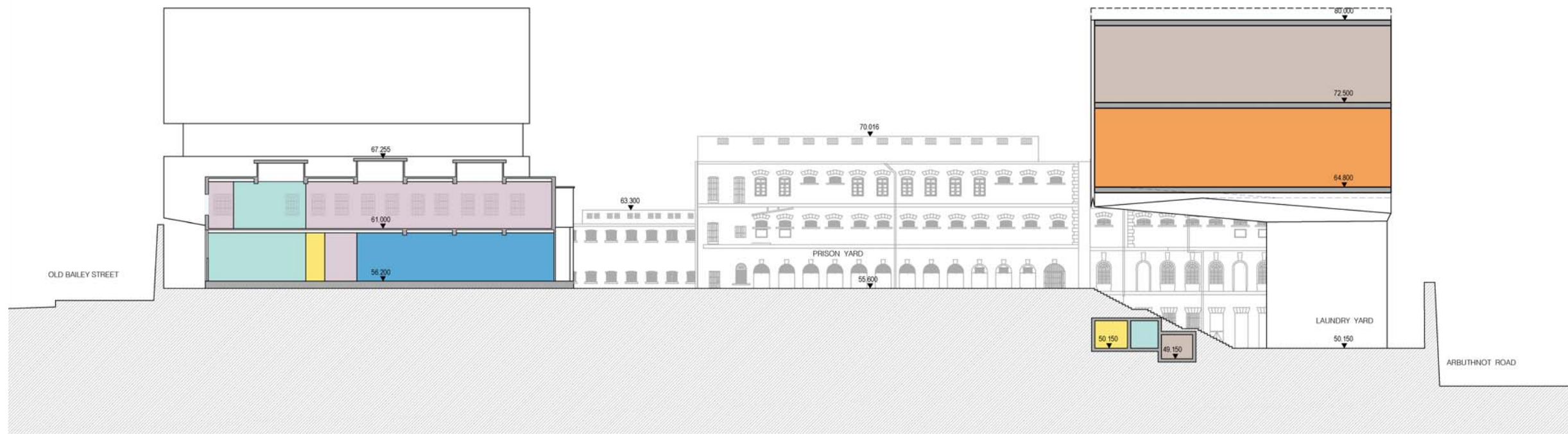
Proposed Master Layout  
Level 76.995 to 80.000

FILE: 0095646w11  
DATE: 29/12/2010

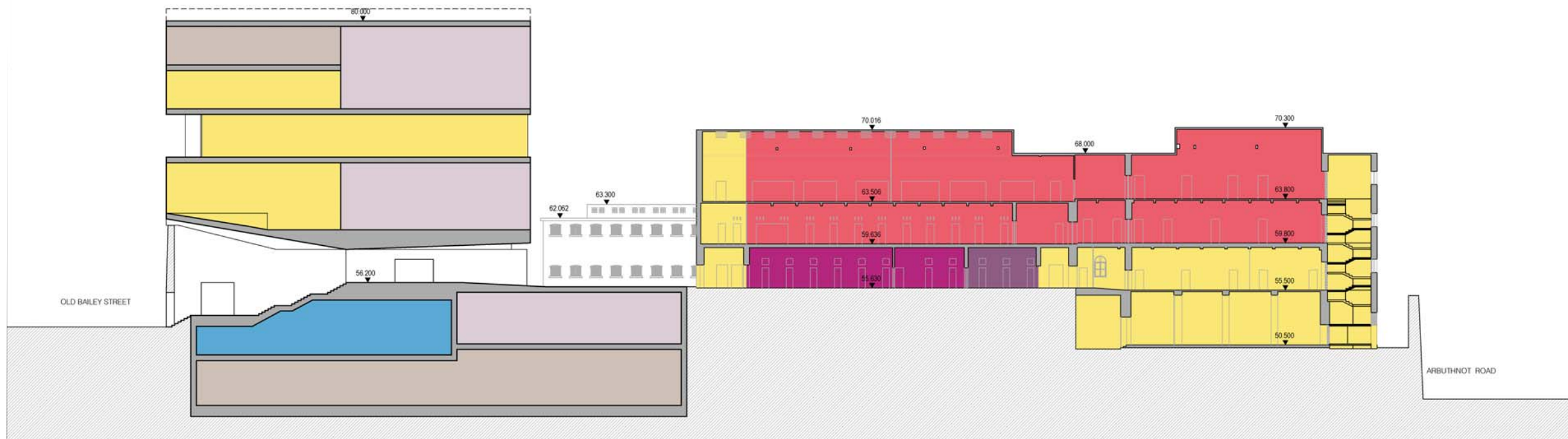
Environmental  
Resources  
Management



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









Site Section A - A



Site Section B - B

USES LEGEND

- |  |  |  |  |   |
|--|--|--|--|---|
|  F & B AND ANCILLARY SUPPORT  |  TOILET                             |  EDUCATION CENTRE AND ANCILLARY SUPPORT |  ARTS RELATED SUPPORT SPACE                           |  SITE MANAGEMENT OFFICES AND STORE ROOMS |
|  RETAIL AND ANCILLARY SUPPORT |  PLANT ROOMS AND MAINTENANCE ACCESS |  MULTI-PURPOSE AND ANCILLARY SUPPORT    |  POLICE REPORTING CENTRE                              |   |
|  CIRCULATION                  |  INTERPRETATION ROOM                |  ART GALLERY AND ANCILLARY SUPPORT      |  ARTS RELATED ORGANISATION ARCHIVES AND RECORD CENTRE |   |

NOTE: THE STRUCTURAL FLOOR LEVEL OF MAIN ROOF FOR NEW BUILDINGS WILL NOT EXCEED 80MPD, CERTAIN NON-STRUCTURAL ELEMENTS WILL PROJECT ABOVE THIS STRUCTURAL FLOOR LEVEL, SUCH AS ROOF FINISHES, BUILDING MAINTENANCE SYSTEM, LIGHTNING PROTECTION PROVISION, ARCHITECTURAL FEATURE AND/OR SKYLIGHT, SUBJECT TO DETAIL DESIGN DEVELOPMENT.

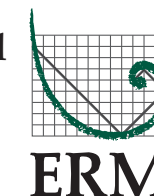


Figure 2.22

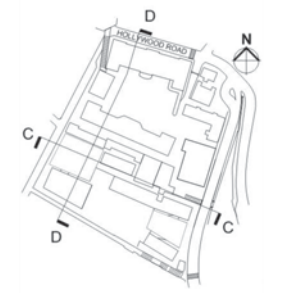
Proposed Master Layout  
Section A-A & B-B

FILE: 0095646w12  
DATE: 04/01/2011

Environmental  
Resources  
Management



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- USES LEGEND
- |                              |                                    |  |  |   |
|------------------------------|------------------------------------|--|--|---|
| F & B AND ANCILLARY SUPPORT  | TOILET                             | EDUCATION CENTRE AND ANCILLARY SUPPORT | ARTS RELATED SUPPORT SPACE                           | SITE MANAGEMENT OFFICES AND STORE ROOMS |
| RETAIL AND ANCILLARY SUPPORT | PLANT ROOMS AND MAINTENANCE ACCESS | MULTI-PURPOSE AND ANCILLARY SUPPORT    | POLICE REPORTING CENTRE                              |   |
| CIRCULATION                  | INTERPRETATION ROOM                | ART GALLERY AND ANCILLARY SUPPORT      | ARTS RELATED ORGANISATION ARCHIVES AND RECORD CENTRE |   |

NOTE: THE STRUCTURAL FLOOR LEVEL OF MAIN ROOF FOR NEW BUILDINGS WILL NOT EXCEED 80MPD. CERTAIN NON-STRUCTURAL ELEMENTS WILL PROJECT ABOVE THIS STRUCTURAL FLOOR LEVEL, SUCH AS ROOF FINISHES, BUILDING MAINTENANCE SYSTEM, LIGHTNING PROTECTION PROVISION, ARCHITECTURAL FEATURE AND/OR SKYLIGHT, SUBJECT TO DETAIL DESIGN DEVELOPMENT.



Figure 2.23

Proposed Master Layout  
Section C-C & D-D

FILE: 0095646w13  
DATE: 04/01/2011

Environmental Resources Management

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Site Section E - E



Site Section F - F

USES LEGEND

- |                              |                                    |  |  |   |
|------------------------------|------------------------------------|--|--|---|
| F & B AND ANCILLARY SUPPORT  | TOILET                             | EDUCATION CENTRE AND ANCILLARY SUPPORT | ARTS RELATED SUPPORT SPACE                           | SITE MANAGEMENT OFFICES AND STORE ROOMS |
| RETAIL AND ANCILLARY SUPPORT | PLANT ROOMS AND MAINTENANCE ACCESS | MULTI-PURPOSE AND ANCILLARY SUPPORT    | POLICE REPORTING CENTRE                              |   |
| CIRCULATION                  | INTERPRETATION ROOM                | ART GALLERY AND ANCILLARY SUPPORT      | ARTS RELATED ORGANISATION ARCHIVES AND RECORD CENTRE |   |

NOTE: THE STRUCTURAL FLOOR LEVEL OF MAIN ROOF FOR NEW BUILDINGS WILL NOT EXCEED 80MPD, CERTAIN NON-STRUCTURAL ELEMENTS WILL PROJECT ABOVE THIS STRUCTURAL FLOOR LEVEL, SUCH AS ROOF FINISHES, BUILDING MAINTENANCE SYSTEM, LIGHTNING PROTECTION PROVISION, ARCHITECTURAL FEATURE AND/OR SKYLIGHT, SUBJECT TO DETAIL DESIGN DEVELOPMENT.

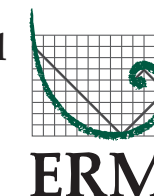


Figure 2.24

Proposed Master Layout  
Section E-E & F-F

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Environmental  
Resources  
Management



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Location	Proposed Uses
Married Sergeants Quarters	<ul style="list-style-type: none"> <li>Arts related support space <sup>(a)</sup></li> <li>F&amp;B and ancillary support</li> <li>Retail and ancillary support</li> <li>Public circulation</li> <li>Toilet</li> </ul>
Single inspectors Quarters	<ul style="list-style-type: none"> <li>Police reporting office</li> <li>Toilet</li> </ul>
Ablutions Block	<ul style="list-style-type: none"> <li>Plant rooms</li> <li>Public circulation</li> <li>Toilet</li> <li>Site management office and store room</li> </ul>
Central Magistracy	<ul style="list-style-type: none"> <li>Interpretation room</li> <li>Multipurpose <sup>(b)</sup> and ancillary support</li> <li>F&amp;B and ancillary support</li> <li>Retail and ancillary support</li> <li>Public circulation</li> <li>Toilet</li> <li>Site management office and store room</li> </ul>
Superintendents House	<ul style="list-style-type: none"> <li>Arts related support space <sup>(a)</sup></li> <li>Retail and ancillary support</li> <li>Public circulation</li> <li>Toilet</li> </ul>
A Hall	<ul style="list-style-type: none"> <li>Education centre</li> <li>Public circulation</li> <li>Toilet</li> <li>Site management office and store room</li> </ul>
B Hall	<ul style="list-style-type: none"> <li>Interpretation room</li> <li>Public circulation</li> <li>Site management office and store room</li> </ul>
C Hall	<ul style="list-style-type: none"> <li>Interpretation room</li> <li>Art related support space <sup>(a)</sup></li> <li>Retail and ancillary support</li> <li>Public circulation</li> <li>Toilet</li> <li>Site management office and store room</li> </ul>
D Hall	<ul style="list-style-type: none"> <li>Interpretation room</li> <li>Arts related organisation archives and record centre</li> <li>Art related support space <sup>(a)</sup></li> <li>Public circulation</li> <li>Toilet</li> <li>Site management office and store room</li> </ul>

Location	Proposed Uses
E Hall	<ul style="list-style-type: none"> <li>Multipurpose <sup>(b)</sup> and ancillary support</li> <li>Public circulation</li> <li>Toilet</li> <li>Interpretation rooms</li> </ul>
F Hall	<ul style="list-style-type: none"> <li>Interpretation rooms</li> <li>Art gallery and ancillary support</li> <li>F&amp;B and ancillary support</li> <li>Public circulation</li> <li>Toilet</li> </ul>
Bauhinia House	<ul style="list-style-type: none"> <li>Public circulation</li> </ul>
New Building (Old-Bailey Wing)	<ul style="list-style-type: none"> <li>Art gallery and ancillary support</li> <li>F&amp;B and ancillary support</li> <li>Public circulation</li> <li>Toilet</li> <li>Loading/unloading bay and two truck stops</li> </ul>
New Building (Arbuthnot-Wing)	<ul style="list-style-type: none"> <li>Multipurpose <sup>(b)</sup> and ancillary support</li> <li>Plant Rooms</li> <li>Public circulation</li> <li>Toilet</li> </ul>

**Notes:**

(a) Arts-related support spaces refers to the spaces for art and cultural programmes such as:

- museum quality exhibition spaces, galleries, video/film projection space, events, exhibition, performances, concerts, discussions and poetry reading space for classic, modern or contemporary art, design, film, video, photography, drawings, cartoons, architecture, monographic, performance art, fashion, sculpture;
- library/archive/study area/video/reading/viewing spaces;
- small working spaces for arts use;
- spaces for sound pieces art works;
- heritage interpretation spaces;
- display spaces.

(b) Multipurpose spaces refers to the spaces potentially serving the following functions:

- Lecture/ viewing Room/Conference Centre
- Venue for medium and small sized musical performances
- Venue for literary/poetry readings
- Venue for small scale theatrical/dance performances
- Private functions (e.g. corporate gatherings and small scale weddings)

### 2.6.3 Construction and Modification/Refurbishment Works

The construction and modification/refurbishment works are designed to match the requirements of the proposed uses and enhance the spaces and connections between the buildings and improve circulation throughout the Site. The key modification/refurbishment works will include repairs to internal finishes and necessary alterations, repair of facades, electrical and mechanical upgrading, improve the paving and site circulation between buildings and opening up part of the existing boundary wall to facilitate access to the Site.

General

Much of the works are to remove later accretions and to bring the buildings back into a good state of repair. The works common to all buildings include:

- *Windows* – they will be carefully repaired where original fabric remains or will be replaced with high quality copies of the original windows to bring the elevations of the buildings back to the original design intention.
- *External façade* - the scope of the work on the external skin of the buildings will be re-roofing with traditional Chinese tiled roofs, repairs to masonry walls and redecorations, removal of later service pipes and cables that are no longer needed and similar work.
- *Internal work* - the works will be more significant as modern partitions and false ceilings are generally to be removed and fire compartmentation is to be added to the buildings along with improved insulation to cut down on heat gain. There will also be some disruption to finishes to allow the strengthening of floors and to allow the floors to be brought up to an appropriate standard of fire compartmentation. This will generally be achieved by adding to the existing structure and strengthening it, rather than by removal and replacement. There will also be disruption to install new services, electrics, fire detection and alarms, telephones, computer cabling, hot and cold water and ventilation works. Care will be taken to ensure that these services are fitted with the minimum disruption to original finishes or structures.
- *Lift* - all the buildings will be provided with lifts (either platform lifts or full passenger lifts) to accommodate accessibility.

Specific Modification Works

For more comprehensive details of the proposed modification to the existing historic buildings please refer to Section 3. Table 2.3 outlines the specific modification/refurbishment works for individual building and structure within the CPS.

**Table 2.3 Proposed Modification/Refurbishment Works in CPS**

Location	Modification/Refurbishment Works
Police Headquarters	All four floors of the building will be brought fully back into use, and provided with new lifts. The old double height gymnasium, latterly used as a traffic control centre, will have its inserted floor removed and will be reclaimed for multipurpose performance activities, and others areas in the building will be used mainly for retail. Modern partitions and suspended ceilings will be removed on each floor level. The upper floor where the original dormitory spaces are located will be opened up to make new restaurants. The main staircase and the cross passages and the Superintendent of Police’s office will be retained and refurbished for public display. A later open canopy on the east side wing facing the Parade Ground will be removed.
Armoury and Store	The blocked in Veranda on the east side of the building will be opened up to regain the original design, and the flat roofed first floor addition over the veranda will be removed to provide a balcony. Internally the modern partitions will be removed to create open areas on both floors for the new retail use, and the existing stair will be replaced to allow direct escape to the exterior. A second stair has to be added to provide an alternative means of escape which will be necessary to allow public access to the first floor. A

Location	Modification/Refurbishment Works
	small lift will be provided.
Barrack Block	All four floors will be brought back into full use, and provided with new lifts, with three floors of retail and an upper floor containing two restaurants. There will also be a small Museum and interpretation room on the ground floor. The work will require the removal of modern suspended ceilings and some modern partitions. The floors will be strengthened by the addition of steel beams underneath the existing timber joist structure with minimal loss of original fabric. The clutter of modern extensions and the security fence at ground floor level to the south of the Barracks will all be removed to reveal the original form of the building. The wide open porch on the north elevation on the east side of the Barrack Block will be removed to regain the impressive original building appearance. The intention is to reuse the existing staircases (which are significant historic features) despite the presence of winders. The Barrack Block is attached to the blocks to the south by a set of three bridges and to the Magistracy on the east by a single bridge. There have been more of these in the past. To avoid putting new staircases within the Barrack Block it is intended to put in five new bridges to facilitate alternative means of escape.
Deputy Superintendent’s House and Married Inspectors’ Quarters	The ground floor rooms of this relatively fragile building will be used for interpretation purposes and for retail. The upper timber floors will be used arts-related support spaces. The house has the original steep stairs and relatively slender floor construction. The proposed uses should ensure that minimal alterations and strengthening are necessary. The main alterations to the building will be the reopening of the original verandas on the north and east sides. It will also be necessary to alter one room on each floor to allow the two verandas to be joined to allow an alternative means of escape down the existing staircases. A small lift will be provided.
Garage	This timber framed building from the 1930’s will be demolished to create a new courtyard in front of the Deputy Superintendent’s House.
Married Sergeants’ Quarters	This small relatively fragile house will remain unaltered except for the insertion of a new platform lift and new toilets, and minimal alterations to widen a number of doorways to provide full wheelchair access. The lower floor will be used for retail and a small café, and the upper floor for arts-related support spaces.
Single Inspectors’ Quarters	This house will also remain unaltered except for the insertion of a platform lift to give access to the upper floor and two new toilets. The house will be used as a police post.
Ablutions Block	The Ablutions block is the most significantly altered building on the Site. A large amount of electrical load will be needed in the existing buildings for their new uses, as well as for the new cultural buildings containing art galleries and multipurpose spaces. It has been decided that the Ablutions block represents the best option for a centralised location for the transformers and switchgear and emergency generator needed for the Site with a direct road access. The building will remain relatively unaltered as far as its exterior is concerned, including the balconies on the north side. Internally, however, the existing floors will be removed and new concrete floors will be inserted to allow for the adjusted heights needed for the transformers and for the necessary ductwork for high voltage cables.
Central Magistracy	The Magistracy will have mixed uses. New lifts will be provided. The lowest floor will largely be used for specialist retail (a book shop seems to be the most appropriate). The middle two floors with the double height court rooms will be used as multipurpose entertainment spaces and the upper floor will be used as a restaurant. The only area where major alterations are proposed is in the lowest floor. Because of the slope of the ground the south end of the lowest floor is a basement below the surrounding ground level (this will be used for plant and storage space) whereas the north end of this floor is slightly above the adjacent ground level opening out onto the new yard in front of the Deputy Superintendent’s House. This north side will be used as the bookshop. At the higher levels there is relatively little alteration to the structure. Some modern accretions, such as the lobbies to the court rooms will be removed. The courts

Location	Modification/Refurbishment Works
	will be restored to their original appearance by removing the blocking to the balconies to allow these to be reopened as balconies and the full extent of the decorated ceiling to be seen once again. On the top floor, the bulk of the modern partitioning is to be removed along with the inserted modern suspended ceilings. Escape will be via the existing staircases, justified by a fire engineering approach, although some work is needed to introduce fire doors and create new escape routes. It is not anticipated that significant work will be needed to the existing structure.
Superintendent's House	The major work to the relatively fragile Superintendent's House is the reopening of the central archway on the east side, part of the earlier entrance to the prison, to provide public circulation access from the Magistracy Terrace directly through the Superintendent's House and adjacent C Hall into the yards around A Hall and B Hall – thus avoiding the long route around to the Ablutions block which is the only access to the Prison at present. It is also proposed to demolish the single storey extension at the east side of the house which opens into the yard north of D Hall's east wing. Demolition of this cell will allow access from the Magistracy Terrace directly into D Hall east at its lowest level. The Superintendent's House will be used in conjunction with C Hall to provide retail outlets and some public toilet space on the ground floor, and arts-related support spaces on the floors above. The more robust C Hall will house the new lift and alternative fire escape stairs. There will be minimal changes to the planning of the Superintendent's house itself and only limited work to restore the interior, strengthen and provide fire compartmentation to the floors, and provide a new lift and a small change of level lift for disabled access.
A Hall	A Hall is to be used as the primary education centre of the Site with provision for classrooms on the ground floor and offices and storage above. New stairs and lifts will be provided at the east end, shared with C Hall, for access to the upper floor, and at the west end which will also provide access and escape for the Ablutions block and the Barrack Block, via the proposed bridge links. There will be no significant change to the external appearance or construction of the building and the internal floors, walls and partitions will generally be maintained and adapted where necessary. The proposal to create a new tunnel for public circulation access from the lane at the south side of the Barrack Block under A Hall, with a stairway rising into B Hall will be tunnelled in horizontally as described in more detail in Section 3. The intention is that there will be no adverse impact at all on the fabric of A Hall during both tunnel construction and operation phases (see Sections 3.6.2 and 3.7.3 for mitigation measures). The presence of a stairway passage will not affect the structural integrity of the building.
B Hall	B Hall is to be generally left in its current state with no work other than weathering repairs and health and safety work. For the public to safely use the upper floors would require a lift for equal access and two new staircases for access and escape. This would do a great deal of damage to the fabric of the building, and the intention is to leave it untouched. As such it will provide a primary interpretation area of a cell block, but the public will only be allowed into the ground floor. External work will be limited to repairs to the asphalt roof and the clerestory rooflight, overhauling and repainting gutters and downpipes, repairing and repainting windows and external gates. Internally the work will be limited to electrics for fire alarms and smoke detection and emergency lighting. As noted for A Hall above there will be a new tunnel under B Hall with a stairway, and also a lift, rising up through the ground floor to provide public circulation access from the lower site to the upper site levels. The intention is that there will be no adverse impact at all on the fabric of B Hall during both tunnel construction and operation phases (see Section 3.7.3 for mitigation measures to avoid damage to B Hall during tunnel construction). The presence of a stairway passage will not affect the structural integrity of the building. The passageway will be located within the width of three cells to be removed across the building. An opening of three cells wide will be formed in the south elevation at the ground floor landing of the new stairway and lift suitable for safe circulation of the public out into B Hall Yard. The ground floor cells to the east of the new stairway will be left intact for interpretation purposes, and the cells to the west will provide stores. The upper floors cannot be made accessible for the public without two new staircases which would destroy a considerable amount of the interior. It is hoped to be able to take very small groups of the public under supervision to see the upper floors but only for interpretation purposes.

Location	Modification/Refurbishment Works
C Hall	The work in C Hall needs to be seen in conjunction with the Superintendent's House as the two buildings are interconnected. The major intervention is a new stair and lift core on the north side providing service access and escape stairs for both C Hall and for the Superintendent's House. This stair will also, via bridge links, provide the alternative means of escape from the upper floors of the Barrack Block. The structure of C Hall is robust with minimal finishes. Little needs to be done to this area to accommodate the new proposed uses, which are public circulation and toilets on the ground floor and site management offices and plant space on the upper floors. The old Prison Kitchen is being retained as an interpretation space.
D Hall	The use of the upper two floors of D Hall for an Arts-related Organization Archive and Record Centre is seen as a most suitable function for this long prison building in this part of the Site. The location is adjacent to the new buildings which will help bring the planned arts-related revitalization to the former bleak Prison site. Pairs of the existing cells will be opened together for the archive rooms, and rooms which have been formerly altered will be further adapted to form the library space. A set of the impressive range of cells on the ground floor of the West Wing will be retained for interpretation of the original Prison. The other cells will also be retained and used for arts-related purposes. As well as providing entrance lobbies at lower ground and ground floor levels for the Arts-related Organization accommodation on the upper floors, the uses of the lower floors of the East Wing for public accessible toilets and storage are related to the new entrance into the site from Arbuthnot Road, and the cultural, interpretation and leisure activities planned in the adjacent areas of the Prison Yard and the Laundry Yard. The original stair in West Wing will be retained and refurbished. Two new staircases will be required in East Wing to make the whole of D Hall suitable for reuse. One of these stairs will also provide the alternative means of escape for the new building in the Laundry Yard via a bridging link. Three lifts will be provided for this long building, two including a fireman's lift in the East Wing, and one in the West Wing.
E Hall	The lower ground floor of E Hall with the existing walls removed, is seen as being most useful in providing visitors entering the Site from the new Arbuthnot Road entrance, either as individuals walking in or as coach parties being dropped off, with an impressive covered space. Overhead cooling fans will create a space for people to assemble and be given some preliminary information about the history of the Site before going on guided tours. It will also be used for arts-related activities. Two cells in the ground floor area of E Hall adjacent to the west entrance will be retained for some interpretation of the former Prison activities in the context of the Prison Yard, and the other cells on this floor will be opened together in twos and threes for an arts-related programme of small scale activities or exhibitions. The upper floors can be made accessible from a new staircase and lifts in the new building in the Laundry Yard and, by opening the cells together again in twos and threes, will provide suitable back-up spaces for the new multipurpose activities in the new building. The interventions for these uses will retain the characteristic open stair and balcony circulation of the cell block and its structural integrity. The main intervention will be the provision of a new code compliant staircase for an alternative means of escape, and this will be provided in a shaft formed from a stack of four cells on the south side. The final flight of this escape stair, only used for emergency egress, will be external on the south elevation of E Hall, descending from the ground floor down to the new entrance to the Site and hidden from view by the high Chancery Lane wall.
Workshops & Laundry	The Workshops and Laundry Yard structure will all be demolished to reopen the lower yard. There would need to be significant work to the existing structures to adapt and strengthen them for new uses, and their removal will allow more of the elevations of D Hall and E Hall to be seen. A new wide external staircase will be provided between the Laundry and Prison Yards, under the canopy of a new arts-related building to be built overhead between D and E Halls. This new building will also provide the centralised chilled water cooling towers for the whole Site. The space under the new staircase adjacent to the revetment wall to the Prison Yard will be a passageway across the Laundry Yard with public accessible toilets serving this area of the Site.

Location	Modification/Refurbishment Works
F Hall	F Hall will be retained and refurbished for uses in conjunction with the arts –related revitalization of the Prison site. A new building will be located adjacent to F Hall, currently on the site of the existing General Offices. Between F Hall and the new building there will be a new entrance into the Site from a new opening in the revetment wall on Old Bailey Street. On the ground floor of F Hall the reception areas and the booths for visitors and prisoners will be retained for interpretation, but the existing open barred cell areas on the first floor will be recorded and cleared away for an art gallery. The remaining existing partitions of the ground floor will be removed and the area will be used for a shop and café and toilets related to the new art galleries on the first floor of F Hall and in the adjacent new building. The new lifts and staircase for access to the first floor gallery space in F Hall will be provided in the adjacent new building to avoid significant interventions. The existing structure will be retained and strengthened, and the existing open external stairway on the east side will be retained as a means of escape. The existing windows of F Hall will be retained but adapted for the internal conditions required for the new uses.
General Office	The modern office and other buildings will all be demolished to make a site for the new arts-related building to be used in conjunction with F Hall. All the modern offices and the separate stores in the office yards will be removed.
Bauhinia House	Bauhinia House will be repaired and have the modern finishes and fittings removed. It is intended to open up the doorway to the Arbuthnot/Chancery Lane corner, to open the blocked door from Bauhinia House into the Laundry Yard, and to install a ramp for equal access into the Site in this location. This small building will also provide some interpretation and information at this new entrance to the Site.
External and Revetment Walls	<p>There are a number of significant walls around and across the Site which are seen as highly significant structures. The intention is to keep the external walls to the whole Site very much as they are at present. The internal revetment walls will also all be retained though some more modifications will be undertaken here to provide entrances and exits. Modifications will include:</p> <ul style="list-style-type: none"> <li>○ The opening of a new pedestrian gateway in the revetment wall on Arbuthnot Road close to Bauhinia House in the location of a former historic opening to the Site. This will also provide an emergency exit from the Site.</li> <li>○ A new gateway opening will be formed into the Prison site in the revetment wall on Old Bailey Street, to provide both a new pedestrian access and emergency egress. In association with the new gateway from Arbuthnot Road this will encourage public circulation through the upper level of the site. The size of the new opening will be visually quite small in the context of the proportion of the revetment wall and should not reduce the sense of containment of the site.</li> <li>○ The taking down and rebuilding of a section of high revetment wall onto Old Bailey Street. This part of the wall has been prejudiced by a wall tree and is leaning over to some degree. As there is to be a deep basement next to this wall it would seem to be more sensible to take down the unstable section and rebuild it rather than trying to stabilize it <i>in situ</i>.</li> <li>○ The red brick single storey extension adjacent to the south side of the Ablutions building on Old Bailey Street will be removed to provide a vehicle access to the new service yard.</li> <li>○ The retaining wall to the south of the new service yard is currently heavily buttressed with steelwork. A new service entrance is to be cut in this wall for access to the back of house spaces of the new arts-related building. As the wall is already in poor condition and new basements are to be excavated on its south side, it will more practical to take it down and rebuild it rather than stabilizing it <i>in situ</i>.</li> <li>○ A new gateway will be made in the wall on Old Bailey Street adjacent to the Barrack Block. This is necessary to provide access to the Site for people coming from Staunton Street. The gateway will follow the pattern of the historic gates – one gate pier of which remains.</li> <li>○ The curved modern concrete wall, which has been built to allow the sweep of Arbuthnot Road into Wyndham Street must be retained as there is no scope for regaining the historic building line. The intention is to add a new facing to the relatively modern concrete wall using a material similar to that proposed for use on the facades of the new buildings. This will identify this particular section of</li> </ul>

Location	Modification/Refurbishment Works
	<p>wall as not being original or on the original alignment of the historic granite wall.</p> <ul style="list-style-type: none"> <li>○ The wall which run east west across the Site to the south of the Barrack Block is an early retaining wall. This is to be repaired but there will be three new openings created in it (two of these will be about 1.5m wide to accommodate escape routes from the new stairs through A and C Halls. The third will be wider to accommodate the new public circulation access tunnel stairway and lift to the upper site levels.</li> <li>○ The new footbridge from the mid-levels escalator to the Site will require the existing balustrade between the Police Headquarters and the Armoury buildings on Old Bailey Street to be removed.</li> </ul> <p>The findings of the cultural heritage impact assessment (refer to Section 3 and Annex A1) is that the overall impact of these openings is not highly significant. The bulk of the wall remains and the sense of this being an enclosed site will not be significantly diminished. The new openings will not detract from any interpretation of the Site. The new openings do play a critical part in making the Site work well for all visitors in the future.</p>

The construction programme is shown in *Figure 2.8*. The construction works are tentatively scheduled to commence in early 2012 and complete during 2014. The modification works at the existing buildings are divided into four phases. The major demolition and excavation work will be conducted in Phase 1 while Phases 2 to 4 will involve renovation work carried out mainly by the use of handheld/light equipment. The construction work for the new building will be undertaken in parallel to the modification works at the existing buildings.

## 2.7 CONCURRENT PROJECT

There are no major construction projects identified during the construction phase of this Project. However, the former Police Married Quarters on Hollywood Road at about 250m to the west of the Project Site will be revitalized and brought into operation in early 2014 (See *Figure 2.25*). The planning of the revitalisation work is on-going and detail information regarding its environmental impact is not available yet. Hence, the cumulative impact cannot be assessed at this stage. However, it is envisaged that the revitalisation work would be relatively small scale. Given that the former Police Married Quarters site is located at about 250m away from the CPS and with dense high rise buildings in between, it is not expected that there will be any adverse cumulative impact arising from the construction of the former Police Married Quarters project and the CPS project.

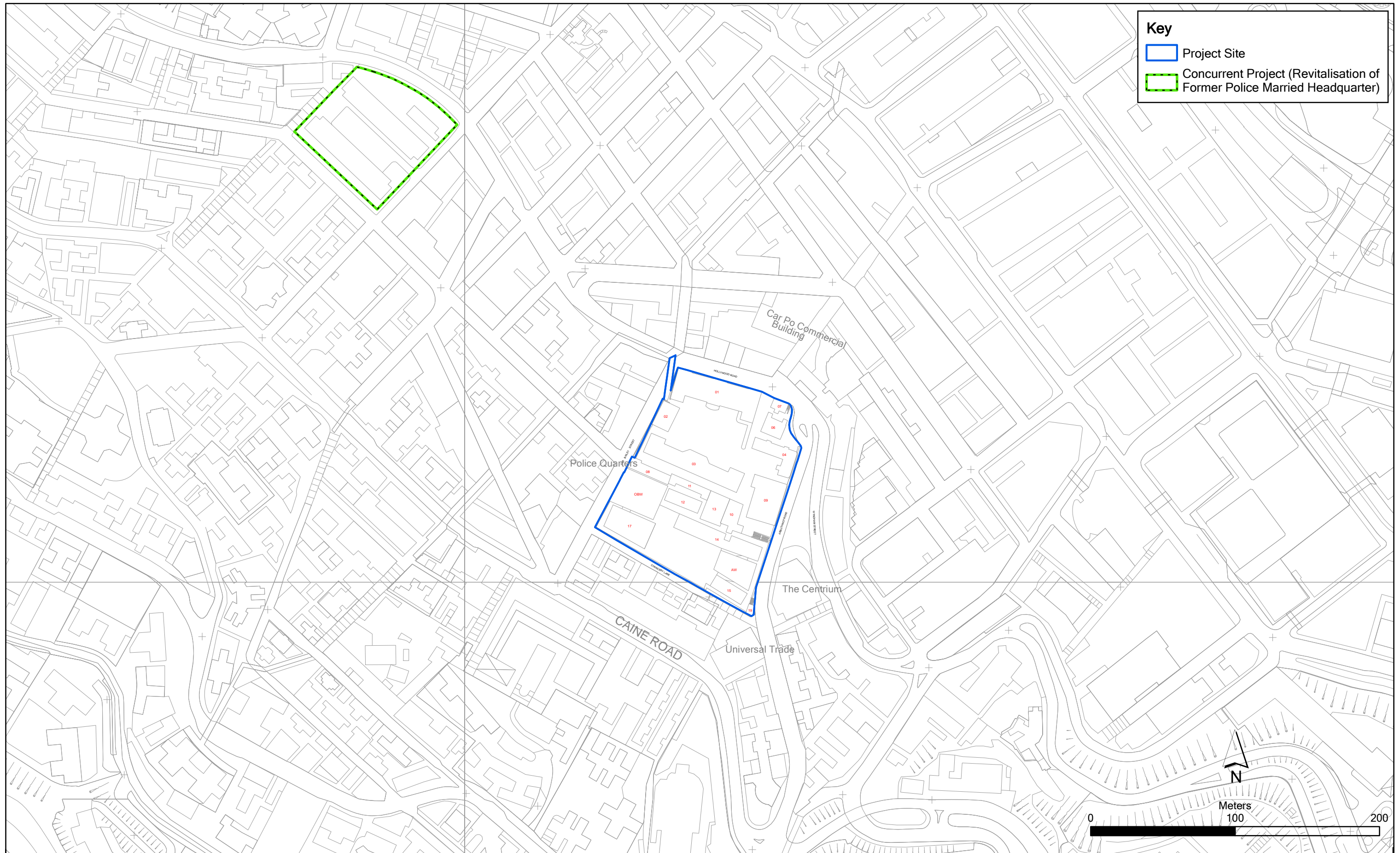
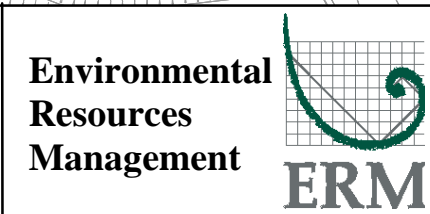


Figure 2.25

Location of Concurrent Project

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### 3 CULTURAL HERITAGE

#### 3.1 INTRODUCTION

This section presents the cultural heritage impact assessment (CHIA) for the Project. The CHIA has been completed in accordance with the requirements set out by the *EIA Study Brief* and the *EIAO-TM*. The main objectives are:

- To carry out a Baseline Study, the purpose of which is to investigate the history and establish the cultural significance of the CPS, including its historic buildings, structures and spaces;
- To formulate a Heritage Conservation Policy which provides guidance on how to conserve, control change, manage and interpret the CPS;
- To identify the impacts of the proposed development and identify mitigation measures to control these impacts; and
- To provide a Conservation Management Plan (CMP) for long term caring of the heritage site(s) and sustainability of the adaptive reuse.

##### 3.1.1 Other Built Heritage Resources within 50m but Outside the Site

In the area around the Site, there are numerous examples of historic built fabric. These include some remnants of 19<sup>th</sup> century granite walls or steps located along the streets immediately around the Site including Hollywood Road, Arbuthnot Road, Chancery Lane, Wyndham Street, Old Bailey Street, Staunton Street, Elgin Street and Caine Road. They are presented in *Tables 3.2 to 3.9* below.

#### 3.2 RELEVANT LEGISLATION AND GUIDELINES

The following legislation and guidelines are applicable to the assessment of impacts on sites of cultural heritage in Hong Kong, and have therefore informed the statements made within this section:

- *Environmental Impact Assessment Ordinance (EIAO) (Cap. 499. S16), Technical Memorandum on the EIA Process, Annex 10 and 19 (EIAO TM) and Guidance Notes on Assessment of Impact on Sites of Cultural Heritage* in EIA Studies;
- *Antiquities and Monuments (AM) Ordinance (Cap. 53)*;
- *Guidelines for Cultural Heritage Impact Assessment (CHIA) for Adaptive Reuse Projects (as at May 2009)*;
- *Hong Kong Planning Standards and Guidelines (HKPSG)*; and
- *Land (Miscellaneous Provisions) Ordinance*.

#### 3.2.1 EIAO & EIAO TM

According to the *EIAO, Schedule 1 Interpretation*, "Sites of Cultural Heritage" are defined as:

*"an antiquity or monument, whether being a place, building, site or structure or a relic, as defined in the AM Ordinance and any place, building, site or structure or a relic identified by the Antiquities and Monuments Office to be of archaeological, historical or paleontological significance"*.

The technical scope for evaluating and assessing the cultural heritage impacts is defined in *Annexes 10, 18, and 19* of the *EIAO TM*. The approach recommended by the guidelines can be summarised as follows:

- *The general presumption in favour of the protection and conservation of all sites of cultural heritage because they provide an essential, finite and irreplaceable link between the past and the future and are points of reference and identity for cultural and tradition; and*
- *Adverse impacts on sites of cultural heritage shall be kept to an absolute minimum.*

#### 3.2.2 Antiquities and Monuments Ordinance

The *AM Ordinance (Cap. 53)* provides statutory protection against the threat of development on Declared Monuments, historic buildings and archaeological sites to enable their preservation for posterity. The *AM Ordinance* also establishes the statutory procedures to be followed in making such a declaration and specifies the need of a Section 6 permit for works to be carried out in a declared monument. *Section 11* of the *AM Ordinance* requires any person who discovers an antiquity, or supposed antiquity, to report the discovery to the Antiquities Authority. By implication, construction projects need to ensure that the Antiquities Advisory Board (AAB) is formally notified of archaeological resources which are discovered during the assessment or construction of a project.

#### 3.2.3 Hong Kong Planning Standards and Guidelines

*Chapter 10: Conservation*, of the *HKPSG* provides general guidelines and advice for the conservation of historical buildings, archaeological sites and other antiquities. Of particular interest is *Section 2: Principles of Conservation*, and *Section 4: Conservation of Monuments, Historical Buildings, Archaeological Sites and other Antiquities*. In accordance with section 4.3 of the guidelines there have been 3 Declared Monuments identified in the Site.

#### 3.2.4 Guidelines for Cultural Heritage Impact Assessment (CHIA) for Adaptive Reuse Projects (as at May 2009)

The Guidelines for Cultural Heritage Impact Assessment (CHIA) for Adaptive Reuse Projects (as at May 2009) are stated in *Appendix B* of the *EIA Study Brief No. ESB-205/2009*, which sets out the requirement of baseline study, conservation policy, impact assessment study and long-term impact control. This section has been written with the context and layout of these guidelines as a framework.

### 3.2.5 Land (Miscellaneous Provisions) Ordinance (Cap. 28)

Under this Ordinance, it is required that a permit be obtained for any excavation within government land prior to commencement of the excavation work. While there has not been any excavation carried out on site prior to the completion of this report, there will be a necessity for both archaeological and construction excavation relating to the proposed works.

### 3.3 ASSESSMENT METHODOLOGY

In accordance with *Clause 3.4.1.1 of the EIA Study Brief No. ESB – 205/2009*, the Cultural Heritage study area is within 50 metres from the project boundary.

In accordance with *Clause 3.4.1.3 of the EIA Study Brief No. ESB-206/2009*, the CHIA comprises two parts: the Building Heritage Impact Assessment (BHIA) and the Archaeological Impact Assessment (AIA). The methodology for the BHIA and AIA follows the *Guidelines for Cultural Heritage Impact Assessment (CHIA) for Adaptive Reuse Projects* as stated in *Appendix B of the EIA Study Brief No. ESB – 205/2009*.

This report is based on the guidelines provided in the *EIA Study Brief No. ESB-205/2009*, specifically *Appendix B: Guidelines for Cultural Heritage Impact Assessment for Adaptive Reuse Projects*. The guidelines provided in the Technical Memorandum have also been used as a reference, most notably *Annex 10 (Criteria for evaluating visual and landscape impact, and impact on sites of cultural heritage)*; *Annex 18 (Guidelines for Landscape and Visual Impact Assessment)*; and *Annex 19 (Guidelines for Assessment of Impact on Sites of Cultural Heritage and other Impacts)*.

This CHIA also references several international charters and other guidance, some of which are listed in the *Guidelines for the CHIA* provided in 2009. These are:

- Venice Charter: International Charter for the Conservation and Restoration of Monuments and Sites (1964)
- Convention for the Protection of the Architectural Heritage of Europe – the Granada Convention (1985)
- The Nara Document on Authenticity (1994)
- Principles for the Recording of Monuments, Groups of Buildings and Sites (1996)
- Burra Charter (1979, revision of 1999)
- Principles for the Conservation of Heritage Sites in China (2003)
- Hoi An Protocol for best Conservation Practice in Asia (2005)
- The Beijing Document (2007)
- Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment (2008)
- ICOMOS Charter on the Interpretation and Presentation of Cultural Heritage Sites (2008)

In addition, further guidance has been used to assess the significance of areas, features, buildings and spaces or elements within them. This includes *'Informed Conservation'* by Kate Clark (2001), *'Conservation Plans'* by James Semple Kerr (2006), and guidelines provided by other British-based organisations including English Heritage, Heritage Lottery Fund and National Trust.

In accordance with the guidelines for the CHIA, a Conservation Management Plan (CMP) was completed by Purcell Miller Tritton LLP in June 2008 for the whole of the CPS as enclosed in *Annex A6*. The research carried out to complete the CMP forms the basis for the Baseline Study of this CHIA as well as drawing up policies which formed a framework for the conservation and restoration of the existing buildings. Following the completion of the renovation works for the Site, the CMP should be updated in order to remain a viable working document for the owners and users of the Site. *Section 3.7.1* presents the changed elements of the CMP considering the span of time between completion of the CMP June 2008 and of this EIA Report, as well as the further research which has been carried out in that time.

The Site Plan with the locations and names of each individual building is shown in *Figure 2.7*. Each building within the Site has been provided with an identification number which will be used throughout this section.

#### 3.3.1 Desktop Study

According to *Section 1.3, Appendix B of the EIA Study Brief No. ESB 205/2009*, Graded historic buildings/street, declared monuments, and Government historic sites should be reviewed. Therefore, the initial step for conducting a baseline study was to consult the AMO *List of Historic Buildings in Building Assessment* (as of 10 November 2010, <http://www.amo.gov.hk/form/AAB-SM-chi.pdf>), the Government historic sites identified by AMO (as of 31 August 2010, [http://www.amo.gov.hk/form/build\\_hia\\_government\\_historic\\_sites.pdf?20100603](http://www.amo.gov.hk/form/build_hia_government_historic_sites.pdf?20100603)), and the AMO list of Declared Monuments in Hong Kong (as of 12 November 2010, [http://www.lcsd.gov.hk/ce/Museum/Monument/form/DM\\_Mon\\_List\\_e.pdf](http://www.lcsd.gov.hk/ce/Museum/Monument/form/DM_Mon_List_e.pdf)). This initial consultation revealed that the Site contains no Government historic sites, but does contain one Grade 1 historic street (Pottinger Street) and one proposed Grade 3 historic building (No.20 Hollywood Road) and three Declared Monuments (Former Central Magistracy, Arbutnot Road; Central Police Station Compound, Hollywood Road; and Victoria Prison Compound, Old Bailey Street).

A Baseline Condition study has been carried out for all of the heritage resources within the Site, including historic buildings, Prison Yard, Parade Ground and walls & revetments. The General Office (building 18) has not been included in the baseline assessments as it does not meet any of the requirements for inclusion in the baseline study defined by the CHIA guidance. It was not constructed before 1950, and is not considered to be *'of high architectural and historical significance and interest'*.

For each of these buildings and features both a field study and a desktop study were completed. The findings were used to inform historic development drawings and to set a basis for understanding the significance of the Site as well as any changes that have occurred over time. Inevitably, some buildings or features will have more information in the baseline study than others. This is based on the size, date and architectural complexity as well as the availability of archival and other research material.



Initial research for the desktop studies was carried out during the preparation of a CMP for the Site completed in June 2008. Following the completion of additional data collection and the desk top study, the information was compiled and used to write a general history for the Site. Any specific information was then used to create individual desk-top assessments for each building or feature.

Several sources were used to gather information initially for the CMPs and later for the Desktop study. For a full list of items used for researching this section please refer to the Bibliography in *Section 3.4.7*.

A summary of the sources used includes:

- **Antiquities and Monuments Office (AMO)**
- Various reports on the history and significance, historic photographs, maps and plans.
- **Journals of the Royal Asiatic Society and the Hong Kong Archaeological Society**
- The archive of articles was searched, but aside from general referencing material there was no specific information relating to the Site.
- **Hong Kong Public Records Office**
- Several visits were made to the Public Records Office, where numerous historic maps, plans, photographs and other documents were accessed.
- **National Archives, UK**
- The National Archives contained original design drawings for some of the buildings on the Site, as well as historic maps and plans of Hong Kong.
- **Hong Kong University Library**
- Books, dissertations, brochures, reports and journals all relating to the Site were referenced here.
- **Hong Kong University Library Digital Initiatives**
- This online resource supplied access to Oral Histories, newspaper articles, theses, photograph galleries and most importantly Hong Kong Government Reports Online (1842 – 1941), which includes Public Works Reports and Prison and Police Reports.
- **Photographic Archives**
- Several photograph archives were searched, including the University of Wisconsin Asia & Middle East Archive (Harrison Forman Collection); Gwulo: Old Hong Kong; and South China Morning Post.
- **Cartographic Archives**
- Numerous online cartographic archives held by universities and libraries were referenced.
- **Museums**
- Relevant museums in Hong Kong were visited to view any relevant documents and exhibitions. These include the Hong Kong Museum of History, Correctional Services Museum, and the Hong Kong Police Museum.
- **Oral Histories and Discussions**
- Interviews were held with members of the AMO, the Hong Kong University Architecture Department and other relevant groups. Other documents, such as the Anecdotes of Dr W K Chan were also referenced. A pilot study prepared by Dr Lawrence Ho of Lingnan University contains interviews with three former employees of the Central Police Station Compound. The *1841-2005 Victoria Prison Memorial Book* was also used and this provided descriptions of the everyday tasks carried out by individuals and general anecdotes about the running of the prison
- **Government Departments**

Government Departments including the Land Registry and District Lands Office were contacted. Also contacted with the GIS (Government Information Services) and GRS (Government Records Services)

### 3.3.2 Field Study

Several site visits were made from 2007 to 2010 with the intention being to gain a more complete understanding of the Site. For each building or feature, a thorough investigation was undertaken for the internal and external spaces, taking note of architectural styles and features, materials, alterations to the built fabric, areas or items of significance, and relationships between adjacent areas or spaces. A set of survey photographs was taken for each heritage resource within the Site.

Generally, each Field study entry contains the following information, though some categories may not apply to all entries:

- Designation
- Date of construction
- Location (including location plan)
- Height & number of floors
- Exterior & Interior descriptions (including photographic survey)
- Areas of Significance
- Summary of Archaeology
- History (including timeline and historic maps, plans and photographs)
- Significance
- Historic Development and Significance Drawings

### 3.3.3 Oral History

In accordance with *Section 1.3.1* of the *EIA Study Brief No. ESB-205/2009*, the baseline study should include an oral history in the form of 'discussion with the former users and the local informants' of the Site. To meet this requirement, a pilot study was carried out by Dr. Lawrence Ho of the Department of Political Science, Lingnan University. The draft report *Oral History of the Central Police Station* was completed 1 August 2010. This study represents an initial attempt at completing an oral history for the Site, and it is the intention that further studies of this kind will be carried out in future in order to provide a more complete understanding of the history of the Site.

The study was confined to interviews with three senior police officers (two retired, one serving). However, due to issues with confidentiality it was not possible at this time to establish contact with any previous users of the Magistracy, and the knowledge of prison workings was somewhat limited. The three individuals interviewed were:

- An expatriate inspector who joined the Hong Kong Police in the 1950s. He was an officer in the Police-Military Liaison Office (Pol-mil) during the 1967 riots.
- A serving Senior Superintendent who was on duty in the Central Police Station in the 1980s when he was deployed to the Hong Kong Island Traffic Division.

- A retired Assistant Commissioner who worked in the Central Police Station in several stints, and has taken responsibility for the internal renovation of the Officers' Mess.
- The oral history report highlighted four areas which were discussed by all three informants: Fengshui and ghost stories, pay day, worshipping Guangong and other rituals, and the Officer's Mess.

### 3.3.4 Ground Penetrating Radar Survey

As the desk-based assessment identified areas with archaeological potential but the information is considered inadequate for further detailed impact assessment, a non-destructive Ground Penetrating Radar (GPR) survey was conducted in August 2009 to obtain the field data. The GPR survey was carried out at the Site on 13<sup>th</sup> – 15<sup>th</sup>, 17<sup>th</sup>, 26<sup>th</sup>, and 27<sup>th</sup> August 2009. The survey was performed by FT Laboratories Limited working as sub-contractors for Alliance Professional Surveys. The equipment used was the GSSI GPR with 400 MHz antenna for scanning, and the GSSI TerraSIRich SIR System-3000 for data processing. The process of carrying out the survey is given here, as detailed by FT Laboratories Ltd:

*'The GSSI GPR system produces a cross-sectional image of subsurface features. The system design allows for concrete scanning to locate re-bar, pipes, tension bars, conduits, and voids within and behind/beneath concrete slabs. GPR is a remote sensing technique that uses microwave electromagnetic energy. An antenna, or transducer, transmits brief pulses of energy into the ground or concrete structure...The GPR antenna radiates signals into the structure, where they are reflected from the subsurface objects or voids'.*

The survey was carried out in specified areas throughout the Site, namely:

- The Parade Ground, including the area beneath the west porch of the Barracks Block (building 03) but excluding Pottinger Street and the area immediately west of the Married Inspectors' Quarters and Deputy Superintendent's House (building 04) and the Garage (building 05).
- The Prison Yard
- F Hall (building 17) ground floor, though excluding the south alleyway (this was carried out at a time when there were proposals for demolition of F Hall)
- A narrow strip of ground running north-south from the north side of A Hall (building 11) to the south side of the west extension of D Hall (building 14)

Figure 3.1 shows the exact location of these GPR survey for the Site. A summary of the survey finding is presented in Section 3.4.6 and detailed in Annex A3.

## 3.4 BASELINE HISTORY

### 3.4.1 History of the CPS

The history of the Site has been well researched in various texts including theses, AMO documents and the CMPs produced for the whole of the CPS, and these should be the main point of reference for understanding the history of the Site and of the Hong Kong Correctional Services and Police Force. Provided here is a brief summary of the history of the Site documenting the major events to occur up to decommissioning in 2006. For more in-depth information relating to the history and development of the individual buildings, features and spaces within the Site see the desktop studies included as Annex A1.

### 3.4.2 General History of the CPS (see Figures 3.2 to 3.12)

The Site was first occupied by a prison and Chief Magistrate's residence, which were among the first buildings to be constructed in Hong Kong after colonisation in 1841. Early difficulties policing the new territory led to high arrest rates and within three years the prison was over capacity. The Colonial Police Force was established in 1844 to deal with law enforcement. The Superintendent of Police Charles May had a new prison created in 1845 from the Chief Magistrate's residence; one half was converted into a Debtor's Prison and the other as a Gaoler's residence. Three cell blocks were also constructed: two for Chinese prisoners with communal cells and one for Europeans with individual cells.

By 1851 the first Magistracy – a two storey structure with central courtroom – had also been constructed on the eastern edge of the site and large retaining walls had been built around the compound for security. There were several guard houses and look-outs within the perimeter walls, including Bauhinia House (building 19).

Further alterations in the 1850s included the construction of a Tread Wheel as a form of punishment for the prisoners, two Guard Houses and a Gaoler's House, and a new Debtor's Gaol to replace the original Goal building, which was in a poor state with filthy conditions for the inmates.

Continued increase in the number of prisoners led to a complete redesign of the Victoria Gaol, based on popular radial plan prisons in the USA which had a central hall with radiating cell block. The new building (constructed 1858, now surviving only in part as D Hall, building 14) was located on the south side of the site, and had a T-shaped block containing cells and wings radiating diagonally and used as cook houses and a Goal Hospital. By 1864 the site was again suffering overcrowding, and all the prisoners were moved to a new goal on Stonecutter's Island.

The north half of the site was quickly taken over as the Central Police Station and a new Barracks Block (building 3) was constructed in 1864 to provide accommodation for single and married Sergeants and Constables. The building was three storeys and situated east-west across the centre of the site, designed in the typical British Colonial style but with local adaptations like verandahs and Chinese tile roofs. The A block of Officers' Quarters (building 4) was constructed in the north-east corner of the site at the same time. This could have marked the takeover of the whole site for police used, but in 1866 the prisoners were brought back from Stonecutter's Island to Victoria Gaol. From this time onwards the site was divided with the Central Police Station on the north half of the site and the Gaol on the south half.

Presumably around the same time a Superintendent's House (building 10) was built at the south-east of the Barracks Block. It was designed in a typically colonial style and featured a gabled roof of the same design as that on the Barracks Block. A blocked archway on the ground floor provided the main entrance to the prison.

The prison was by this point a remarkable architectural feature of Hong Kong and utilised the latest design theories in prison reform. In 1871, Japanese representatives visited the Victoria Gaol and used it as a basis for prison design under the Meiji reform.

"Building No."	"Building Name"
1	Police HQ
2	Armoury & Store
3	Barracks
4	Married Inspectors' Quarters and Deputy Superintendent's House
5	Garage
6	Married Sergeants' Quarters
7	Single Inspectors' Quarters
8	Ablutions Block
9	Magistracy
10	Superintendent's House
11	A Hall
12	B Hall
13	C Hall
14	D Hall
15	E Hall
16	Workshop & Laundry
17	F Hall
18	General Office
19	Bauhinia House

- 01 Building Number
- Shows areas of Ground Penetrating Radar Surveys (to be read in conjunction with GPR Consultant Survey documents).

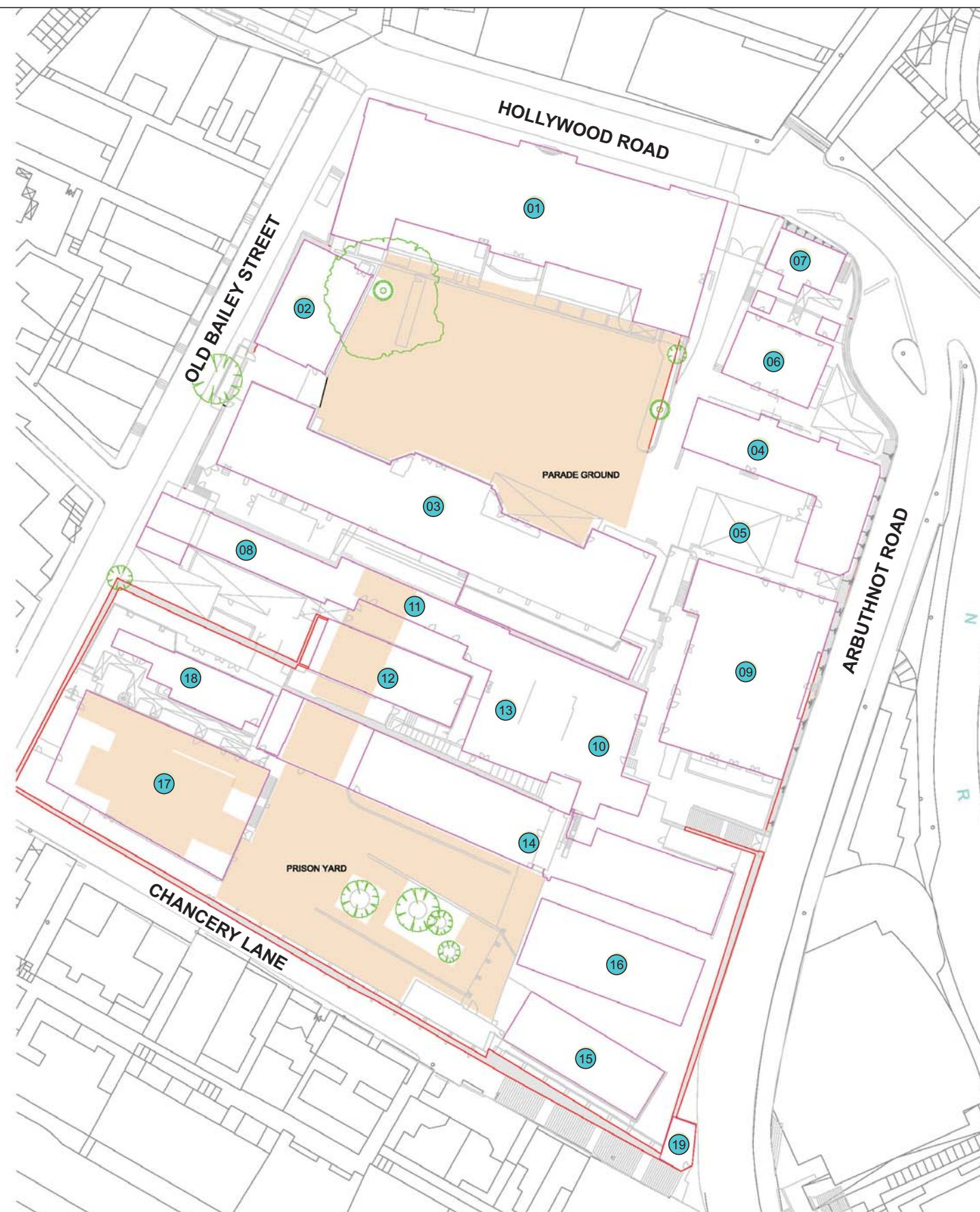


Figure 3.1

Map showing Location of GPR Survey for the Site  
Adapted from plan by F T Laboratories Ltd.

Reforms of the Police Force during the late 1860s and 1870s expanded the numbers of both Chinese and Indian officers. By 1880, the Force employed a total of 610 officers: 125 Europeans, 315 Chinese and 171 Sikhs. The expanding Force necessitated further accommodation. In 1906 an additional floor was added to the Barracks Block which reuse of much of the original roof structure. Three blocks of new officers' quarters (only two survive; buildings 6 and 7) were constructed by 1908 in the north-east corner of the site.

Overcrowding was also still a problem in the Gaol, though public opinion on a proposed extension was varied as the conditions in the prison, being far better than the prisoners' own homes, were not a deterrent to crime. It was reported that the Gaol *"is already looked upon as a paradise by many a rascal"*<sup>1</sup>. Despite these objections two new cell blocks (now demolished) were constructed in 1894 on the corner of Old Bailey Street and Staunton Street, to the west of the present site. By 1887 the radial layout of the prison was being eradicated to provide a more efficient gaol. First was the demolition of the southwest wing to provide further yard space and a new workshop. At the same time the existing cells in the radial prison block were subdivided to provide individual cells.

The period between 1910 and 1920 saw a considerable amount of growth over the whole Site. A new cell block (now demolished) was constructed in 1901 to replace the demolished southeast diagonal wing of the prison. A similar block (building 12, B Hall) was constructed in 1910 to the north of original cell block. Both provided space for 78 prisoners each. In 1915 a further cell block (building 15, E Hall) was constructed in the southwest corner of the site, and set on pillars over the lower yard. In 1917 the space adjacent to this cell block (building 16, Laundry) was also covered over to provide an additional exercise area for the prisoners.

A new Magistracy (building 9) was built 1912-1914 on the Site of the earlier one, with its main classical design façade overlooking Arbuthnot Road. The three storey building with a basement contained two large court rooms with associated offices and some officers' quarters. Extensive alterations were carried out to the top floor of this building in 1938 to insert a third courtroom.

The Central Police Station was also expanded with the addition of a Headquarters Block (building 1) on land purchased in the northwest corner of the Site. Construction started in 1916 and was completed in 1919. On the south side facing the Parade Ground the building had a more domestic, two-storey scale, while the north, public elevation was four storeys and of a much more imposing design.

There was then little space left on the Site to expand the accommodation of either the Police Station or Gaol but smaller works were undertaken. In 1924 a new Armoury and Store (building 2) was built at the west end of the parade ground and in 1933 the veranda on the ground floor of this building was filled in to provide further storage. In 1927 a Garage (building 5) for police cars was constructed. Numerous other minor alterations were undertaken to all the buildings on Site, such as the partitioning of rooms in the Barracks Block for offices of the Criminal Investigations Department (1928 - 9) and the construction of a new printing shop on the site of the workshop (in part building 17, F Hall) in the southwest corner

of the Site in 1929. In 1928 a new 'Reception Block' (building 11, A Hall) was constructed, in 1929 a building was constructed to the east of this for use as a male hospital and various offices (building 13, C Hall) and in the 1930s a new Ablutions block (building 8) was constructed west of the Reception Block.

During the 1930s two new prisons were constructed at Lai Chi Kok and Stanley to once again try to solve the overcrowding problem. This left the Victoria Gaol for remand prisoners, debtors, destitute and persons awaiting deportation.

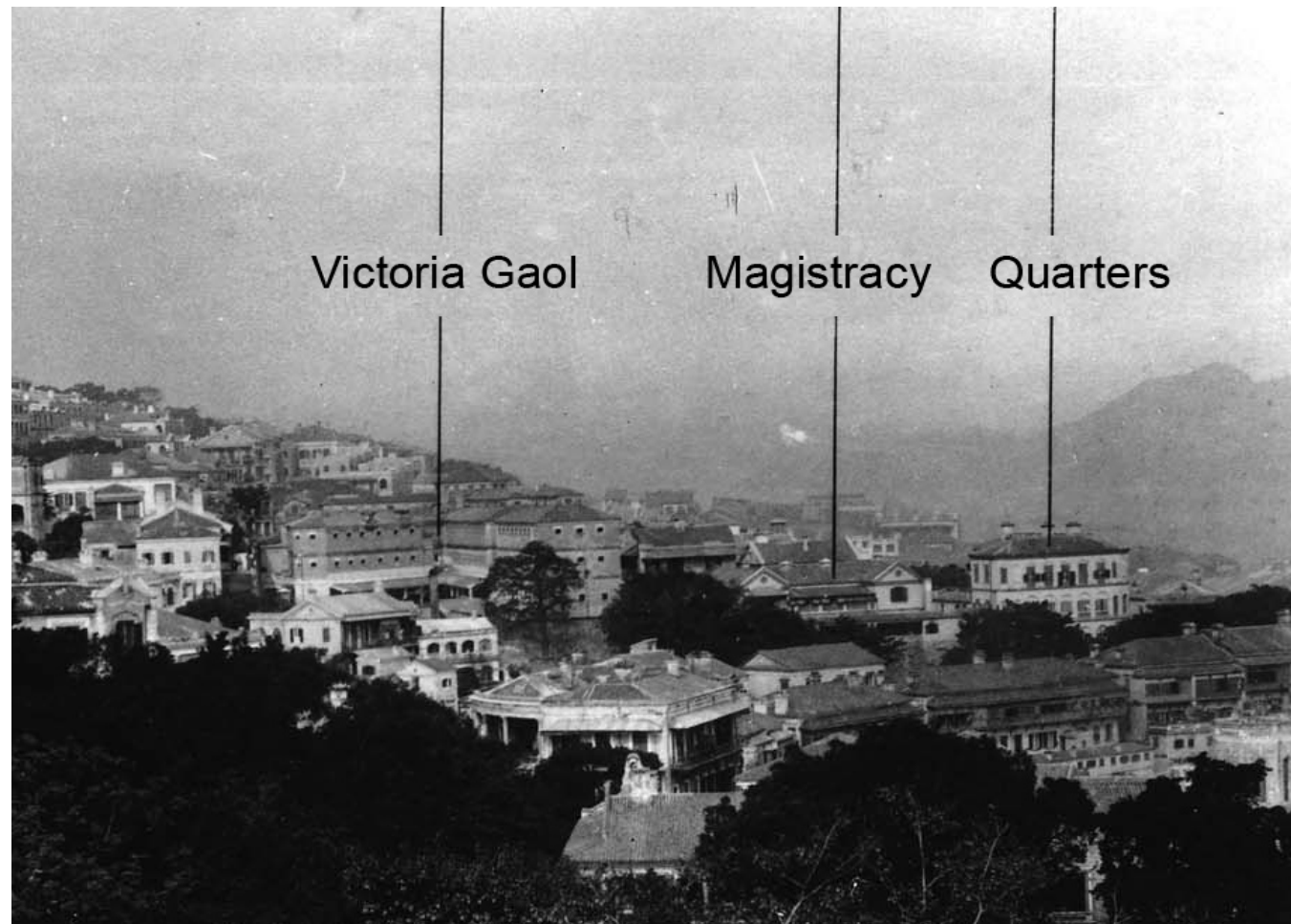
Hong Kong was occupied by the Japanese from 1941 - 5. The aerial bombardment caused damage to buildings of the Police Station and Prison, including the Headquarters Block. The Japanese then used the Site as a military base during their three year occupation and by the time they surrendered little maintenance had taken place. After a programme of demolition, repair and reconstruction the Site reopened in 1946.

Organisational changes took place in the Police Station and Gaol following the War. Female officers were first allowed into the Force in 1949. The Gaol was never used as a convict prison again- instead it was a remand prison. Various building functions were reorganised, such as the use of the Armoury and Store for the Traffic Police, the Parade Ground as a car park and a new radio control room on the top floor of the Barracks Block (later moved to the basement of the Headquarters Block for security). In 1956 F Hall was converted into use as the new Reception building, with the iconic blue gate on Old Bailey being built.

By the 1970s the prison was increasingly being used by the Immigration Office to detain illegal immigrants. In 1979 the Magistracy was converted for offices for the Immigration Department. The prison was also used as an institution for accommodating discharged inmates prior to repatriation or deportation. The Prisons Department was also reformed towards the end of the 20<sup>th</sup> century, changing its name to the Correctional Services Department and adopting the motto "We Care" to encourage team work and rehabilitation of offenders.

In the 1990s the Central Police Station and Victoria Gaol were becoming less important with the construction of newer facilities across Hong Kong. Because of the fear that the Site could fall into disuse or be severely adapted, the AMO designated the Central Police Station Compound, Magistracy and Victoria Gaol as Declared Monuments in 1995. By 2003 the decision had been made that the Site would be redeveloped for tourism use and in 2006 the prison was officially decommissioned.

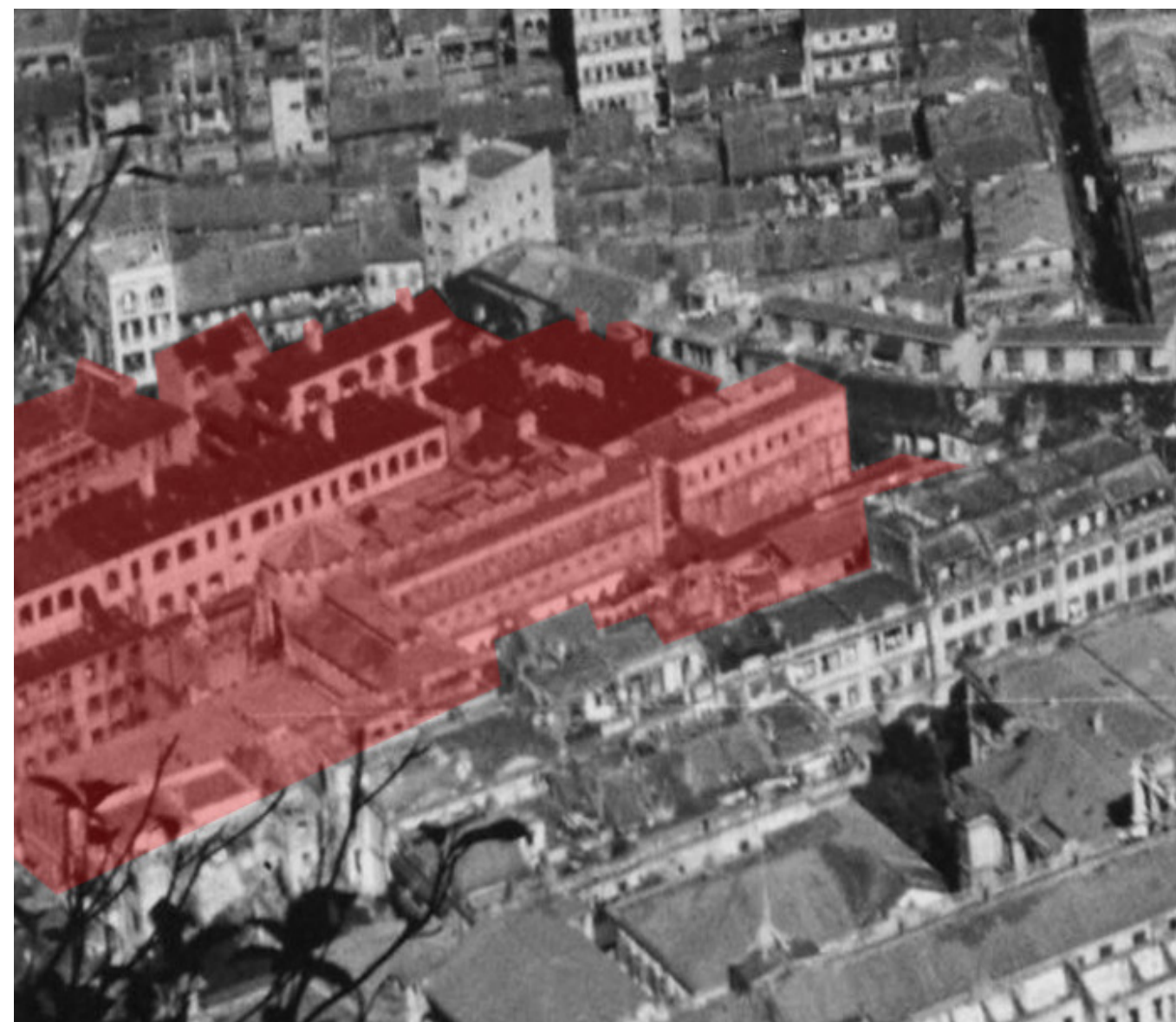
(1) The Hong Kong Government Gazette, 28th January, 1893



*Figure 3.2 View overlooking the site in 1895, showing the radial plan prison, the Married Inspectors' Quarters and Deputy Superintendent's House (Building 04), the original Magistracy, and the Superintendent's House (10) behind that.*



*Figure 3.3 View looking into the Victoria Gaol radial plan prison c.1895, showing the laundry yard area and D Hall*



*Figure 3.4 Photograph of Central Hong Kong taken from the Peak c.1946-47 by Hedda Morrison. The site is shown highlighted in red, with the central tower and south wing of the radial plan prison still in place (Harvard University Library Visual Information Access, [www.via.lib.harvard.edu](http://www.via.lib.harvard.edu)).*

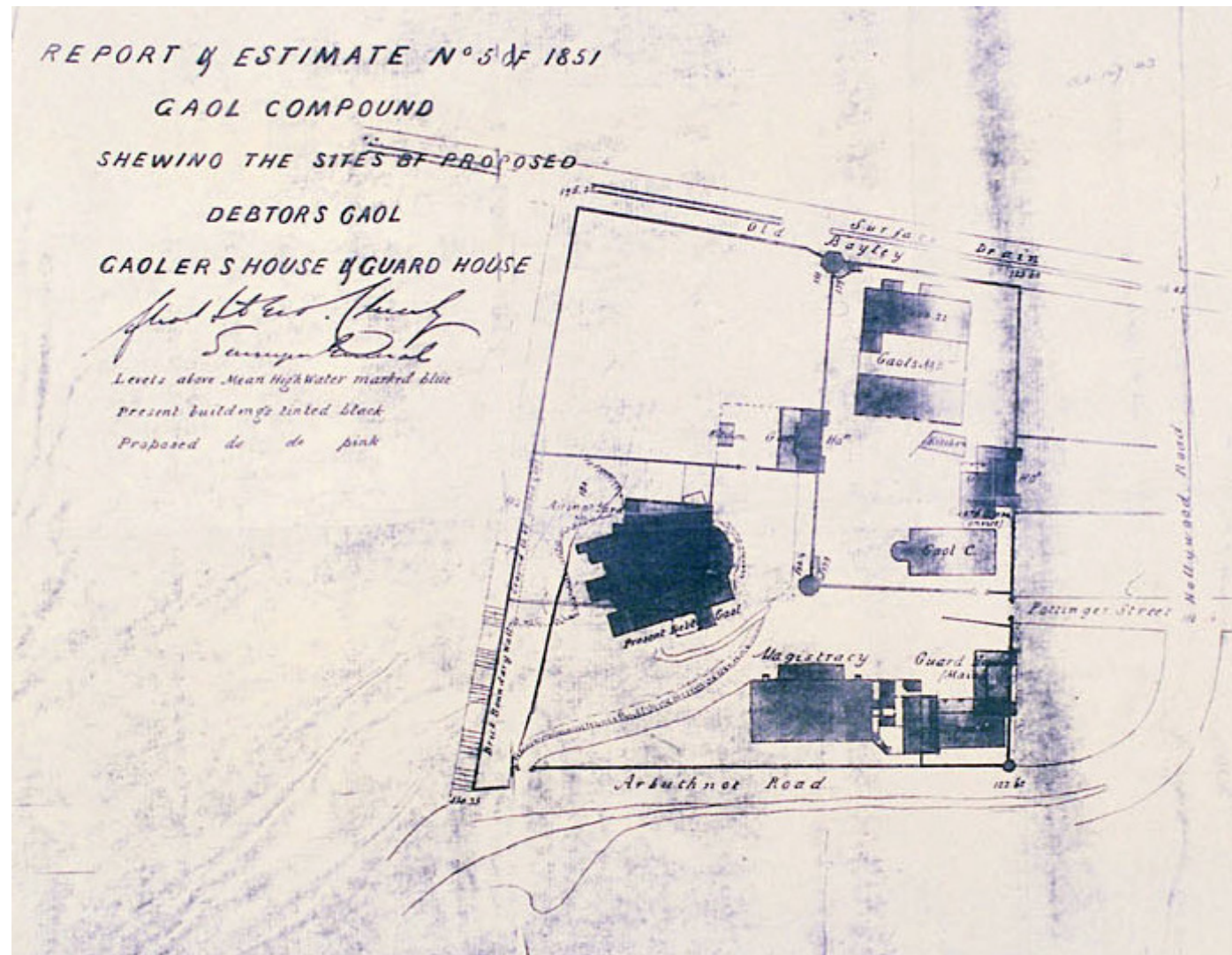


Figure 3.5 1851

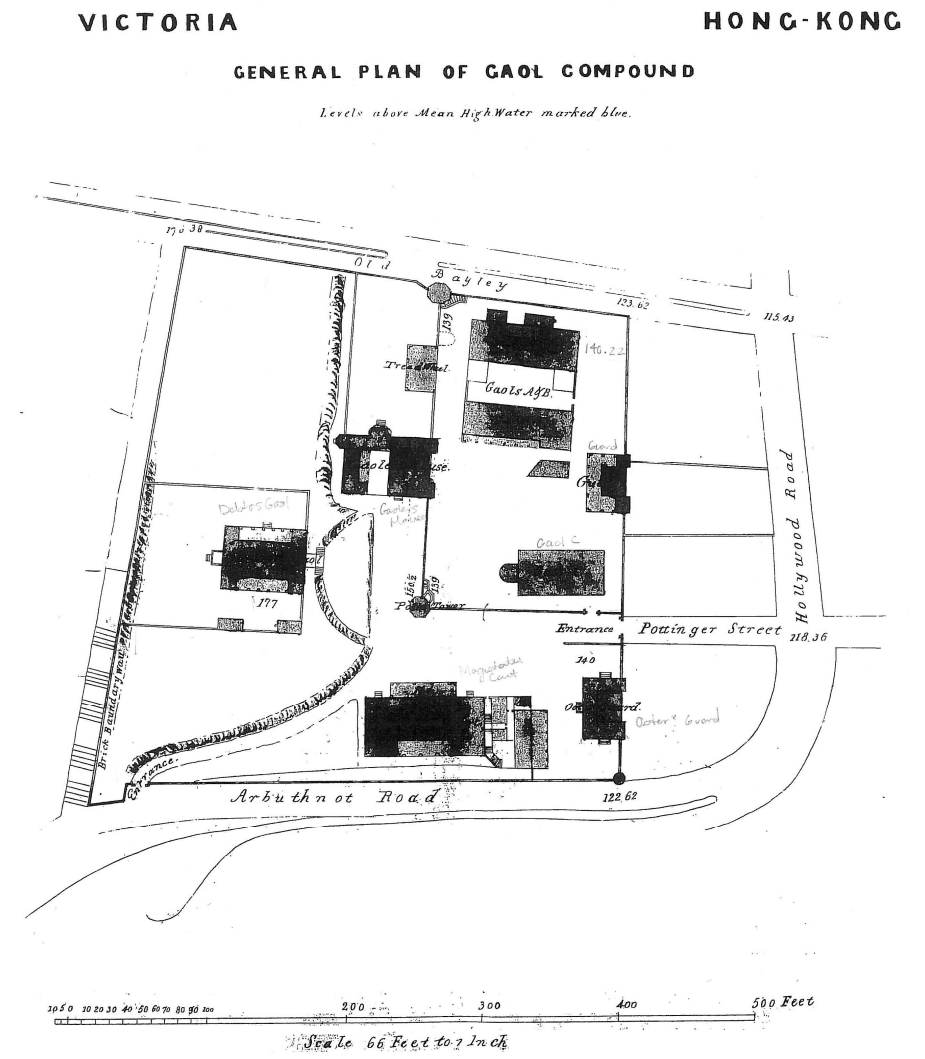


Figure 3.6 1856

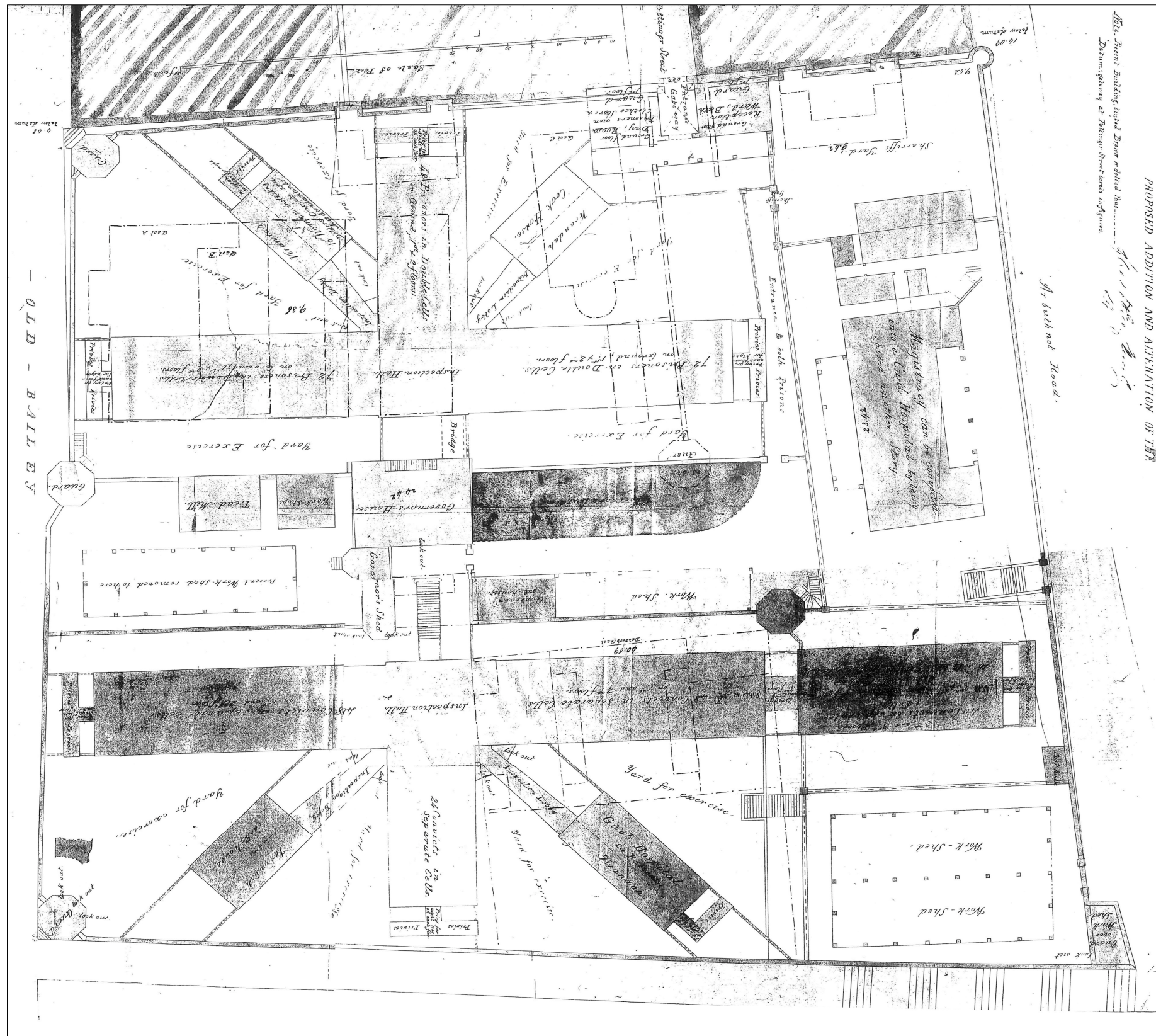


Figure 3.7 1858





Figure 3.8 1887

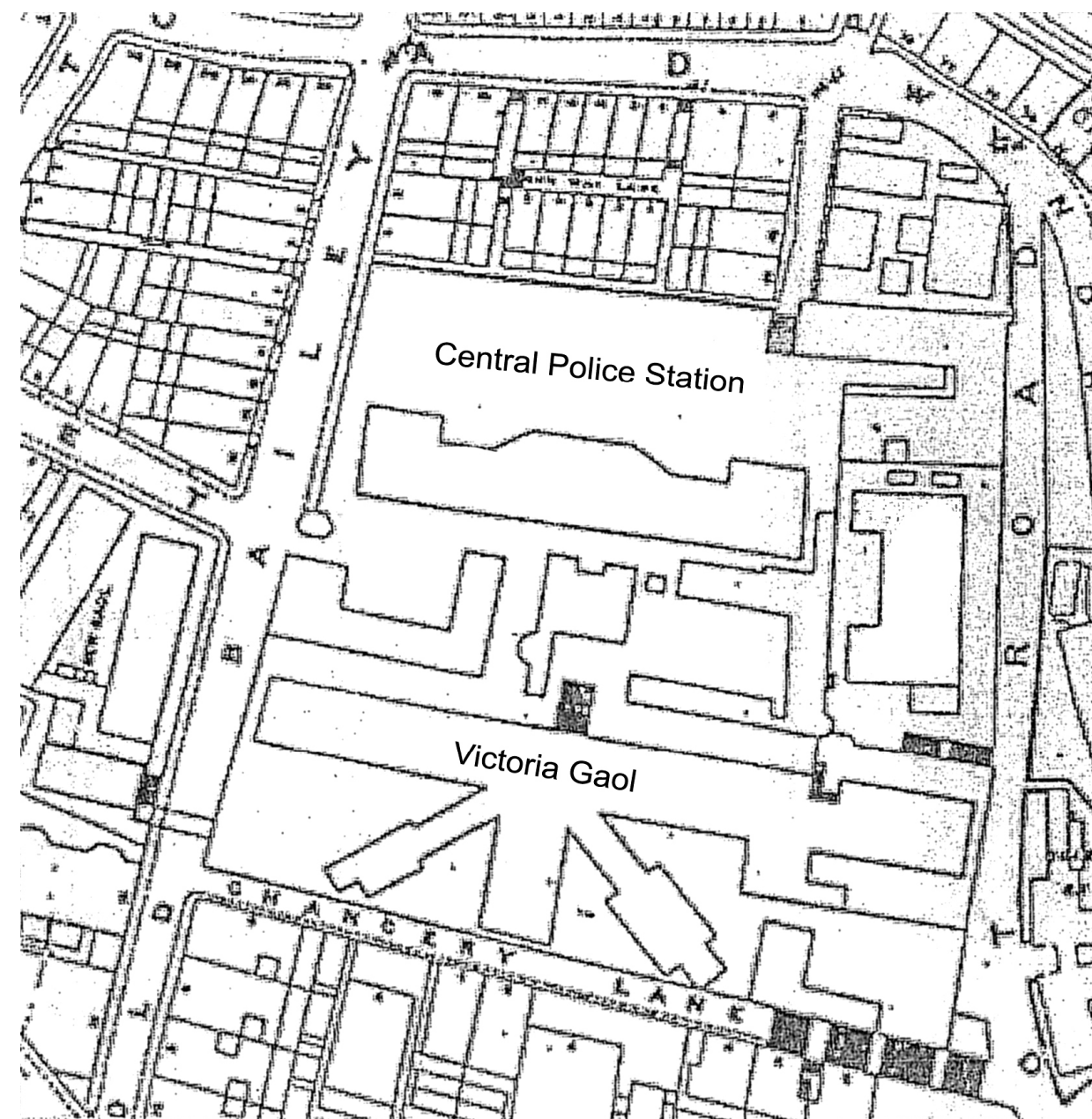


Figure 3.9 1901

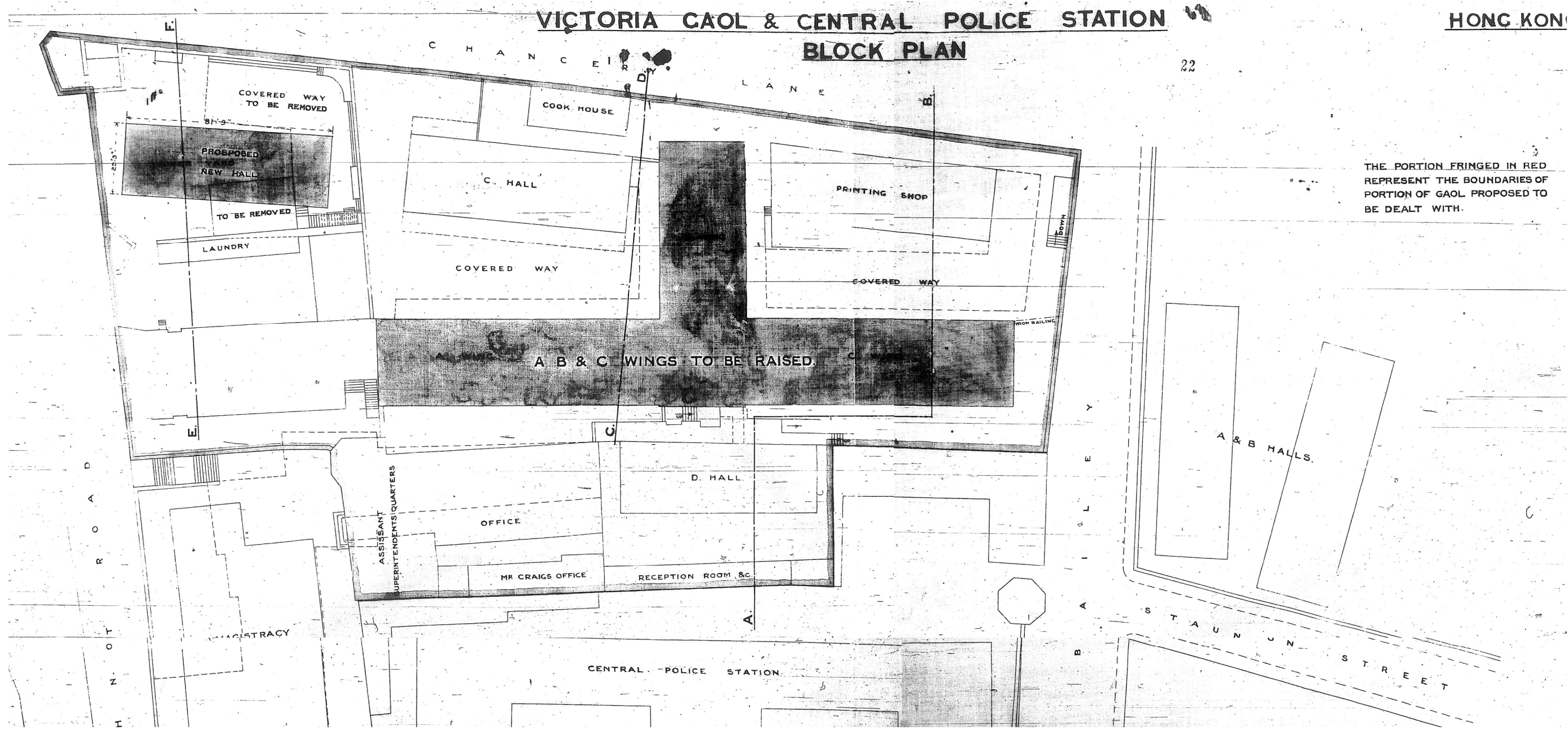


Figure 3.10 1913

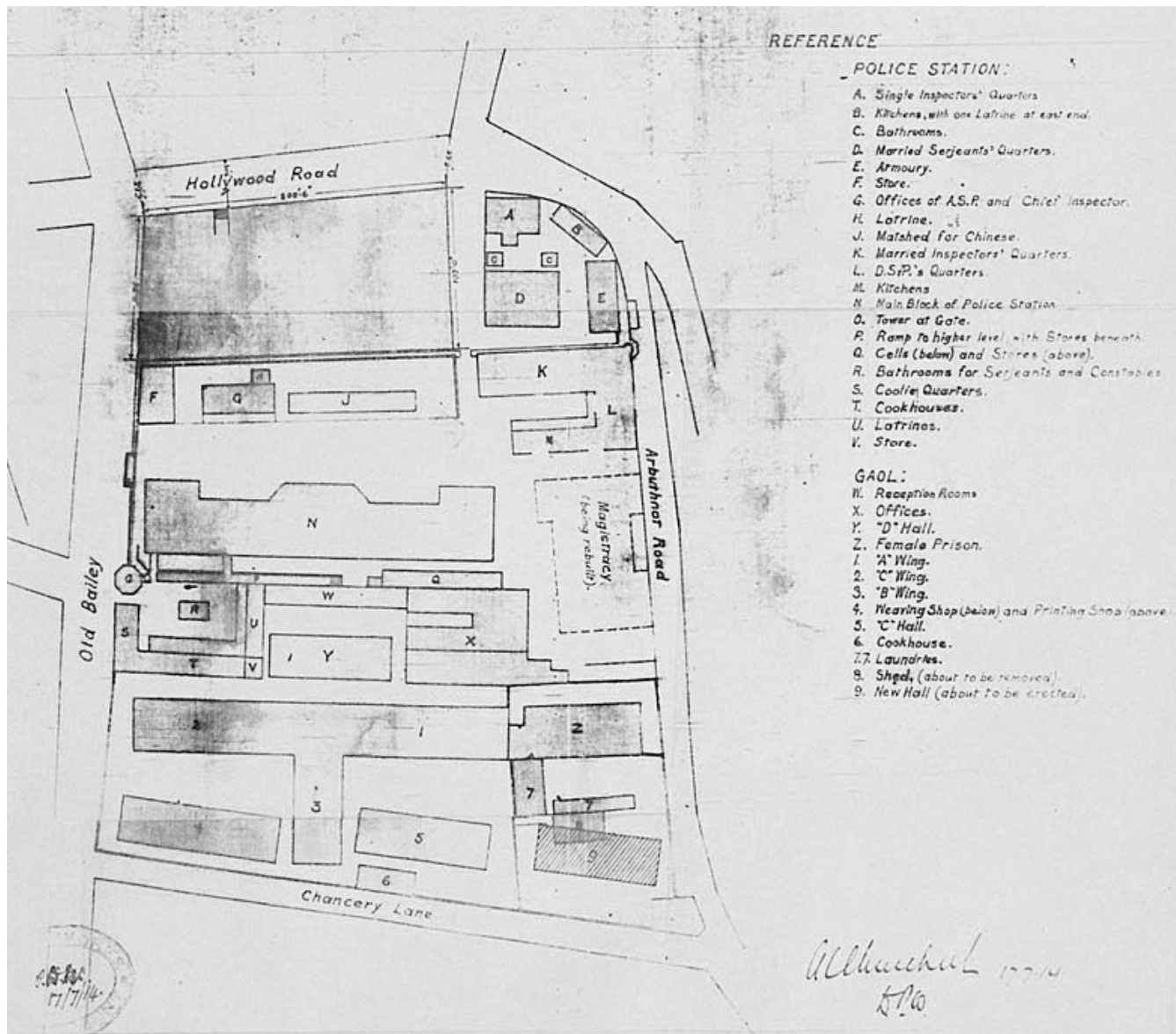


Figure 3.11 1914



Figure 3.12 1936

### 3.4.3 Oral History

The oral history report carried out by Dr Lawrence Ho of Lingan University highlighted four areas which were discussed by all three informants: Feng-shui and ghost stories, pay day, worshipping Guangong and other rituals, and the Officer's Mess.

The discussion on feng shui and ghosts mentioned that elderly peers of one interviewee had described the Central Police Station as being able to "oversee what has happened in the coastline area in Central District. The place should be very good Fengshui and was described as 'Fu Tei' (the land of Tiger' by geomancers", while another described how after a night patrol with the traffic division he saw some World War II ghosts: "In an early morning, I drove back to the Station after duties and heard some strange noise when parking my vehicle. I leaned over the windows and amazingly saw some Japanese soldiers with long guns were foot drilling tidily at the parade ground!".

The report also highlighted the well-known subculture of the worship of Guangong, which represented a figure of loyalty and honour in Chinese History. Statues of Guangong would have been located throughout the CPS and indeed some shrines survive today. One interview described this worship:

*"I remember there was a statue in canteen and another was in common room. CID Department office also had one set; my traffic division had another.....and we would take care of campus direction when installing them. None of them would face eastward as it symbolized bad luck as Guangong has been exiled by the emperor to the East during his service. Meanwhile, it is totally wrong to consider the worship of Guangong is a religious ritual or superstitious act and most of my local and expatriate leaders would just treat it as a means to promote collegiality. Even the Christian colleagues would take part in the worshipping ceremonies from time to time."*

There was also mention of the practicalities of life in the police station, such as the range of duties held by officers including the maintaining of law and order, fire service, prison management, immigration and postal services. There were also services which were carried out by private vendors who would arrive on pay-day to take their share of police pay checks; these included vendors for meals, laundry and shoe-shining. The issue of co-habitation was also discussed, with one interviewee saying that some couples met while on duty and subsequently married, while there were also police officers who were able to get jobs for their partners in the Immigration Department.

Information regarding the Site and the buildings themselves was somewhat limited. One informant described the Officers' Mess, which he was asked to re-design, and which he attempted to make into the style of a British pub:

*"My sister-in-law was working as the chief designer in a company at Landmark at that time, they remove all the molding and wood paneling, I like them, so I use them. The Central Police Station was built almost 200 years ago, Hong Kong at that time was still the colony, we have many colleagues that come from the Britain, so I design the mess to be like British Victorian style, I have been to Britain few times, and the layout of the mess was just like those old pubs there".*

One interview gave a description of the Central Police Station:

*"When we come to the Police Station at the ground floor, there is a 3-floor block at the right hand side, it was the stable before, and it becomes the office of the Accidents Investigation Unit, it used to be the place for placing equipments and apparatus [building 02, Armoury]. The block next to it is the oldest, which was over 200 years, the Emergency Unit of Hong Kong Island use one side of the ground floor, the other side is the Report Room of Central Police Station. The canteen and the hair-cut room are upstairs, every police station has one "hair-cut director", and we also have magistracy, that's why I say everything of us just like army, and no air-conditioning! [Building 03, Barracks Block].*

*Behind the Magistracy, there is a block which is used by the Immigration Department for monitoring those illegal immigrants. Next to it is another quarter for women police, and next to it is already the court".*

In order to form a more complete understanding of how the Site was used, the 1841 – 2005 *Victoria Prison Memorial Book* (Hong Kong Correctional Services Department, 2005) has also been referenced. Though this does not provide interviews with previous users, it does provide a firsthand account of what roles and tasks were carried out by individual workers within the prison. Given below is a selection of information about the various tasks carried out at the prison:

- Assistant Officer I CHEUNG Kwok-choi, who supervised inmates in the kitchen. He said that meals for inmates were based on dietician recommendations, and that there were four diets in rotation: Asian, European, South Asian and vegetarian. Preparation for morning meals would start at 5:00am and breakfast served in shifts, and by 11:30am lunch was being made.
- Assistant Officer I YIU Kwong-tak was the officer in charge of the main gate, and started work at 6:30am. He recorded details of anyone and anything that passed through the gate, including staff and officers, visitors, inmates upon admission and discharge, and vehicles. He also checked for contraband. Mr. YIU stated that when he joined in the prison in 1973 it was "very simple and rudimentary. But after years of development, the prison had become systematic and modernized in management and operation with most of its old architecture being preserved".
- Assistant Officer II IP Mei-ling supervised female inmates working in the laundry, starting from 8:30am. This included laundering of prisoner's clothing, bedding and staff uniforms. She said "When I was in charge of the Laundry, I gladly completed an in-service training course on laundry services and I was able to apply what I had learnt. I also got many opportunities to practice Putonghua while supervising inmates from the mainland and I derived considerable job satisfaction from it".
- Assistant Officer II SHECK Chung-wai from the Works and Maintenance Unit was in charge of workers carrying out various maintenance within the Site, which sometimes has to work with the government departments or professionals to preserve the historic building. Officer I LEE Chi-yuen was responsible for upkeep of staff quarters, and said that "Participating in various renovation work of Victoria Prison, I am fascinated by the special features of its buildings".
- Assistant Officer TANG Man-chui supervised Vietnamese detainees, who because of their status had different regulations to follow (e.g. they were allowed to wear their own clothes). He worked at the Victoria Prison in the 1970s, at which time "Victoria Prison was a reception centre. There were more categories of inmates and they were more difficult to handle. Besides, most of the senior officers where either British or ex-patriate".

- LAW Hau-Long, the last Superintendent of Victoria Prison, was also interviewed for the memorial book. He had worked at the prison in the 1970s when it was and was re-assigned in 2004. He remembered that “there used to be a basketball court outside the office of the Centre Division and there was a fig tree in the compound. When we were performing night duties, we often picked the figs stealthily”. The tree is now gone.

Three declared monuments with a total of 21 heritage interest items, one Grade 1 historic street, one proposed Grade 3 historic building, three streets and some steps, walls & revetments features, and ten areas with archaeological potential are identified within the CHIA Study Area. A master layout plan showing all the identified cultural heritage items are presented in *Figure 3.13* and further detailed below.

#### 3.4.4 Built Heritage Resources within the Site

There are a total of 19 Built Heritage Resources within the Site, as well as two open spaces and various other built features (as listed in *Table 3.1* below) which are considered to be of heritage interest: the Parade Ground and Prison Yard. All of these buildings and features are considered to be Heritage Resources within the Site, and therefore are covered in the CHIA. Further information about these heritage resources is included in the baseline studies in *Annex A1*.

**Table 3.1 Built Heritage Resources within the Site**

Ref No	Building or Feature Name	Date Built
1	Police Headquarters Block	1916 – 19
2	Armoury	1924 – 26
3	Barracks Block	1862 – 64
4	Married Inspectors’ Quarters and Deputy Superintendent’s House	1862 – 64
5	Garage	1927
6	Married Sergeants’ Quarters	1904 – 08
7	Single Inspectors’ Quarters	1904 – 08
8	Ablutions Block	c. 1930s
9	Central Magistracy	1912 – 14
10	Superintendent’s House	c. 1860s
11	A Hall	1928
12	B Hall	1910
13	C Hall	c. 1929
14	D Hall – west wing	1858
14	D Hall – east wing	1858
15	E Hall	1913 – 15
16	The Laundry	1917
17	F Hall	1931
19	Bauhinia House	c. 1858
	Parade Ground	N/A

Ref No	Building or Feature Name	Date Built
	Prison Yard	N/A
	Walls & Revetments	1858 – 1960s

#### 3.4.5 Other Built Heritage Resources within 50m but Outside the Site

In the area around the Site, there are numerous examples of historic built fabric. These include one Grade 1 historic street, one proposed Grade 3 historic building and some remnants of 19<sup>th</sup> century granite walls or steps located along the streets immediately around the Site including Hollywood Road, Arbuthnot Road, Chancery Lane, Wyndham Street, Old Bailey Street, Staunton Street, Elgin Street and Caine Road. They are presented in *Tables 3.2* to *3.9* below.




Figure 3.13

Master Layout Plan showing all Identified Cultural Heritage Items in the CHIA STUDY AREA



**Table 3.2** Details of Hollywood Road

<b>Site Name:</b> Hollywood Road	
<b>Location:</b> North of the Site, bordering the Central Police Station north side	
<b>Type:</b> Road	<b>Distance from Site:</b> 1 metre
<b>Designation:</b> none	
<b>Construction date:</b> Completed 1842	
<p><b>Historical Appraisal:</b> Though Queen’s Road Central was the first road to come under construction in colonial Hong Kong, Hollywood Road was the first to be finished in 1842. The origin of the name is thought to be a reference to the second governor of Hong Kong, Sir John Francis Dove, whose family home outside Bristol in England was called Hollywood. It begins to the west at the junction of Queen’s Road West, and ends at the northeast corner of the Site at the junction of Arbuthnot and Wymondham. It is today well known as being a prime spot for antiques shops. At the west end is the Man Mo Temple, a Declared Monument constructed in 1847. It is thought that prior to the Second World War prisoners were led from the Victoria Gaol down Hollywood Road to the temple, where they would stand in an open courtyard and be taunted by the public.</p>	
	
<p><b>Architectural Appraisal:</b> The road has most certainly been altered since its establishment, changing from a dirt track to a busy vehicular route with road markings, pavements, curbs, drainage, traffic lights and pedestrian crossings. There is no street furniture or other features of note.</p>	
<p><b>Construction Material:</b> Asphalt with concrete curbs and pavements.</p>	

**Table 3.3** Details of Old Bailey Street



<b>Site Name:</b> Old Bailey Street	
<b>Location:</b> West of the Site, bordering both the Central Police Station and Victoria Prison	
<b>Type:</b> Road	<b>Distance from Site:</b> 1 metres
<b>Designation:</b> none	
<b>Construction date:</b> c.1840s	
<p><b>Historical Appraisal:</b> Originally called Old Bayley, this road was likely constructed in the early 1840s when the Site was used as a Magistrate’s house and gaol. It is shown on the earliest plans of the Site (1851) as a wide road with a surface drain running down the centre. Though the plan shows the street continuing northward beyond the Site, it today ends at Hollywood Road with only a narrow pedestrian way carrying on to Lyndhurst Terrace, and only continues a short distance south of the Site to Caine Road. The origin of the name is unclear, with possibilities including a reference to the well-known Old Bailey court building in London, or to the term ‘bailey’ which is a high wall around a castle (reminiscent to the retaining walls around the Site).</p>	
	
<p><b>Architectural Appraisal:</b> The road has most certainly been altered since its establishment, changing from a dirt track to a busy vehicular route with road markings, pavements, curbs, drainage and traffic lights.</p>	
<p><b>Construction Material:</b> Asphalt with concrete curbs and pavements.</p>	

**Table 3.4** Details of Chancery Lane

<b>Site Name:</b> Chancery Lane	
<b>Location:</b> South of the Site, bordering the Victoria Prison	
<b>Type:</b> Road	<b>Distance from Site:</b> 1 metre
<b>Designation:</b> none	
<b>Construction date:</b> c.1840s	
<b>Historical Appraisal:</b> This is a narrow alley running the width of the Site between Old Bailey Street and Arbuthnot Road. At the west end there is vehicular access, though this does not follow through to the west end as there is a set of historic steps in place (discussed in more detail below). Though the street and the steps appear in early plans of the Site and likely date to the 1840s, the name Chancery Lane does not appear until drawings of 1877, which illustrate how residents in the two-storey homes on the south side of the street could see inmates over the south wall of the prison. This demonstrates the early residential use of the street which continues today, though with high rise buildings. The origin of the name is likely a reference to the Sites early use as Magistracy, as chancery is another word for a Court of Equity.	
 	
<b>Architectural Appraisal:</b> The road has not been widened much from its establishment, but the surface has changed. There is little of architectural interest, though the high prison walls are of significance.	
<b>Construction Material:</b>	


Concrete surface with curbs and pavement to the south.

**Table 3.5** Details of Chancery Lane Steps

<b>Site Name:</b> Chancery Lane Steps	
<b>Location:</b> South of the Site at the east end, leading from Chancery Lane to Arbuthnot Road	
<b>Type:</b> Steps	<b>Distance from Site:</b> 1 metre
<b>Designation:</b> none	
<b>Construction date:</b> c.1840s	
<b>Historical Appraisal:</b> As mentioned above, Chancery Lane as been on the site since the 1840s, as have the steps at the east end. These steps were originally constructed of long, narrow granite slabs, and have three intermediate landings with approximately 20 steps between. In the earliest graphic representation of the steps (1851) they are shown with four landings having approximately 5 steps between; it is unclear whether this is evidence of change or merely a drawing convention.	
 	
<b>Architectural Appraisal:</b> The width of the steps has been somewhat altered with the construction of new buildings on the south side, and there have been several unsympathetic repairs over the years. This include patching and large areas of replacement carried out in concrete and cement, much of which is due to the insertion of drainage pipes. While these alterations detract from the overall appearance of the steps, which are not of any high architectural significance anyway, they nonetheless form an important part of understanding the historic layout and circulation patterns of the Site.	
<b>Construction Material:</b> Granite and other stone with some concrete in-fill and cement patching.	

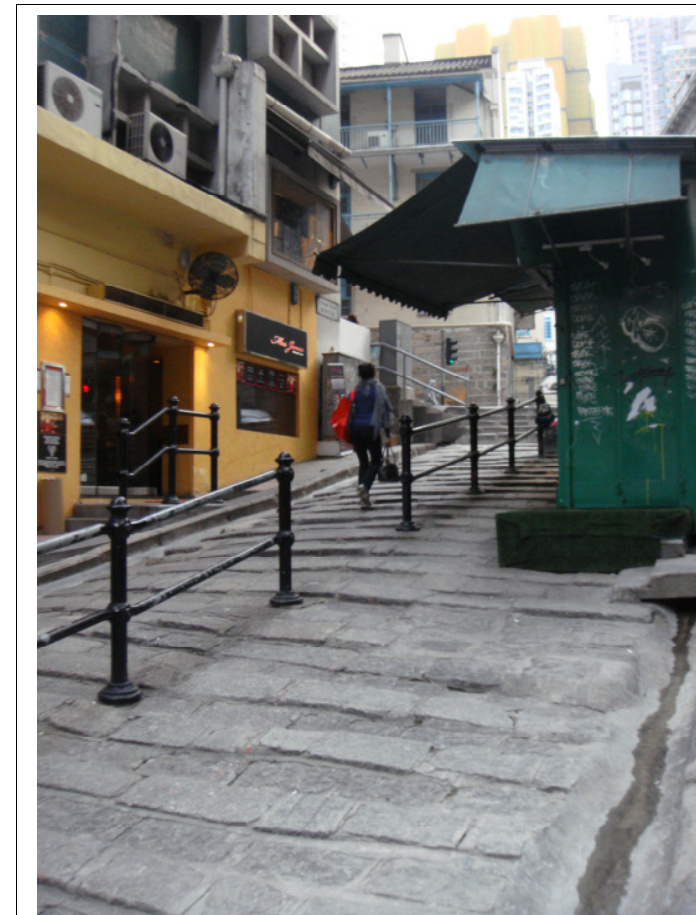


**Table 3.6**      *Details of Arbuthnot Road*

<b>Site Name:</b> Arbuthnot Road	
<b>Location:</b> East of the Site, bordering both the Central Police Station and Victoria Prison	
<b>Type:</b> Road	<b>Distance from Site:</b> 1 metre
<b>Designation:</b> none	
<b>Construction date:</b> Completed 1842	
<p><b>Historical Appraisal:</b>                  Named for George Arbuthnot, a member of the Treasury present at the drawing up of the HSBC Charter, this road dates from the 1840s and slopes downward to the north. It has undergone more changes than any of the others around the Site, namely alterations to the north junction (the northeast corner of the Site) to accommodate a turning area for vehicles in the 1960s, and a widening of the road which removed the pavements on the west side and made the street level door of the Magistracy unusable. Today this road provides some of the best views of the Site from the exterior, especially of the Magistracy and building 04.</p>	
	
<p><b>Architectural Appraisal:</b>                  The road has most certainly been altered since its establishment, changing from a dirt track to a busy vehicular route with road markings, pavements, curbs, drainage and traffic lights.</p>	
<p><b>Construction Material:</b>                  Asphalt with concrete curbs and pavements.</p>	

**Table 3.7 Details of Pottinger Street**

<b>Site Name:</b> Pottinger Street	
<b>Location:</b> East of the Site, bordering both the Central Police Station and Victoria Prison	
<b>Type:</b> Steps	<b>Distance from Site:</b> 5 metres
<b>Designation:</b> Grade 1 (graded structure #63, confirmed 18 December 2009)	
<b>Construction date:</b> c.1840s	
<p><b>Historical Appraisal:</b> Pottinger Street is a pedestrian route running downhill (north) from Hollywood Road to Queen’s Road Central. Due to its steep slope, stone slab steps were installed, allowing for easier pedestrian access. Gutters along the site of the steps were also provided for the draining of rainwater. Therefore, though Pottinger is the official name of the street, it is commonly known as the Stone Slabs Street (‘Sek Baan Gaa’) by locals, so-called for the granite slab steps which run the full length.</p> <p>Pottinger is one of the earliest streets in Hong Kong, and so named for the first governor, Irish-born Sir Henry Curwen Pottinger. Following a stint in the army, he joined the British East India Company and later held the post of Resident Administrator in Sindh and Hyderabad. Following a return to England and creation as baronet in 1839, Pottinger was soon after made British Administrator (1841) and the first Governor (1843) of Hong Kong. Pottinger’s immediate plan for the lawless island was to bring order by any means, and in August 1842 he negotiated the Nanking Treaty to bring an end to the Opium Wars. Pottinger left Hong Kong after a very short tenure in 1844.</p> <p>The street was certainly in place by 1843, when it is mentioned by the Reverend James Legge (a missionary in China), who said that, ‘Looking up Pottinger Street, you could see the Magistracy and Gaol of the day, where the dreaded Major Caine presided, and below them were two or three other buildings’.<sup>1</sup></p> <p>The earliest known plans of the site (1851) show Pottinger running south to a large revetment wall (now the line of the south side of Building 01). Along with a narrow curved road entering the southeast of the Site, it was one of only two entrances into the walled compound. These plans suggest that Pottinger originally had a gateway at the point it entered the ‘Gaol Compound’. This street would have then run virtually down to the harbour, which was originally along Connaught and Queen’s Roads.</p> <p>In the early 20th century, the part of Pottinger Street south of Hollywood Road became fully integrated into the CPS; firstly with the construction of officers’ quarters at the northeast corner of the site in 1903, and soon after by the much larger Headquarters Block along virtually the whole north side of the site in 1916. It was at this time that the actual entrance into the CPS moved from its position at the former revetment wall down to the junction of Pottinger and Hollywood Road.</p> <p>Historically, the Pottinger Street Entrance has continued, from the 1840s onward, to be the principal entrance onto the site for all users with the exception of prisoners and prison visitors. Its retention as a ramped entrance today makes clear reference to the early street layout of Central Hong Kong, while the steps from Queen’s Road to this day provide a clear and defined path up to the site. It is therefore desirable in terms of historic significance that this remain one of or the principal entry to the site.</p>	



**Architectural Appraisal:**  
The road width and layout has changed little since construction, and is important for maintain its historic appearance.

**Construction Material:**  
Granite steps and drainage channels with some cement and concrete repair. Cast iron railings.

(1) Sayer, Geoffrey Robley (1937) Hong Kong: birth, adolescence, and coming of age.

**Table 3.8 Details of Walls (and Potential Tunnel) at Old Bailey Street**

<b>Site Name:</b> Walls (and potential tunnel) at Old Bailey Street	
<b>Location:</b> Southwest of the Site	
<b>Type:</b> Wall	<b>Distance from Site:</b> 1-5 metres
<b>Designation:</b> none.	
<b>Construction date:</b> c.1840s	
<p><b>Historical Appraisal:</b> Overcrowding was a constant problem at the Victoria Gaol, and in the late 19th century the continued desire for further space led to designs for new prison buildings outside the actual site. In 1894 – despite opposition from the Chinese community – a proposal was made for the construction of two blocks of buildings in a site on the corner of Old Bailey and Staunton Street. Following approval by the Public Works Department for the drawings and estimates, Mr. Foo Sik was given the contract for the work. At the end of the year the old buildings on the site had been demolished and the excavation of the trenches was in progress.</p> <p>The following Public Works Report of 1896 gives clear evidence that both the masonry walls in Old Bailey and the tunnel running under it can be dated to the gaol extension of 1894 – 6:</p> <p><i>‘The new buildings in Old Bailey have been completed and were handed over to the Superintendent of the Gaol on the 20th December, 1895. These buildings consist of two main blocks three stories in height having basements under the northern portions. The blocks contain 155 separate cells and are connected by a covered way. In the basements ample store and bath-room accommodation has been provided. A portion of the site has been utilised for the erection of a workshop and workshed with storeroom adjoining. The whole of the site is surrounded by a high masonry wall, and communication with the existing Gaol premises situated on the east side of Old Bailey has been provided by the construction of a subway under Old Bailey. Gas and water have been laid on at convenient places throughout the premises.’</i></p> <p>The exact location of the tunnel is unknown, though it is likely that it ran in a straight line across Old Bailey into the prison side of the Site, entering into the space either north or south of what was then the east wing of the radial plan prison (where the General Office – building 18 – is today). There is no evidence for the entrance of the tunnel within the CPS, and this is likely owing to several later alterations. It is also a possibility that the tunnel was in-filled, much like the nearby tunnel in Pottinger Street which was constructed as an air raid shelter in the 1940s. This tunnel, which ran approximately 75m south into the hill (being entered into from Pottinger Street between Stanley and Wellington) was found in the 1980s to be in danger of collapse and was filled in. The Bailey Street tunnel perhaps suffered a similar fate.</p> <p>The walls around the original gaol extension still remain in place, and form a complete perimeter around the Site now occupied by the Police Married Quarters.</p>	



**Architectural Appraisal:**  
The walls are of the same construction type and style as many of the walls around the CPS, making them an important visual (as well as historic) link to the Site.

**Construction Material:**  
Granite

**Table 3.9 Details of No. 20 Hollywood Road**

<b>Site Name:</b> No. 20 Hollywood Road	
<b>Location:</b> Northwest of the site, at the corner of Hollywood Road and Old Bailey Street.	
<b>Type:</b> Building	<b>Distance from Site:</b> 5 metres
<b>Designation:</b> Proposed as Grade 3 historic building #791 (on AMO List of 1,444 Historic Buildings up to 20 September 2010)	
<b>Construction date:</b> c.1920s or 1930s	
<b>Historical Appraisal:</b> Land records show that the lease on this landed property commenced in 1844, and this must have been one of the earliest lots to be sold; however, it is not known when the lot was first built on. The building lots along Hollywood Road were some of the first to be sold after the cession of Hong Kong Island to Britain. As a “second generation” or even possibly “third generation” building on this site, 20 Hollywood Road is significant in the evolution of Hong Kong’s social, cultural and commercial development. The building dates from sometime in the 1920s or 1930s, judging by its vaguely Art-Deco Style design. It would have originally been one of many narrow terraced buildings of four to five storeys which lined Hollywood Road and other streets in Central in the first half of the 20 <sup>th</sup> century. However, many have since been demolished or their plots redeveloped. In the case of 20 Hollywood Road, the ground floor has been completely redesigned to accommodate more modern commercial use.	



**Architectural Appraisal:**

The building is four storeys on the Hollywood Road frontage, though the ground floor slopes steeply upward to the south. The exterior features regular rows of set-back windows with projecting window canopies on the north and east sides, Crittall-style metal windows on the upper floors and small oculus windows at the southeast corner, a high parapet stepped up at the corners with decoration at the northeast corner, and these are all indicative of the Art-Deco Style. The ground floor of the building, which is presently an art gallery, has a much more commercial character, with its open shop front, than the more office style upper floors. A pedestrian bridge section of the Central to Mid-Levels Escalator runs alongside the front of the Hollywood Road elevation of the building and obscures its façade.

The interior has been modernized and its authenticity and integrity have therefore been compromised, but the Art Deco style staircase with its green polished terrazzo handrail and skirting has largely survived.

Presumably brick or concrete, finished externally with painted Shanghai plaster grooved with artificial joint lines.

### 3.4.6 Archaeological Resources

#### Topographical Background

The Site is situated at the northwest part of the Hong Kong Island near the northern coast. The northern part of Hong Kong Island has been heavily developed at the very beginning of the colonial period and the original coastline (see *Figure 3.14*) at the northern shore of the Island has been reclaimed a number of times to the present condition. The Site is now surrounded by built urban environment. When chasing back to the 1843 and 1863 historic maps of the area as shown in *Figure 3.15*, development commenced at the north of the Site in 1843 and major roads around the Site have been developed in 1863.

The Site is located not far from the original northern coastline at its north. To the southwest and southeast, the Site is protected by the Victoria Peak (with 552m height) and the Mount Gough (with 479m height) respectively and they are separated by the Victoria Gap. Review of 1843 and 1863 historic maps also indicated that a number of south-north running streams can be found adjacent to the Site running from the mountains towards the sea, and the Site is situated between streams. Based on the topographical condition of the area, the Site is a possible location for human activities because it is well protected by the mountains at the south from strong wind, not far from the sea for water transportation and with additional food supply, and supplied with fresh drinking water from streams sources.

#### Geology Background

The Site is situated on Kowloon Granite (Klk), which are Cretaceous intrusive rocks with an approximate age of  $140.4 \pm 0.2$  million years before present. The lithology of Kowloon Granite is equigranular medium-grained biotite granite. Between the University of Hong Kong and the Central District, the granite is light grey to light pink, uniform, equigranular and medium-grained, with an average grain size of 3 to 4 mm (CEDD website). A NE-SW fault runs through the Victoria Gap. The superficial deposit of the Site is debris flow deposit. The geology map of the Site and the adjacent area is shown in *Figure 3.15*.

#### Archaeological and Historical Background

According to the AMO List of Sites of Archaeological Interest in Hong Kong (as of February 2009, [http://www.amo.gov.hk/form/list\\_archaeolog\\_site\\_eng.pdf](http://www.amo.gov.hk/form/list_archaeolog_site_eng.pdf)) there are no sites of archaeological interest within the Site. With regard to unknown archaeological potential within the Site, an archaeological desk-based assessment has been carried out for the Site as part of the establishment of the CMP for the Site conducted in June 2008, the findings of which are detailed in the CMP (June 2008). The summary findings are presented below.

There is little written information regarding the Site prior to colonial occupation. Early maps of Hong Kong from the 19<sup>th</sup> century show little detail beyond the coastline or cover a larger area with limited details of Hong Kong Island at all (see *Figure 3.15* for examples of early maps of Hong Kong). Limited intrusive archaeological investigations had been conducted on the Site or at the adjacent area regarding the pre-colonial history of the area, therefore, there is very limited information to understand if any occupation existed on the Site prior to the 1840s.

The Site has, however, been occupied continually from the 1840s until the present, with construction work being carried out in virtually every area of the Site. The earliest buildings were in place from the

1840s to the mid 1850s and included cell blocks and guard houses to the north, a magistracy to the east, and the Magistrate's House to the south; this was soon after converted to use as a Debtor's prison and then replaced by a new building with the same use (see *Figures 3.5* and *3.6*). These buildings were typically built in a quick, low quality manner, and a description of the first Magistrate's House provides a clear understanding of the poor construction:

*'This building, one of the first to be erected on the establishment of the Colony, was intended for and occupied as the first residence of the Chief Magistrate with Court Room, etc. The materials and workmanship are of the most ordinary kind, the several scantlings of timber used throughout extremely slight, and the whole put together in the manner common to all similar houses built here without efficient superintendence.'*

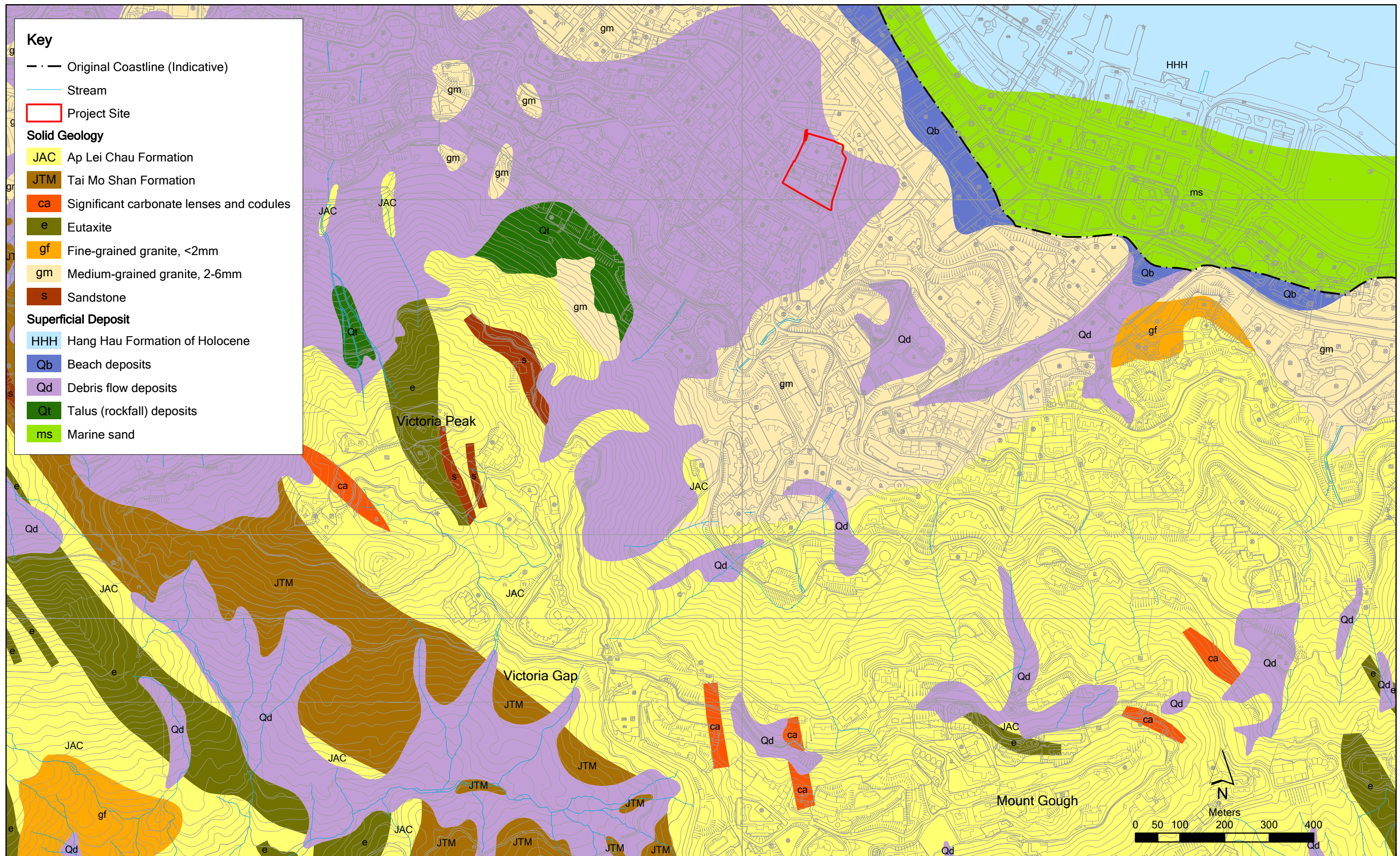
*'In the year 1845 one half of the building was converted into a Debtor's Prison, and subsequently the remainder was used as Gaoler's residence; and although the utmost was done to render it suitable for such purposes it was perfectly impossible to arrange anything from satisfactorily for the former both on account of the unsuitableness of the plan and the insufficiency of the materials and workmanship, which to correct would have involved the reconstruction of the greater part of it'.*

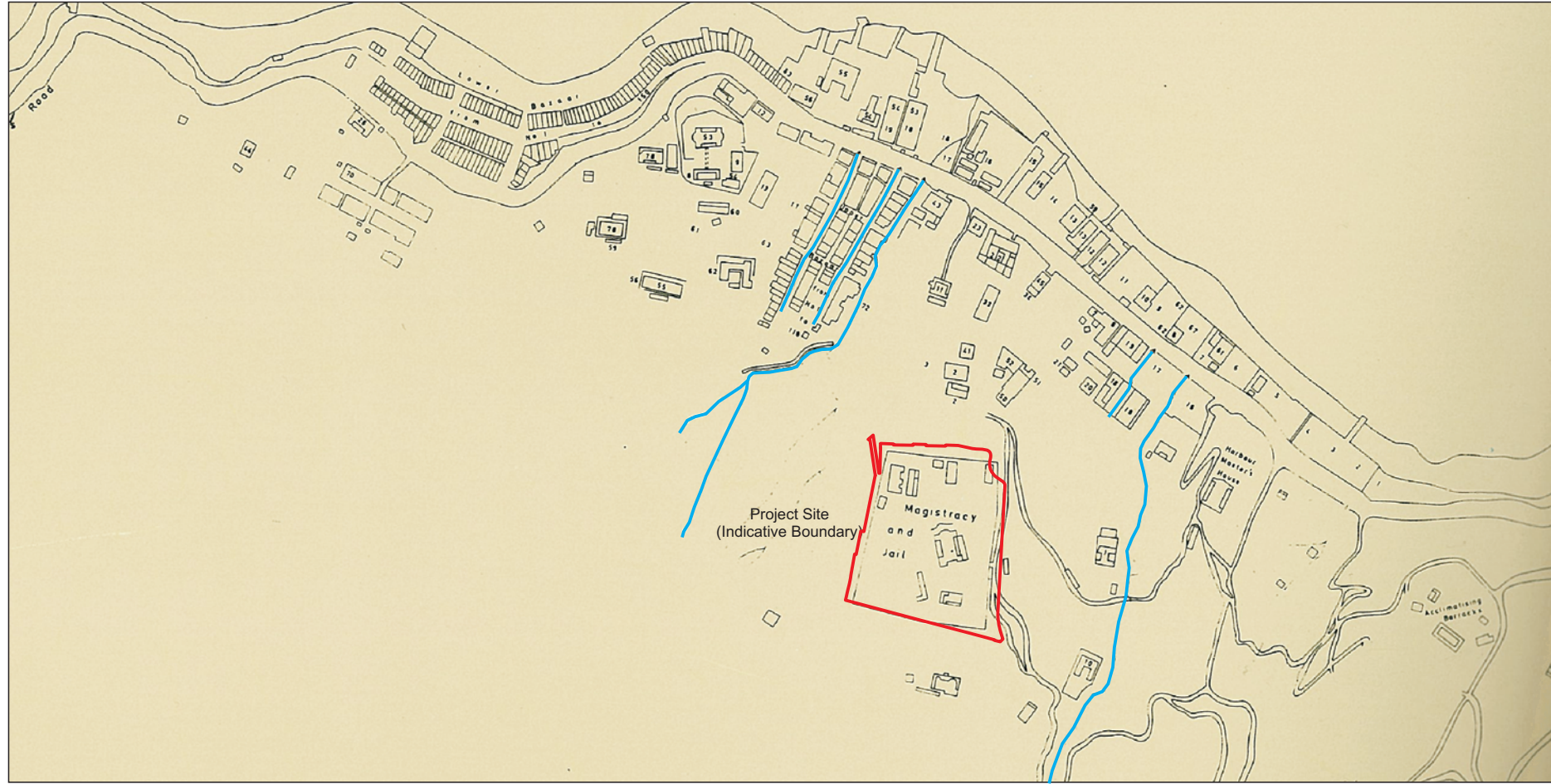
Most of these structures were demolished in the late 1850s and 1860s, when the radial plan prison was constructed to the south and buildings 3 and 4 were built on the north side of the Site (see *Figure 3.7*). The earliest buildings on the Site presumably required only shallow foundations, while those of the radial plan prison, Barracks Block and Officers' Quarters would have been much more substantial and likely removed any trace of the early structures.

Further construction works through the late 19<sup>th</sup> and early 20<sup>th</sup> centuries resulted in the systematic demolition of all the original buildings on the Site, with some areas undergoing several phases of construction and demolition over the years. One example is the area south of the Barracks Block (building 3) where the Site had a Guard House, Governor's House, Superintendent's House (still present; building 10), Matron's House, Prison hospital, offices and Reception Block, and finally the still standing A Hall (building 11) and C Hall (building 13). In areas such as this where several rounds of construction took place, there is little likelihood that any original archaeological material remains. It is possible that some disturbed finds are contained under the present foundations, though these are likely to be out of context.

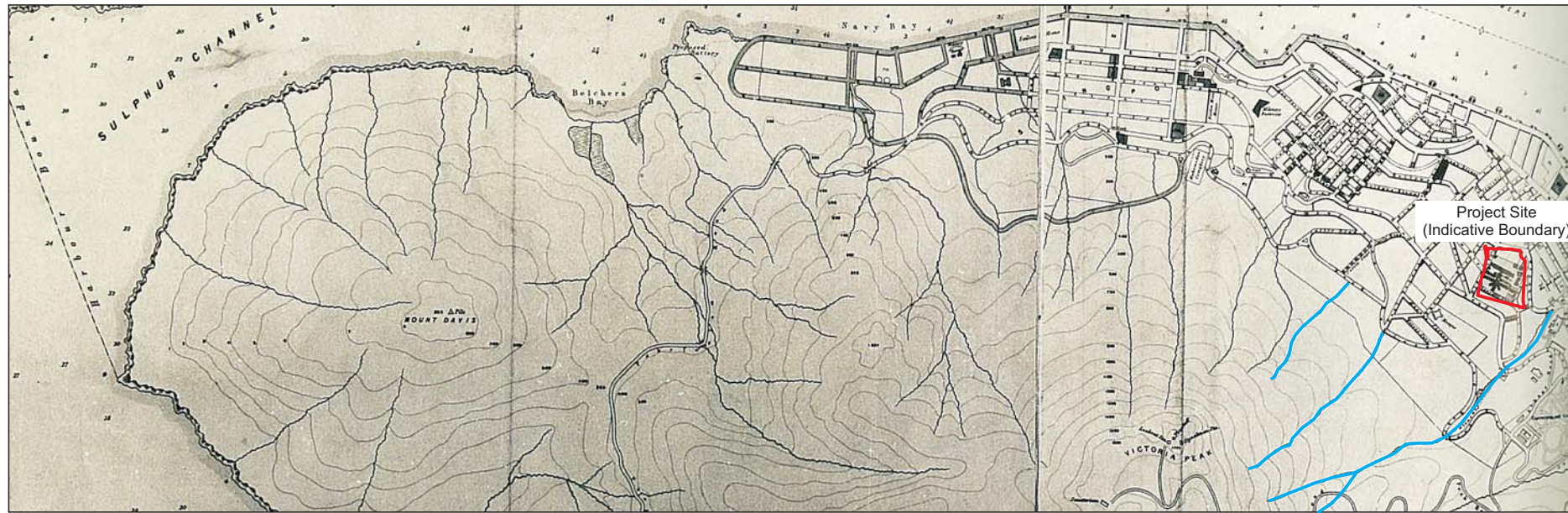
The original Magistracy was an early structure on the Site (c. late 1840s) (see *Figure 3.5*) which was replaced in 1914 by the present building (see *Figure 3.11*). It is presumed that very little of the original structure remains, given that it would have had very shallow foundations which would have been completely demolished to construct the partial basement in the new building. Public Works reports described the digging of the basement, reporting that the land was mostly rock and difficult to excavate; it is assumed that this extreme level of excavation would have destroyed any remnants of the earlier building. At the north side of the Site is the Headquarters Block (building 1), partially constructed on what was previously a residential area with 18 terraced houses set on two stepped platforms around a central street. Again, the deep basements for the new building would have required extensive excavations that most likely destroyed any remains of the earlier buildings.

The Parade Ground presents some possibility of archaeology, as it was previously the location of early gaol buildings and has not been built on since their demolition in the 1860s. However, several factors have caused disturbance to the Parade Ground and may have destroyed or damaged any below ground evidence. This includes the digging of the basement for building 1 (Headquarters Block) which extends south into the Parade Ground; the digging of trenches for electric wiring and piping, construction of an

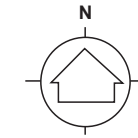





1843 Source: Empson 1992



1863 Source: Empson 1992



Key  
 Streams adjacent to the Project Site

Not to Scale

Figure 3.15

Historic Maps of the Project Site and Its Adjacent Area

FILE: 0095646m  
 DATE: 17/11/2010

Environmental  
 Resources  
 Management



賽馬會文物保育有限公司  
 The Jockey Club CPS Limited

air raid shelter in the northwest corner, re-surfacing, and potential bomb damage from the Second World War. It should also be remembered that the original buildings would not have had substantial foundations anyway, and may have left little or no trace of previous structures. Aside from the possibility of some earlier foundations or other substantial archaeology, there is also the possibility for small finds. The Parade Ground historically had a more porous ground covering, with areas grassed over and other parts dirt or gravel. As a high traffic area, it is likely that some small objects – be they personal items or police related – would have been dropped and have perhaps been trapped within the layers of archaeology beneath the present surface.

The Prison Yard also has some potential for archaeology, as it was originally the location of the 1858 radial plan prison, and there may be evidence of the four wings which have been demolished. Some evidence of this early prison has likely been lost, however, with the construction of later buildings like a cell block in the southeast and a printing shop – later replaced by F Hall (building 17) in the southwest.

There is also a possibility of finding small artefacts in the Prison yard, though here the remains are more likely to be related historic use as an area for various types of prison labour. The following are known to have been undertaken at the prison, and archaeological remains relating to any of these items could remain: stone breaking and dressing, mat making, laundering clothes and blacksmithing. There is also potential for finding remains of the wall which separated F Hall from the rest of the prison in the first half of the 20<sup>th</sup> century; it was demolished following the Second World War.

Based on the findings as presented above, the desktop findings identified the following ten areas considered to have some archaeological potential to identify colonial period remains or even earlier period remains if they are still survived in the ground and their locations are presented in *Figure 3.16*.

- Parade Ground;
- Prison Yard;
- Barracks Lane;
- the Garage ;
- the married inspector's quarters and deputy superintendent's house (building 04)
- the area between A Hall (building 11) and B Hall (building 12);
- the area between and beneath Ablutions block (building 08) and the revetment wall to the south;
- west of D Hall (building 14);
- Laundry (building 16); and
- General Office (building 18).

As the desk-based assessment identified areas with archaeological potential but the information is considered inadequate for further detailed impact assessment, a non-destructive Ground Penetrating Radar (GPR) Survey was conducted in August 2009 to obtain the field data. Detailed results of the GPR Survey are presented in Annex A3 and the summary findings are presented below.

#### *Ground Penetrating Radar Survey Result*

*Figure 3.1* shows the area coverage of the GPR survey. The GPR survey revealed four major types of below ground elements, namely voids, utility cables, pipes and loose materials, all of which range in depth from 0.5 – 1.8 metres below ground level. There were a total of:

- Parade Ground - 128 transverse passes, and 85 longitudinal passes.
- Prison Yard - 63 transverse passes, and 97 longitudinal passes.
- F Hall (building 17) – several passes made in rooms 17/G/16 – 19.

- Narrow strip from north side of A Hall to south side of D Hall west extension – 67 transverse passes and 58 longitudinal passes, including rooms at the west ends of A Hall (building 11), B Hall (building 12) and D Hall west extension (building 14) as well as the open alleyways between these buildings .

Generally, the survey revealed various areas of possible voids and loose materials typically occurring at 0.6 or 0.8m below the surface. The results of the GPR do not provide a clear indication of what these disturbances could be. There were several occurrences of utility cables and pipes ranging from 0.5 to 1.5 metres below ground.

The results for 17/G/18 showed '*no observable void or loose material or detectable pipe or utility*', while there were possible voids or loose material throughout 17/G/16. Room 17/G/19 revealed possible voids or loose materials throughout, as well as some utility cables and pipes.

The most substantial finding of the survey is a tunnel in the northwest corner of the Parade Ground, which runs south from the Headquarters Block (building 01) at the west end. The general location of this tunnel – built as an air raid shelter during the Second World War – was previously known, though the GPR has identified its exact dimensions and position.

Another possible find is a series of drains in the Prison Yard, which appear to follow almost exactly the foundations for a previous cell block in the southeast corner. This building was constructed in 1901 in an area previously occupied by the southeast wing of the radial plan prison, and was the first building to be designed in the style of the still remaining B and E Halls. While the GPR survey suggests that only the drainage (which would have following the exterior perimeter of the building) is in place, but there is the possibility that some fabric of the cell block remains. This possibility is increased due to the lack of construction of any later buildings on this area of the yard.

The narrow area surveyed across A Hall, B Hall and D Hall west extension was carried out in several transverse passes, with approximately 10 passes per space. The number of longitudinal passes per space varied on the width of the room or open area. This included:

- A Hall (building 11) Chapel – 6 transverse and four longitudinal passes
- A Hall (building 11) Lavatory – 6 transverse and 6 longitudinal passes
- A Hall yard – 8 transverse and 9 longitudinal passes
- B Hall (building 12) – 5 transverse and 3 longitudinal passes in each of three north side and three south side cells
- B Hall (building 12) – 4 transverse and 9 longitudinal passes in the central corridor
- B Hall yard – 6 transverse and 10 longitudinal passes
- D Hall (building 14) west extension – 10 transverse and 18 longitudinal passes

The findings of these passes revealed very little additional information, with the general result showing the detection of utility cables and pipes as well as some loose material between 0.5 and 1.5 metres below ground.

Based on the desktop findings and the results of the GPR survey it is likely that the continued demolition and construction in the years prior to 1950 on the Site have likely destroyed much of the early built fabric below ground, and that few archaeological resources remain. However, considering the limitations of the GPR technique to identify small portable finds, there is still potential to identify archaeological remains in the areas of archaeological potential as shown in *Figure 3.16*. Archaeological



Building No.	Building Name
1	Headquarters Block
2	Armoury
3	Barracks Block
4	Married Inspectors' Quarters and Deputy Superintendent's House
5	Garage
6	Married Sergeants' Quarters
7	Single Inspectors' Quarters
8	Ablutions Block
9	Central Magistracy
10	Superintendents House
11	A Hall
12	B Hall
13	C Hall
14	D Hall
15	E Hall
16	Workshops & Laundry
17	F Hall
18	General Office
19	Bauhinia House

- 01 Building Number
- Indicates areas of potential archaeological remains including foundations of former buildings and features

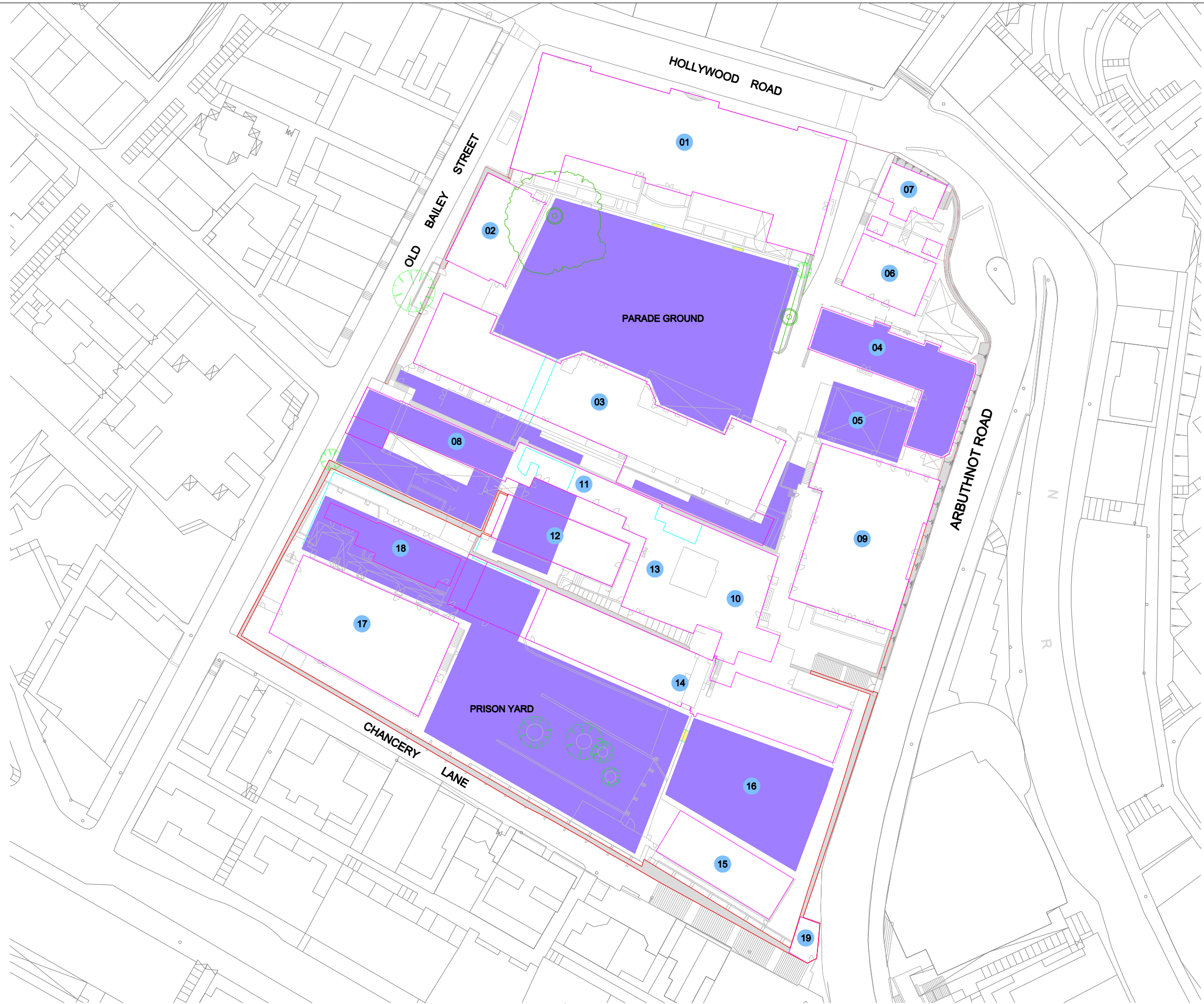


Figure 3.16

Ten Areas with Archaeological Potential

assessment including desk-based study for individual building and open space is also presented in Section 3.6.4 *Impact on Archaeological Resources* and Annex A1.

#### *Need for Archaeological Investigation*

The desk-top findings and the results of the GPR survey have been reviewed by two qualified archaeologists, Dr Jin Zhi-wei and Dr Liu Wen-suo, and it is now considered that the potential to identify archaeological remains exists. In order to obtain further field data for a detailed impact assessment, an archaeological investigation is therefore considered necessary. However, at this stage of the Project, a full archaeological investigation is considered not practical because:

- Some of the areas with archaeological potential have existing buildings on them, such as the Garage and the Management Offices and the Laundry, and these will not be demolished until EIA consent has been granted;
- Some of the areas with archaeological potential have existing historic buildings on them but no building works will be conducted during the EIA Stage of the Project; and
- Consents for archaeological investigation in terms of test pits excavation across the open sites such as the Parade Ground and the Prison Yard have not been granted at this stage and these sites are occasionally being used for public access and exhibitions.

Given the above constraints, AMO has been consulted and it was principally agreed and considered practical that the archaeological investigation be conducted during the detailed design phase of the Project. The archaeological investigation will focus on areas with archaeological potential that may potentially be impacted by the Project (i.e. proposed new development that involves excavation work in archaeological potential areas). These areas are identified on *Figure 3.17*.

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- University of Wisconsin, American Geographical Society Library. Harrison Forman Collection: <http://collections.lib.uwm.edu/>
- Gwulo: Old Hong Kong, photographic archive: <http://gwulo.com/photos-of-old-hong-kong>
- Government Records Service, Public Records Office: [http://www.grs.gov.hk/ws/english/ps\\_online\\_cata.htm](http://www.grs.gov.hk/ws/english/ps_online_cata.htm)
- Hong Kong Museum of History: <http://www.lcsd.gov.hk/CE/Museum/History/en/aboutus.php>
- Photo Library, Government Information Services: <http://www.isd.gov.hk/eng/pub.htm>

Building No.	Building Name
1	Headquarters Block
2	Armoury
3	Barracks Block
4	Married Inspectors' Quarters and Deputy Superintendent's House
5	Garage
6	Married Sergeants' Quarters
7	Single Inspections' Quarters
8	Ablutions Block
9	Central Magistracy
10	Superintendents House
11	A Hall
12	B Hall
13	C Hall
14	D Hall
15	E Hall
16	Workshops & Laundry
17	F Hall
18	General Office
19	Bauhinia House

- 01 Building Number
- Indicates areas of excavations for proposed new buildings, principal service trenches and underground circulation
- Indicates areas of potential archaeological remains including foundations of former buildings and features

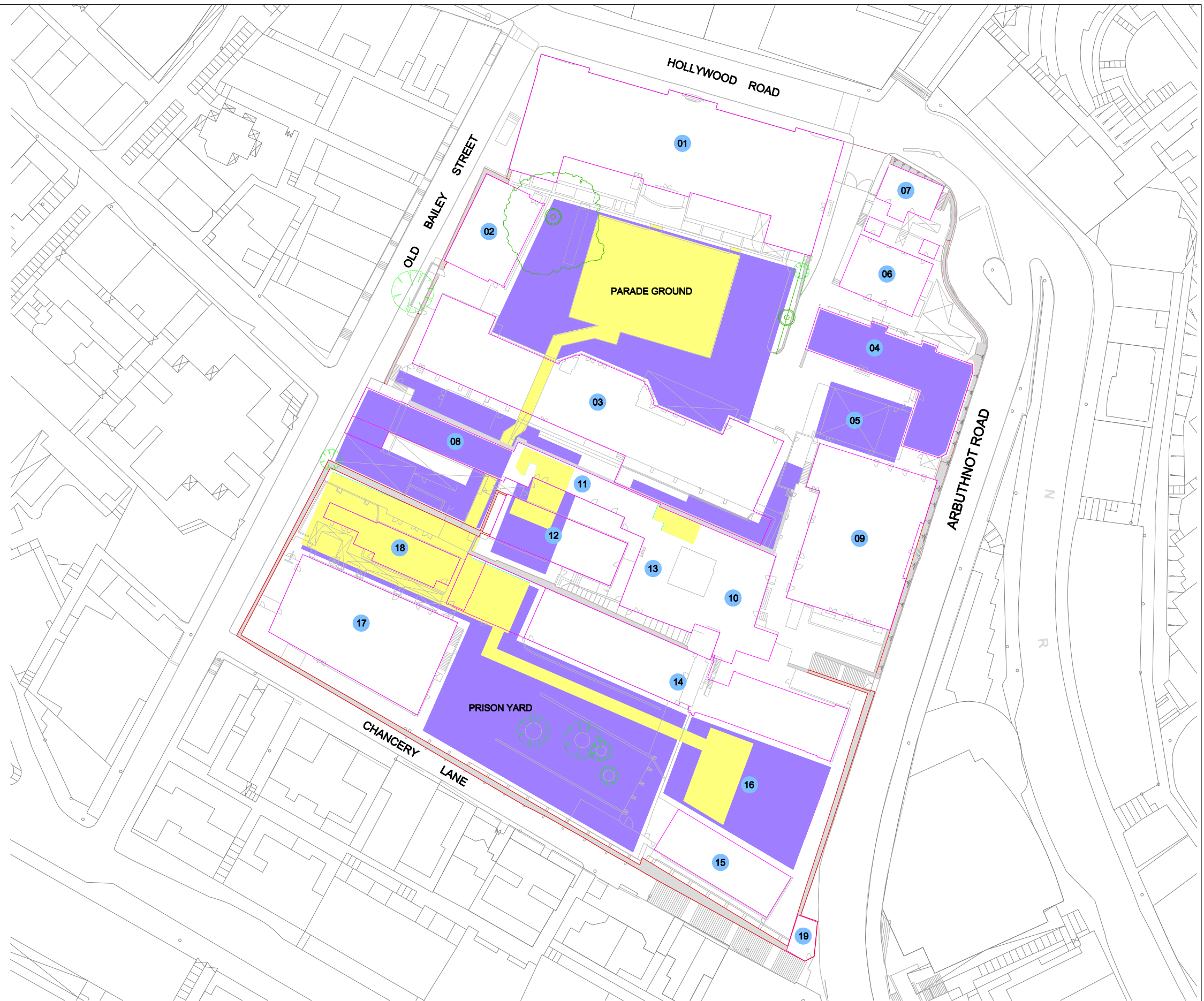


Figure 3.17

Areas (in Yellow) involve Soil Excavation Works

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[http://www.amo.gov.hk/form/build\\_hia\\_government\\_historic\\_sites.pdf?20100603](http://www.amo.gov.hk/form/build_hia_government_historic_sites.pdf?20100603)
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#### *Archives*

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Tsim Sha Tsui, Kowloon  
Hong Kong  
(852) 2208 4400  
amo@lcsd.gov.hk

##### ***Hong Kong Jockey Club***

Several photographs, maps and plans used in the creation of an exhibition for the HKJC were made available.

*Hong Kong Public Records Office*  
13 Tsui Ping Road,

*Kwun Tong, Kowloon*  
*Hong Kong*  
(852) 2195 7700  
proinfo@grs.gov.hk

##### ***Hong Kong University Library***

Digital Initiatives  
Hong Kong Government Reports Online  
<http://sunzi1.lib.hku.hk/hkgro/index.jsp>  
Sessional Papers (1884 - 1940)  
Gaol Reports  
Reports on the Legislative Council  
Reports of the Colonial Surgeon  
Police Reports  
Public Works Department Reports  
Administrative Reports (1879 – 1939)  
Police Annual Report and Returns  
Gaol Annual Report and Returns  
Reports of Colonial Surgeon and other Sanitary Papers  
Hong Kong Hansard (1890 – 1941)  
Reports of the Meetings of the Legislative Council  
Report of the Superintendent of Gaols  
Report of the Superintendent of Police  
Hong Kong Government Gazette (1853 – 1941)  
Tenders for buildings, dry earth, waste, food and clothing  
Notifications of employment at Prison  
Notifications of employment at Prison  
Public Notice for Rules, Regulations of Gaol  
Prison reports on punishments, treatments of prisoners

##### ***National Archives***

*The National Archives*  
*Kew, Richmond*  
*Surrey*  
TW9 4DU  
*United Kingdom*  
44 20 8876 3444  
[www.nationalarchives.gov.uk](http://www.nationalarchives.gov.uk)

##### ***Maps Collection***

MPG 1/118 : 001 – 005 a, b (original plans for the Buildings 3 & 4)  
MPG 1/113: 001 (plan of the radial plan prison c. 1864)  
MPG 1/118:17, 18 (plans of Stonecutter's Prison)

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<http://hdclib.lcsd.gov.hk/index.htm>

### 3.5 POTENTIAL SOURCES OF IMPACT

#### 3.5.1 Construction Phase

The potential sources of impact on the heritage site during the construction phase include:

- The demolitions of existing buildings.
- The excavations for the basements of the new buildings.
- The dismantling and reinstatement of sections of revetment walls, either to repair them or to enable ground excavations to be made for new basements.
- The excavations for the site-wide underground services, including new drainage.
- New openings to be made in the revetment walls to improve access into the Site.
- The safe collection and discharge of rainwater off the roofs of the existing buildings into the permanent or temporary drainage system to avoid damaging ingress into the interiors.
- The erection of essential scaffolding and any temporary roof protection for the repair and refurbishment of the existing buildings and for the new buildings.
- The use of construction cranes and vehicles on the Site.
- The use of areas of the Site for temporary construction storage.
- The construction of a new footbridge.

These potential sources of impact may result in direct loss, and permanent or temporary changes to the buildings. The construction works will be controlled and monitored by suitable construction methods and procedures to avoid damages to the historic buildings to be conserved.

#### 3.5.2 Operational Phase

The potential sources of impact on the heritage site during the operational phase may generally arise from:

- Potential operation visual impact due to the construction of a new footbridge
- Visitors across the Site in great numbers
- The tenants and users of the particular buildings
- Poor management of the operation and maintenance of the Site facilities and landscape

The existing heritage buildings have different qualities ranging from those with quite robust constructions and finishes to others which are more fragile. The impact on the buildings from the way

they are used can therefore vary significantly. It is for this reason that the adaptive uses in the buildings have been selected to avoid the most damaging effects of inappropriate uses. The uses selected should be capable of being sustained without irreversible damage by employing suitable operational controls. In some cases there will be the need to control visitor numbers within certain buildings to preserve the significant features. Generally the aim is that by taking suitable precautions to safeguard the heritage resources all the individual buildings will be able to be fully used to their greatest sustainable potential.

The operational controls to avoid damage to the heritage buildings include:

- Built –in protections required for certain fragile historic finishes and features, which would include for instance fragile artifacts such as painted signs.
- Heritage Operation and Maintenance Manuals for routine inspection and maintenance (including safe access methods) for window and gutter cleaning, cleaning of external and internal historic finishes, external and internal repainting, plant equipment and services maintenance. In particular the maintenance of fire precautions and the control of water services are of paramount importance in avoiding most damaging impacts on the buildings (please refer to *Annex A4 Heritage Operational Strategies* for more details).
- Suitable tenancy agreements clearly setting out the limitations of uses and the duties for maintenance.
- Control of unauthorised alterations.
- Visitor management where essential.
- Security measures, both passive and active.
- Guidance for operators carrying out maintenance work, for instance in the use of historic materials to maintain authenticity of the historic fabric.
- Risk management procedures for routine and emergency operations.
- Heritage related staff management.
- Heritage related staff training.

### 3.6 IMPACT ASSESSMENT

The following section provides an assessment of the potential impacts on the declared monuments on the Site, on the potential archaeological resources of the Site, on other built heritage resources outside the Site and within 50m of the Site boundary, and during the operational phase, based on proposals for changes on the Site. This section is divided into five main categories, each with its own assessment of impact and the relevant mitigation for these impacts. Within each category, the impact on the Site will be assessed according to *Clause 3.2.4, Appendix B of the EIA Study Brief No. ESB-205/2009*, including the impact ratings which determine the level of impact and possible requirement for mitigation measures. These are:

- 1 *Beneficial Impact: the impact is beneficial if the project will enhance the preservation of the heritage site and heritage items such as improving flooding problem of the historic building after the sewerage project of the area, putting an unused historic building back into use and allowing public appreciation*

- 2 *Acceptable Impact: if the assessment indicates that there will be no significant effects on the heritage site or items*
- 3 *Acceptable impact with mitigation measures: if there will be some adverse effects, but these can be eliminated or reduced to a large extent prior to commencement of work*
- 4 *Unacceptable impact: if the adverse effects are considered to be too excessive and are unable to mitigate practically*
- 5 *Undetermined impact: if the significant adverse effects are likely, but the extent to which they may occur or may be mitigated cannot be determined.*

The five categories of the impact assessment are listed below, along with a summary of their content:

#### *The Site*

This section will discuss the overall construction and operation impacts of the scheme on the whole CPS, looking both at the range of adaptive reuse alterations to the historic buildings and the new buildings.

#### *Individual Built Heritage Resources within the Site*

This section will look at the individual buildings, spaces and features within the Site that will be affected by the new proposals. In order to form a more coherent system of reference within this CHIA, summaries of the baseline studies and impact assessments for each of these heritage resources have also been provided within this section.

#### *Other Built Heritage Resources within 50m but Outside the Site*

There are some built heritage resources within 50 m of the boundaries of the Site (as stated in *Section 3.4.6*) which have a direct relationship to the Site and could potentially be affected to some degree indirectly by proposed development. These mainly involve the roads and pedestrian routes outside the Site and there is a need to make road and footpath improvements for public safety and operational reasons. This section assesses the potential impact on these built heritage resources.

#### *Archaeological Resources*

This section will address the potential impact to the potential archaeological resources within the Site, based on findings of the Archaeological Desk-top study and the Ground Penetrating Radar (GPR) survey. It will discuss only those areas where the below-ground archaeology has the potential to be disturbed, for example in the Parade Ground and Prison Yard, or in areas where buildings are proposed for demolition.

#### *Operational Phase*

This section notes that there could be potential impacts on the exteriors and interiors of the heritage buildings and on the site features during the operational phase due to great numbers of visitors on the

Site, from the tenants and users of the particular buildings, and the operational management of the Site services facilities and landscape (as stated in *Section 3.5.2*).

### **3.6.1 Impact on the Site**

#### *General Impact*

The following interventions are common to the adaptive reuses for all the existing buildings on the Site and will be addressed in detail on a building by building basis during the detailed design stage. The individual building studies included in *Annex A1* refer to these interventions and their impact ratings:

- Compliance with building codes using a recognised conservation approach for adaptive reuses in heritage buildings;
- Underpinning;
- Roof tiling: repairs or renewals;
- New wall openings;
- Stairs: retention and improvements;
- Lifts: selection to suit buildings;
- Services installations: plant and services (including utility and piping inside or side buildings) distribution;
- Fenestration refurbishments: repairs and replacements;
- Upgrading for fire doors;
- Upgrading for safety: stairs and balustrades; and
- Strengthening of timber floors.

In addressing the means of strengthening the timber floors across the Site, the general methodology has been to use the most appropriate means dependent on the current timber design and strength, the proposed adaptive uses, and the value of heritage significance.

Two main options for strengthening include:

- Reducing the span length of the existing timber member. This method uses a steel beam beneath the timber at mid-span to reduce maximum shear and moment.
- Local strengthening of the existing timber section. This method strengthens the section of the timber beam by sandwiching it between steel plates.

Two main options for strengthening the floor of a kitchen or bathroom include:

- The addition of a concrete floor cast over the existing floor and supported by steel frames resting on the existing masonry walls.
- The use of non-slip water resisting vinyl sheeting over the existing construction.

The existing building structures have been assessed by the structural engineer as being capable of supporting the proposed new uses and alterations without extensive strengthening work. In order to

ensure that the impact to the historic fabric of the buildings is minimal due to the floor strengthening proposal, a detailed structural report will be prepared by the structural engineer during the detailed stage to evaluate if the above proposal needs to be revised and determine any strengthening work is required for the floors and foundations resulting from the loadings of the new uses, or the alterations, or from the condition of the existing structures. Any structural strengthening proposals will be assessed for their impacts on the character defining elements, and mitigation measures will be considered.

In general, the interventions of these alterations to the buildings will vary depending on the method used and the significance of the building. Ultimately, the key goal is to provide a safe environment while also following conservation principles for alterations to historic buildings, including minimum intervention and, where possible, reversibility.

#### *Impact on Site Circulation*

With at least three different levels making up the overall compound, a dense network of buildings separating the Parade Ground and the Old Prison Yard, and a heavy granite wall surrounding the original prison grounds, the CPS compound is presently difficult to navigate and almost impossible to access. Vital to the successful revitalization of the site is the ease through which it can be accessed by the public – and specifically by pedestrians who will be walking into, around and through the site. The aim is to transform what was once a closed and heavily restricted site into a public space that is open and welcoming.

To link the new pedestrian network of public spaces within the site, two main circulation paths running north-south and one running east-west are proposed:

- The first north-south path directly connects the Central Mid-Levels escalator through a new footbridge to the lower Parade Ground. From there, a public path will be opened through the ground floor of Barracks Block leading to a new stair passageway under A Hall and through B Hall to the upper Prison Yard. Two sets of new elevators – the first through B Hall and the second through Old Bailey Wing – can also be accessed along the path ensuring equal accessibility and interpretive experience for all.
- The second north-south path is more meandering and historical in nature. It begins as a continuation of the pedestrian Pottinger Street, through the Pottinger Gate and into the Parade Ground. From there, a set of stairs leads up to the Magistracy Terrace, and then through a new wall opening where the ground floor of D Hall East and the Laundry Yard can be reached. Like all paths, this historical heritage path will also be revitalized to ensure equal access for all.
- The east-west path will be anchored by the two new proposed cultural buildings and will create a cross pedestrian route connecting Soho and Lan Kwai Fong through the Old Prison Yard. An opening in the prison wall along Old Bailey Street, close to Staunton Street, will create a new Western entrance that will be matched on the Eastern side with another new wall opening towards Arbuthnot Road. The Bauhinia House will be rehabilitated as a new gatehouse linking Arbuthnot Road to the Old Prison Yard.

Based on the above described proposed changes in the circulation around the Site, the following interventions are required.

- New openings into the south elevation of B Hall for both the new stair passageway which is the width of two prison cells and the accessible path of travel which occupies the width of one prison cell.
- Several new openings and a minor alteration of the historic revetment walls in a clear modern style to ensure no confusion with historic openings. The new openings will work with the coursing of the granite walls to ensure minimum disruption to historic fabric. The proposed openings/minor alterations are listed below:
  - a) A new opening by Bauhinia House in the wall to Arbuthnot Road;
  - b) A new opening off Old Bailey Street under the location of the proposed new building;
  - c) A minor alteration to the wall between the Armoury and Police Headquarters where the proposed new bridge will land;
  - d) New openings in the revetment wall to the south of the Barracks Block and under the Ablutions Block, A and C Halls; and
  - e) New openings in the revetment wall to the south of the Ablutions Block and under the line of the new Old Bailey Wing building.

The proposed interventions will have direct impact on the Barracks Block, the interior of B Hall and several revetment walls. A marked change on the appearance of B Hall, a visual impact on several revetment walls as described above and fundamental change of the way people can circulate around the Site are also anticipated. Nevertheless, the impacts are considered to have minimal significant change to the ability to appreciate and understand the cultural significance of the buildings/revetment walls. The visual impact will be comparatively modest as the granite walls are large and dominant features and the new openings are small by comparison.

The most significant heritage impact is the loss of the separation of the Site into three distinct areas. At present the distinction between the Police Station and the Prison is clear with a single controlled point of access. Similarly the Magistracy is separated off from the Police area. To enable visitors to have easy access for the full use of the Site the new routes have been created and these will certainly blur the distinction between the areas, but this is really a problem of interpretation rather than impact on the historic fabric. The winding route around B Hall and up to the north side of D Hall have deliberately been left to enable groups who are visiting the site to understand the history and previous uses. This will be a challenge for the education and interpretation plans.

#### **3.6.2 Impact on Built Heritage Resources within the Site: Baseline Studies and Impact Assessments**

The section looks individually at the separate buildings and features, any potential impact and mitigation measures.

For each of these buildings or features, this section will include both the Baseline Study and the Impact Assessment as a means of creating a coherent and readable section. Therefore, each element of the Site addressed here will include the following two sections:

- A – Baseline Study. This includes a field study, archaeological survey, desktop study, assessment of significance, illustrative photographs and, where available, historic photographs and plans. Also included here is a list of character defining elements (where applicable) with figures and plan location references, which make reference to AMO’s archival records.
- B – Impact Assessment. This includes a general overview of proposals for each building or feature and a table setting out the various potential impacts and their potential mitigation measures. As not all parts of the buildings are accessible during EIA stage of the Project, comprehensive impact assessment and appropriate mitigation measures for all the character defining elements of the monuments and historic features of each building cannot not be conducted in this stage. It is therefore proposed that the relevant comprehensive impact assessment be conducted during the detailed design stage when closer access to all parts of the buildings will be made possible and when further ground investigations will have been carried out. Closer access at all levels inside and outside the buildings will clarify the condition of the fabric and features and finishes, and the further ground investigations will clarify any strengthening work required. The design and coordination of the services requirements and their integration into each building will be carried during the detailed design stage. The detailed design development of the historic buildings and structures, with the required interventions, strengthening and integrated services for new adaptive uses, will be carried out by the conservation design team and agreed with AMO. The impact assessments on the historic features with reference to AMO’s archival records will be tabled in four categories in the protection schedule of the historic features for AMO’s approval:

- Historical features to be preserved and repaired in-situ;
- Historical features to be affected altered/ replaced with new replica;
- Historical features to be temporarily removed for conservation treatment and reinstatement, relocation and/or display; and
- Historical features to be affected and relocated for reuse, display and/or preservation by record.

The historical features of significant cultural heritage value will be defined as the character defining elements of the monuments. All the character defining elements will be well preserved and repaired in accordance with the work methodologies approved by the AMO.

For ease of reference and reading this section, these individual building/feature studies have been included as *Annex A1*; with proposed drawings included as *Annex A2*. *Tables 3.10 to 3.31* provide a summary of the Baseline Studies and Impact Assessments; the mitigation measures are included in *Annex A1*.

Note that a comprehensive impact assessment on and photographic recording of the buildings, including all interior and exterior features and elements listed as being character defining or identified

as heritage items for preservation, will be completed during the detailed design stage when better access will be possible. The field study images included in the baseline study are a selection.

### **3.6.3 Impact on Other Built Heritage Resources within 50m but Outside the Site**

The impact assessment on built heritage resources identified (as presented in *Section 3.4.6*) within 50m but outside the Site is presented in *Table 3.32*.

Generally speaking, there will be little impact to the general road pattern and these resources as there are no proposals to alter the road pattern though in Old Bailey Street there are new gates proposed adjacent to the Barracks Block (building 03) and Ablutions Block (building 09) but these will not affect the actual street. The same applies to the new footbridge proposed at the northwest corner of the Site which will lead off from the mid-levels escalator; though it will visually change the junction of Hollywood Road and Old Bailey Street, it will cause no actual change to the traffic movement. Other planned changes are actually beneficial to the Site. For example, it is proposed that the pavement on the west side of Arbutnot Road be re-established. This would both provide better access around and into the Site for pedestrians, but it would also return the street level door of the Magistracy to working order. The pavement on the east side of Old Bailey Street will also be realigned to provide a drop-off point.



**Table 3.10 Summary of the Assessment for Building No. 01**

<i>Building No., Name &amp; Designation</i>	<i>Date of Construction and Original Use</i>	<i>Reference Drawings</i>	
<p>01 Police Headquarters Block Within Central Police Station Declared Monument</p>	<p>1916 – 1919 Central Police Station Headquarters, including: Offices, gymnasium with locker rooms, dormitories, mess rooms, recreation space and storage</p>	<p>01-GA-201 Lower Ground Floor 2 01-GA-202 Lower Ground Floor 2 01-GA-203 Lower Ground Floor 1 01-GA-204 Lower Ground Floor 1 01-GA-205 Ground Floor 01-GA-206 Ground Floor 01-GA-207 First Floor 01-GA-208 First Floor</p>	<p>01-GA-211 Roof Plan 01-GA-212 Roof Plan 01-GA-220 North Elevation 01-GA-221 North Elevation 01-GA-222 South Elevation 01-GA-223 South Elevation 01-GA-224 East Elevation 01-GA-225 West Elevation</p>
<i>Brief Overview</i>	<i>Proposed Adaptive Uses</i>	<i>Significance (refer to Section 3.11 of the Conservation Management Plan dated June 2008)</i>	
<p>Four storey red brick building of Neo-Classical Revival style, with ornate cement render four-storey façade to Hollywood Road and more domestic two storey façade to the Parade Ground. The internal spaces have retained many of their original features, and the openness of the two storeys. Gymnasium and top floor dormitories are easily regained by removing later alterations. The central staircase, spine corridors, verandahs and ground floor Chief Inspector’s and Assistant Superintendent of Police’s offices are the most important spaces in the building.</p> <p>In later years the first floor dormitories were converted into offices, with the rest of the building being used for various office and administration uses.</p> <p>The building has a reasonably robust construction of load-bearing brickwork and reinforced concrete floors, under a pitched tiled roof.</p>	<p>Mixed Use:</p> <ul style="list-style-type: none"> <li>• LG2/F – Multipurpose and ancillary support; Retail and ancillary support</li> <li>• LG1/F – F&amp;B and ancillary support; Toilets; Plant rooms; Site management office and store room</li> <li>• G/F – Interpretation room; Retail and ancillary support; F&amp;B and ancillary support; Multipurpose and ancillary support</li> <li>• 1/F – F&amp;B and ancillary support; Toilets</li> </ul> <p>The mix of adaptive reuses is seen as providing a good balance between cultural and commercial uses, and it also contributes some interpretation of the former Police Station uses in the lower part of the Site.</p> <p>The selected adaptive reuses are suitable for this reasonably robust building, and will be readily accommodated in the quality of the regained spaces.</p>	<p><b>HIGH</b></p> <p>One of the most architecturally important buildings on the Site, and one of few remaining colonial buildings in Hong Kong of such a large scale and grand design. The north façade presents a striking elevation on the Hollywood Road side of the Site.</p>	
<i>Conservation Approach</i>	<i>Major Proposed Changes (for Mitigations see Annex A1)</i>	<i>Overall Heritage Impact Rating Assessments</i>	
<p>All new adaptive uses will be accommodated within the existing building without new extensions.</p> <p>The existing access and circulation layout will be retained. All stairs will be retained and conserved, and justified for use on the basis of a fire engineering analysis of the means of escape for the whole building. Some additional rails to raise the height of the existing balustrades for compliance with safety codes may be required if alternative safety measures are not agreeable.</p> <p>Existing structural walls will be retained, with some new openings justified for the new adaptive uses.</p> <p>Existing original ceilings, plaster cornices and plaster features are to be retained and repaired wherever possible.</p> <p>All elevations, including features and finishes, balconies and balustrades, and roof tiling, will be repaired and refurbished to the original design. Later attached concrete canopies will be removed as they detract from the original building design.</p> <p>The original metal balustrade on the west side 1/F balcony will be retained and repaired, but because the design has unproven strength for safe public use it will only be used for maintenance access.</p>	<p>New external fire escape door and steps at LG2/F are to be provided on the west side, and the location is related to the fenestration pattern.</p> <p>New external equal access door at LG2/F on east side for purposes of equal access to the Site via this building, location is related to the fenestration pattern.</p> <p>Four new lifts will be installed in the central, east and west wings of the building for the purposes of equal access, goods access and fire access. The locations and types of lift are selected for optimizing user circulation and code compliance with minimum impact to the building structure and features.</p> <p>Public accessible WCs will be provided on LG2/F, LG1/F, 1/F for new uses in building and for site-wide uses.</p> <p>Removal of the later LG1/F inserted floor construction in the west side will regain the original double height (gymnasium) room.</p> <p>Later partition walls and suspended ceilings to be removed to regain the original internal spaces.</p> <p>New walls required for new uses generally to be of reversible lightweight stud and plasterboard construction.</p>	<p>The range of Impact Category Ratings for the interventions after mitigations in Block 01 are 1 (Beneficial), 2 (Acceptable), and 3 (Acceptable with Mitigation Measures). The overall Heritage Impact of the proposed interventions in Block 01 is therefore regarded as acceptable to enable the building to have a new adaptive use.</p>	

<i>Conservation Approach (continued)</i>	<i>Major Proposed Changes and Mitigations (continued)</i>	<i>Other Heritage Impact Rating Assessments (continued)</i>
	<p>Existing mechanical and electrical services will be removed, and new services including air-conditioning, water, power and lighting are to be installed suitable for new adaptive uses. Two new plant rooms are required for ventilation and air-conditioning, with chilled water supplied from central chiller plant. Kitchen extract flues will discharge into new chimney stacks matching the existing design.</p> <p>All original windows will be repaired. Later windows are to be replaced by replicas of original windows to regain the original building appearance throughout.</p> <p>Original external doors that have been replaced are to be reinstated in their original form. Original internal panelled doors will be retained and repaired, and upgraded for compliance with fire code as necessary.</p> <p>The original stone and cast iron balustrades on the verandahs will be retained and repaired. Higher barriers are required for compliance with safety codes. Additional higher rails will be of minimal design and have as little visual impact as possible on the overall façade.</p>	

**Table 3.11 Summary of the Assessment for Building No. 02**

<i>Building No., Name &amp; Designation</i>	<i>Date of Construction and Original Use</i>	<i>Reference Drawings</i>
02 Armoury & Store Within Central Police Station Declared Monument	1924 – 1926 Armoury & Store, including: Equipment store, outfit room, monthly store, strong room, armoury, workshop and magazine. The last known use was for the Traffic Police.	02-GA-201 Ground Floor 02-GA-202 First Floor 02-GA-204 Roof Plan 02-GA-220 North Elevation 02-GA-221 South Elevation 02-GA-222 East Elevation 02-GA-223 West Elevation
<i>Brief Overview</i>	<i>Proposed Adaptive Uses</i>	<i>Significance (refer to Section 3.11 of the Conservation Management Plan dated June 2008)</i>
Two storey brick building in the same style as the Headquarters Block, located on the west side of the Parade Ground. The external construction on the east side was altered in the 1930s to fill in the verandah and soon after the first floor was extended over the verandah to provide additional floor space.  Most of the external openings have been altered, and all the interiors have been stripped out, partitioned and refitted to create office space. The large granite revetment wall on which it sits on Old Bailey Street is one of the most important characteristics.  The building has a reasonably robust construction of load-bearing brickwork and reinforced concrete floors, under a pitched tiled roof.	Retail and ancillary support on both floors with toilets, for a single tenant.  The general tone of the Parade Ground area will be enhanced if there is a good balance between cultural and commercial uses.  As one of the buildings with little or nothing of significance internally the building, with its robust construction, prominent location and size, offers the possibility for a commercial use.  The selected adaptive reuse is suitable for this reasonably robust building.	<b>MEDIUM</b>  The significance of this building is mostly attributed to its visual link to the Headquarters Block, as well as its known use as a stable block during Japanese occupation.
<i>Conservation Approach</i>	<i>Major Proposed Changes (for Mitigations see Annex A1)</i>	<i>Other Heritage Impact Rating Assessments</i>
Elevations will be restored to the original design intention, inasmuch as possible.  The G/F infill of the verandah and the 1/F extension over the verandah will be removed to regain the original appearance of the building. A new barrier around the new accessible balcony over the verandah will be provided. Some original external walls are currently internal plastered walls, and will become exposed externally, and they will be refaced in brickwork.  Removal of a concrete entrance canopy & steps from the north east corner of the building, as they detract from the original building design.	The existing single non-code compliant internal concrete stair will be removed. Two new stairs are required for means of escape, and will be inserted on the north and south sides, located to maximise the main space on both floors for use. A new platform lift is to be inserted into the building for the purposes of equal access. Later partition walls will all be removed. Some existing internal wall openings will be widened and new openings created and justified for the new adaptive use. New walls required for the new use are generally to be of reversible lightweight stud and plasterboard construction. Existing mechanical and electrical services will be removed, and new services including air-conditioning, water, power and lighting are to be installed suitable for the new adaptive use. A new plant room is required for ventilation and air-conditioning, with chilled water supplied from central chiller plant. All original windows will be repaired. Later windows are to be replaced by replicas of original windows to regain the original building appearance throughout. On the east elevation where the original façade appearance is not known or is not revealed by the removal of the later extensions, a plain fenestration pattern will be reinstated. A fenestration pattern like the original design will be reinstated on the east elevation following demolition of the in-fill and extension. All the external and internal doors are to be replaced with new doors to compliment the original building design.	The range of Impact Category Ratings for the interventions after mitigations in Block 02 are 1 (Beneficial), 2 (Acceptable), and 3 (Acceptable with Mitigation Measures). The overall Heritage Impact of the proposed interventions in Block 02 is therefore regarded as acceptable to enable the building to have a new adaptive use.

**Table 3.12 Summary of the Assessment for Building No. 03**

<i>Building No., Name &amp; Designation</i>	<i>Date of Construction and Original Use</i>	<i>Reference Drawings</i>	
<p>03 Barracks Block Within Central Police Station Declared Monument</p>	<p>1862 – 1864 Third Floor c.1906 Police Barracks, also including: Offices for Clerks, the Superintendent of Police, Coroner and Interpreters; Reserve &amp; Charge Room; Day Rooms.</p>	<p>03-GA-201 Ground Floor 03-GA-202 Ground Floor 03-GA-203 First Floor 03-GA-204 First Floor 03-GA-205 Second Floor 03-GA-206 Second Floor 03-GA-207 Third Floor 03-GA-208 Third Floor</p>	<p>03-GA-211 Roof Plan 03-GA-212 Roof Plan 03-GA-220 North Elevation 03-GA-221 North Elevation 03-GA-222 South Elevation 03-GA-223 South Elevation 03-GA-224 East Elevation 03-GA-225 West Elevation</p>
<i>Brief Overview</i>	<i>Proposed Adaptive Uses</i>	<i>Significance (refer to Section 3.11 of the Conservation Management Plan dated June 2008)</i>	
<p>Four storey building (and the tallest on the Site) constructed of red brick with painted cement render. The basic floor plan is the same on all levels, with a central block of two or four rooms, a large open Dormitory space in the wings either side, and long verandahs on the north side. There are also projecting rooms on the north side for married and single sergeants. This building was constructed as a simple, functional building which responded to the local climate and a growing police force. The additional third floor is constructed in a similar style and scale, though it did necessitate the loss of a pedimented roof and the addition of buttresses on the south side.</p> <p>The building continued in use as accommodation until decommissioning, with some spaces accommodating kitchens, cafeterias, offices and armouries.</p> <p>The building construction is not as robust as others on the Site. The load-bearing brickwork walls support relatively fragile timber upper floors, under a pitched tiled roof. The timber floors in this building will need to be strengthened for any new use. Some areas of timber floors have already been replaced with reinforced concrete slabs. There are currently also limitations for viable adaptive reuses from the available means of escape if the two existing staircases are to be retained.</p>	<p>Mixed Use:</p> <ul style="list-style-type: none"> <li>• G/F – Museum; Interpretation room; Retail and ancillary support; Public circulation; Plant room</li> <li>• 1/F – Retail and ancillary support; Toilets; Plant room</li> <li>• 2/F – Retail and ancillary support; Toilets; Plant room</li> <li>• 3/F – F&amp;B and ancillary support; Toilets; Plant room</li> </ul> <p>The mix of adaptive reuses is seen as providing a good balance between cultural and commercial uses, and it also contributes some interpretation of the former Barracks Block uses in the lower part of the Site. This block also provides a good G/F location related to the principle access for visitors into the Site for an Information Centre closely associated with a small Museum. Visitors will be able to begin their journey through the Information Centre and take escalators and lifts to reach the upper levels of the Site.</p> <p>The selected uses are generally suitable for the relatively fragile timber floors in this building, which would need to be strengthened for any new use. The uses will be readily accommodated and the quality of the original spaces regained.</p> <p>A conservation approach strategy is required for providing adequate means of escape whilst retaining the use of the original staircases and maximizing the use of the building, and minimizing the damage to its most significant elements.</p>	<p><b>HIGH</b></p> <p>This is one of the oldest surviving buildings on the Police Station, and is an important example of early colonial design. Its location established the creation of the Parade Ground, and was the start of what would eventually become a much larger Central Police Station.</p>	
<i>Conservation Approach</i>	<i>Major Proposed Changes (for Mitigations see Annex A1)</i>	<i>Other Heritage Impact Rating Assessments</i>	
<p>All new adaptive uses will be accommodated within the existing building without new extensions.</p> <p>The existing access and circulation layout will be retained. The two existing open stairs are to be retained, conserved, and justified for use on the basis of a fire engineering analysis of the means of escape for the whole building. Additional rails to raise the height of the existing balustrades for compliance with safety codes may be required if alternative safety measures are not agreeable. The additional rails will be of minimal design and have as little visual impact as possible. Additional matching balusters to reduce the gaps will also be required. To provide alternative means of escape new bridges are to be constructed on the south side of the building to link the upper floors to the existing balconies and new staircases in Buildings 08 and 11.</p>	<p>Two new public lifts for user and equal access purposes, and one new goods/firemen’s lift will be installed in the central block. The central block is one of the areas of least significance within the building, and because of this it has been chosen as the location for both the lifts and the WCs. This location is not only convenient for these uses but by concentrating them together here will have the least amount of impact on the greater part of the historic building. It allows for all of the significant original room layouts in the wings to remain, and for the highly significant spaces like the verandahs and staircases to remain open and unaltered.</p> <p>New public accessible WCs will be provided in the central block on each of the upper floors.</p>	<p>The range of Impact Category Ratings for the interventions after mitigations in Block 03 are 1 (Beneficial), 2 (Acceptable), and 3 (Acceptable with Mitigation Measures). The overall Heritage Impact of the proposed interventions in Block 03 is therefore regarded as acceptable to enable the building to have a new adaptive use.</p>	

<i>Conservation Approach (continued)</i>	<i>Major Proposed Changes and Mitigations (continued)</i>	<i>Other Heritage Impact Rating Assessments (continued)</i>
<p>The existing covered bridge from the east side 1/F to the Magistracy Terrace will also provide an alternative means of escape. These bridges make it possible to provide the alternative means of escape without having to make further major interventions in the Barracks Block, such as additional internal or external staircases or major modifications of the existing stairs and verandahs. The new bridges will be designed with reference to the style of the existing south side bridges. Smoke curtains will be installed on the upper floor verandahs at the existing open stairs. Their use reduces the impact to the building as it negates the need for enclosed lobbies around the historic staircases, which would detract from the open character of the verandahs. The later infill walls in the arches of the ground floor verandahs, which detract from the original design of the building, will be removed, and the original open verandah access and circulation regained.</p> <p>The later single storey timber framed open fronted porch on the north elevation detracts from the original balanced design of the most significant elevation of the building, and will be removed. The porch has little significance and no architectural merit.</p> <p>The external ramp and steps to the north east side of the north elevation is a much later addition to the building and detracts from the overall appearance of the building, and will be removed. It has no significance and no architectural merit.</p> <p>The block of cells attached to the south east side of the south elevation is an extension of poor quality and with no architectural or historic significance. It detracts from the original building design and will be removed. Its removal, together with the removal other relatively insignificant features in this area, will open up a lane behind the Barracks Block to create a more usable site circulation space, and will restore the full height of the south elevation of the building to its original design.</p> <p>Existing internal structural walls will be retained, with some new openings justified for the new adaptive uses.</p> <p>Existing timber floors will be retained, repaired and strengthened, and upgraded to provide the required fire resistance for code compliance.</p> <p>Existing original ceilings, plaster cornices, and plaster and fretwork features are to be retained and repaired wherever possible.</p> <p>All elevations, including features and finishes, balconies and balustrades, and roof tiling, will be repaired and refurbished to the original design.</p>	<p>Later partition walls and suspended ceilings throughout the building will be removed, with the aim of restoring the building to its original layout as far as possible. One original wall on the G/F in the east block, and some other later walls are to be removed to provide spaces for viable new uses.</p> <p>An existing door opening in the G/F central block will be enlarged to provide a room for the Information Centre. Some new openings will be formed in walls on the all floors of the central block to provide layouts for the new uses.</p> <p>New partition walls will be built in the central block and third floor for the new uses, and they will generally be of reversible lightweight stud and plasterboard construction.</p> <p>Existing mechanical and electrical services will be removed, and new services including air-conditioning, water, power and lighting are to be installed suitable for new adaptive uses. New plant rooms, located in the central block on all floors, are required for ventilation and air-conditioning, with chilled water supplied from central chiller plant. Kitchen extract flues will discharge into new chimney stacks matching the existing design.</p> <p>All original windows will be repaired. Later windows are to be replaced by replicas of original windows to regain the original building appearance throughout.</p> <p>All later corrugated metal sunshades over windows will be removed as they detract from the original design of the facades.</p> <p>Blocked windows on the south side of the ground floor central block will be re-opened, and some converted into use as doors for the new G/F uses.</p> <p>Original external doors will preferably be retained and overhauled or upgraded, but where their condition is unacceptably poor they will be replaced. New doors will match the original detailing.</p> <p>Original internal panelled doors will preferably be retained and overhauled or upgraded for compliance with fire code as necessary, but where their condition is unacceptably poor they will be replaced. New doors will match the original detailing.</p> <p>The original pottery balusters with granite handrails on the verandahs will be retained and repaired. Higher barriers are required for compliance with safety codes. Additional higher rails will be of minimal design and have as little visual impact as possible on the overall façade.</p>	

**Table 3.13 Summary of the Assessment for Building No. 04**

<i>Building No., Name &amp; Designation</i>	<i>Date of Construction and Original Use</i>	<i>Reference Drawings</i>
<p>04 Police Deputy Superintendents' and Married Inspectors' Quarters Within Central Police Station Declared Monument</p>	<p>1862 - 1864 Accommodation for the Captain Superintendents and the Deputy Superintendent</p>	<p>04-GA-201 Ground Floor 04-GA-202 First Floor 04-GA-203 Second Floor 04-GA-205 Roof Plan 04-GA-220 North Elevation 04-GA-221 South Elevation 04-GA-222 East Elevation 04-GA-223 West Elevation</p>
<i>Brief Overview</i>	<i>Proposed Adaptive Uses</i>	<i>Significance (refer to Section 3.11 of the Conservation Management Plan dated June 2008)</i>
<p>Three storey brick building with painted cement render, similar in style and construction to the Barracks Block. It is arranged as two blocks forming an L-shape in plan, with a central staircase in each block. Originally open verandahs on the north and east sides are now mostly infilled with windows. It is linked to Building 06 by a concrete bridge at G/F. There are balconies to the upper windows on the south and west sides. The interiors have good quality and remain virtually intact. The original servants' wing to the south has been demolished.</p> <p>The last known use was for various Police staff spaces, including a briefing room, changing room, mess room and storage.</p> <p>The building construction is relatively fragile. The load-bearing brickwork walls support relatively fragile timber upper floors, under a pitched tiled roof. The timber floors in this building will need to be strengthened for any new use. There are currently also limitations for viable adaptive reuses from the available means of escape if the two existing staircases, which are mainly of timber construction, are to be retained.</p>	<p>Mixed Use:</p> <ul style="list-style-type: none"> <li>G/F – Retail and ancillary support; Interpretation rooms</li> <li>1/F – Arts-related support spaces</li> <li>2/F - Arts-related support spaces; Plant room</li> </ul> <p>The mix of adaptive reuses is seen as providing a good and viable balance between cultural and commercial uses in this relatively fragile building and in this area of the Site. The three Blocks 04, 06, 07, which have similar characteristics of style and construction, are considered suitable for providing a hub of arts-related support spaces, although Block 07 may be suitable for a Police office.</p> <p>The G/F location of Retail and Interpretation uses makes them readily accessible to the public without difficulties for means of escape. The selection of Arts-related Support spaces for the upper floors, with the relatively small occupancy and relatively low floor loadings of office use, makes the retention and upgrading of the existing timber stairs viable for means of escape, and will limit any floor strengthening required. With office use it should also be relatively easy to ensure that the existing interior fittings and finishes are retained.</p>	<p><b>MEDIUM/HIGH</b></p> <p>This is one of the earliest buildings on Site, and forms an historical and visual link with the Barracks Block. It also provides an understanding of the various types of accommodation which existed on the Site.</p>
<i>Conservation Approach</i>	<i>Major Proposed Changes (for Mitigations see Annex A1)</i>	<i>Other Heritage Impact Rating Assessments</i>
<p>All new adaptive uses will be accommodated within the existing building without new extensions.</p> <p>The original plan layout of the building is respected and altered as little as possible. New openings in the wall separating the two blocks on the two upper floors at the north east corner will allow the circulation routes along the verandahs to be linked to provide alternative means of escape and equal access. The two rooms on the upper floors at the north east corner will be reduced in size to provide the linking corridors. The existing timber stairs will be retained, repaired and upgraded for means of escape. One seriously non-compliant flight will be replaced to meet code requirements. Additional rails to raise the height of the existing balustrades for compliance with safety codes may be required if alternative safety measures are not agreeable. The additional rails will be of minimal design and have as little visual impact as possible. Smoke curtains will be installed on the upper floor verandahs at the existing open stairs. Their use reduces the impact to the building as it negates the need for enclosed lobbies around the historic staircases, which would detract from the open character of the verandahs.</p> <p>Existing internal structural walls will be retained, with some new openings justified for the new adaptive uses.</p>	<p>A new lift will be provided in the southeast corner of the building to provide equal access. This lift is to be located at the end of a historic circulation route, and requires the demolition of bathrooms for which the original features have been lost. Its location at the end of the circulation route means that the verandahs of the building remain intact and without obstruction, as the original design would have intended, while still allowing access throughout the whole building. As only a single lift is necessary to allow equal access to all parts of the building, this reduces the need for disruption of historic fabric throughout the rest of the building. To avoid the need for further ramps the intention is to form a doorway in the existing window to allow level access from the Parade Ground into the lift. This will then transfer the visitor to all three floors of the building. The lift type will be selected to avoid the overrun penetrating the roof.</p> <p>New public accessible WCs will be provided located at the end of the circulation routes so as not to disrupt the historic verandahs. WC provision in this building is limited so as not to unnecessarily divide the principal rooms.</p> <p>New ramps are proposed behind the east block stair on 1/F and 2/F, with new fire partitions to enclose the staircase for means of escape. The existing steps in the circulation behind the north block stair on 2/F on the will be removed.</p>	<p>The range of Impact Category Ratings for the interventions after mitigations in Block 04 are 1 (Beneficial), 2 (Acceptable), and 3 (Acceptable with Mitigation Measures). The overall Heritage Impact of the proposed interventions in Block 04 is therefore regarded as acceptable to enable the building to have a new adaptive use.</p>

<i>Conservation Approach (continued)</i>	<i>Major Proposed Changes and Mitigations (continued)</i>	<i>Other Heritage Impact Rating Assessments (continued)</i>
<p>Existing timber floors will be retained, repaired and strengthened, and upgraded to provide the required fire resistance for code compliance.</p> <p>Existing original ceilings, plaster cornices, and plaster and fretwork features are to be retained and repaired wherever possible.</p> <p>All elevations, including features and finishes, balconies and balustrades, and roof tiling, will be repaired and refurbished to the original design. The reinstatement of original features including the west elevation 2/F balcony will be carried out. Because this balcony design has unproven strength for safe public use it will probably only be used for maintenance access.</p> <p>Windows that have been added to infill the veranda arches will be removed. These later alterations detract from the original design characteristic of open verandas.</p>	<p>A new external ramp is proposed on the south side of the north block to provide disabled access.</p> <p>Existing mechanical and electrical services will be removed, and new services including air-conditioning, water, power and lighting are to be installed suitable for new adaptive uses. Chilled water will be supplied from central chiller plant. The proposed location of the plant room uses one of the second floor rooms in the north block already proposed to be subdivided for the new circulation.</p> <p>All original windows will be repaired. Later windows are to be replaced by replicas of original windows to regain the original building appearance throughout.</p> <p>All later corrugated metal sunshades over windows will be removed as they detract from the original design of the facades.</p> <p>Original external doors will preferably be retained and overhauled or upgraded, but where their condition is unacceptably poor they will be replaced. New doors will match the original detailing.</p> <p>Original internal panelled doors will preferably be retained and overhauled or upgraded for compliance with fire code as necessary, but where their condition is unacceptably poor they will be replaced. New doors will match the original detailing.</p> <p>The original pottery balusters with granite handrails on the verandahs will be retained and repaired. Higher barriers are required for compliance with safety codes. Additional higher rails will be of minimal design and have as little visual impact as possible on the overall façade.</p>	

**Table 3.14 Summary of the Assessment for Building No. 05**

<i>Building No., Name &amp; Designation</i>	<i>Date of Construction and Original Use</i>	<i>Reference Drawings</i>
05 Garage Within Central Police Station Declared Monument	1924 Garage for 'motor vans and cars', and some servants accommodation	
<i>Brief Overview</i>	<i>Proposed Adaptive Uses</i>	<i>Significance (refer to Section 3.11 of the Conservation Management Plan dated June 2008)</i>
Single storey red brick building with a pitched roof. Internally is a large open space with concrete posts and steel truss roof. There are also a range of small rooms to the east. It was constructed on the Site of the earlier servants' wing to the south of Building 04, and continued in use as a garage through to decommissioning.	This building will be demolished to create an open space.	<b>LOW</b> This building does not have any architectural or historical significance. The main importance lies in the potential for archaeology of the original servants' wing.
<i>Conservation Approach</i>	<i>Major Proposed Changes (for Mitigations see Annex A1)</i>	<i>Other Heritage Impact Rating Assessments</i>
	This building will be demolished to create an open space.	Impact Rating 2 – Acceptable Impact



**Table 3.15 Summary of the Assessment for Building No. 06**

<i>Building No., Name &amp; Designation</i>	<i>Date of Construction and Original Use</i>	<i>Reference Drawings</i>
06 Married Sergeants' Quarters Within Central Police Station Declared Monument	c. 1904 -1908 Accommodation for Married Sergeants and their families (four units in all)	06-GA-201 Ground Floor 06-GA-202 First Floor 06-GA-203 Roofspace Plan 06-GA-204 Roof Plan 06-GA-220 North Elevation 06-GA-221 South Elevation 06-GA-222 East Elevation 06-GA-223 West Elevation
<i>Brief Overview</i>	<i>Proposed Adaptive Uses</i>	<i>Significance (refer to Section 3.11 of the Conservation Management Plan dated June 2008)</i>
<p>Two storey brick building painted cream, with WC towers at the north-east and north-west corners. The exterior is plainly designed with covered balconies on the north, east and west sides. It is linked to Building 04 by a concrete bridge at 1/F. The interior is divided into two blocks with a central timber staircase for each. The design of this building is similar to that of building 07, which is thought to be contemporary.</p> <p>The last known use was as a Traffic Police Dormitory.</p> <p>The building construction is relatively fragile. The load-bearing brickwork walls support relatively fragile timber upper floors, under a pitched tiled roof. The timber floors in this building will need to be strengthened for any new use.</p>	<p>Mixed Use:</p> <ul style="list-style-type: none"> <li>G/F – Retail and ancillary support: F&amp;B and ancillary support; Toilet</li> <li>1/F – Arts-related support spaces; Toilet</li> </ul> <p>The mix of adaptive reuses is seen as providing a good and viable balance between cultural and commercial uses in this relatively fragile building and in this area of the Site.</p> <p>The three Blocks 04, 06, 07, which have similar characteristics of style and construction, are considered suitable for providing a hub of Arts-related Support spaces, although Block 07 may be suitable for a Police office.</p> <p>The G/F location of Retail units and an Arts-related café makes them accessible without difficulties for means of escape. The selection of Arts-related Support spaces for the upper floors, with the relatively small occupancy and relatively low floor loadings of office use, makes the retention and upgrading of the existing timber stairs viable for means of escape, and will limit any floor strengthening required. With office use it should also be relatively easy to ensure that the existing interior fittings and finishes are retained.</p>	<p><b>MEDIUM</b></p> <p>This building has a visual and historical link to Building 07, and is evidence of the constant expansion of the Site. It also adds to the understanding of various types of accommodation on the Site.</p>
<i>Conservation Approach</i>	<i>Major Proposed Changes(for Mitigations see Annex A1)</i>	<i>Other Heritage Impact Rating Assessments</i>
<p>All new adaptive uses will be accommodated within the existing building without new extensions.</p> <p>The original plan layout of the building is respected and altered as little as possible. Both existing timber stairs will be retained, repaired and upgraded for means of escape. Additional rails to raise the height of the existing balustrades for compliance with safety codes may be required if alternative safety measures are not agreeable. The additional rails will be of minimal design and have as little visual impact as possible. The stairs will be separated by a new partition at G/F, and one stair will discharge to the north side. New openings in the wall separating the two blocks on each floor will provide a shared circulation pattern.</p> <p>Existing internal structural walls will be retained, with some new openings justified for the new adaptive uses.</p> <p>Existing timber floors will be retained, repaired and strengthened, and upgraded to provide the required fire resistance for code compliance.</p> <p>Existing original ceilings, plaster cornices, and plaster and fretwork features are to be retained and repaired wherever possible.</p> <p>All elevations, including features and finishes, balconies and balustrades, and roof tiling, will be repaired and refurbished to the original design. The existing covered way, with its tiled roof, linking Building 06 with Building 07 will be retained and repaired.</p>	<p>A new platform lift will be provided in the north east corner tower of the building to provide equal access. The lift requires the demolition of WCs for which the original features have been lost, and this location avoids the need for disruption of historic fabric throughout the rest of the building.</p> <p>New accessible WCs will be provided located at both floor levels in the north east corner tower. WC provision in this building is limited so as not to unnecessarily divide the principal rooms.</p> <p>A new external ramp is proposed on the south side of the block to provide equal access.</p> <p>The existing doorways from the north side veranda and balcony into the rooms, lift and WCs will need to be widened for equal access purposes. New doors will match the original detailing.</p> <p>It will be necessary to raise the level of the rear verandah and extend it to allow for equal access circulation. The first floor north side balcony will require its finished level raising at each end for equal access, with short ramps not visible from the north elevation.</p> <p>Existing mechanical and electrical services will be removed, and new services including air-conditioning, water, power and lighting are to be installed suitable for new adaptive uses. Chilled water will be supplied from central chiller plant. The proposed location of the plant room is in a new attic under the roof, and a new floor will be installed for it.</p>	<p>The range of Impact Category Ratings for the interventions after mitigations in Block 06 are 1 (Beneficial), 2 (Acceptable), and 3 (Acceptable with Mitigation Measures). The overall Heritage Impact of the proposed interventions in Block 06 is therefore regarded as acceptable to enable the building to have a new adaptive use.</p>

<i>Conservation Approach (continued)</i>	<i>Major Proposed Changes (for Mitigations see Annex A1) (continued)</i>	<i>Other Heritage Impact Rating Assessments (continued)</i>
<p>The present balustrade of the east side balcony is of a plain design, and is of a later date and at odds with the historic balconies around the rest of the building. A new balustrade to match the existing ones would create a more coherent exterior design. The strengthening works to the underside of the balcony are of a poor quality and detract from the façade, which will be fully revealed with the removal of the covered sheds adjacent. Because the east and west balcony design has unproven strength for safe public use they may be restricted for maintenance access only.</p> <p>The canopy over the bridge link to Building 04 will be removed. It is of a later date and does not form part of the original design. The support structure is plain and at odds with the more delicate and slender columns of the balcony.</p>	<p>This will avoid having to use one of the rooms for plant. Supply and exhaust air could be provided with louvred openings in the east and west gable walls or with new 'chimneys' matching the existing chimneys.</p> <p>All original windows will be repaired. Later windows are to be replaced by replicas of original windows to regain the original building appearance throughout.</p> <p>All later corrugated metal sunshades over windows will be removed as they detract from the original design of the facades.</p> <p>Original external doors will preferably be retained and overhauled or upgraded, but where their condition is unacceptably poor they will be replaced. New doors will match the original detailing.</p> <p>Original internal panelled doors will preferably be retained and overhauled or upgraded for compliance with fire code as necessary, but where their condition is unacceptably poor they will be replaced. New doors will match the original detailing.</p>	

**Table 3.16 Summary of the Assessment for Building No. 07**

<i>Building No., Name &amp; Designation</i>	<i>Date of Construction and Original Use</i>	<i>Reference Drawings</i>	
<p>07 Single Inspector's Quarters Within Central Police Station Declared Monument</p>	<p>c. 1904 – 1908 Accommodation for Single Inspectors</p>	<p>07-GA-201 Ground Floor 07-GA-202 First Floor 07-GA-203 Second Floor 07-GA-204 Roofspace Plan 07-GA-205 Roof Plan</p>	<p>07-GA-220 North Elevation 07-GA-221 South Elevation 07-GA-222 East Elevation 07-GA-223 West Elevation</p>
<i>Brief Overview</i>	<i>Proposed Adaptive Uses</i>	<i>Significance (refer to Section 3.11 of the Conservation Management Plan dated June 2008)</i>	
<p>Three storey brick building painted cream, set on a single storey brick plinth. The interior layout is the same on each floor, with two main rooms and a corridor linking to a staircase on the east side. There is also a small projecting bathroom tower on the south side. There were originally balconies at each floor on the north side, but the ground floor balcony has been lost. The design of this building is similar to that of building 06, which is thought to be contemporary.</p> <p>The last known use was as a medical office.</p> <p>The building construction is relatively fragile. The load-bearing brickwork walls support relatively fragile timber upper floors, under a pitched tiled roof. The timber floors in this building will probably need to be strengthened for any new use.</p>	<p>Police Reporting Centre, on all three floors, with Toilets.</p> <p>This use is seen as suitable for this relatively fragile building, and can be accommodated with minimal changes to the internal layout, and will allow all the spaces to be used. The limited number of people who would use the upper floor offices makes it probable that agreement can be reached over the retention of a single means of escape staircase. The floor loadings for support or office use can also be more readily justified with minimal strengthening if required.</p>	<p><b>MEDIUM</b></p> <p>The building has a visual link to building 06, and similarly is important for showing the constant expansion of the Site and adds to the understanding of various types of accommodation. It also provides an important elevation facing Hollywood Road.</p>	
<i>Conservation Approach</i>	<i>Major Proposed Changes (for Mitigations see Annex A1)</i>	<i>Other Heritage Impact Rating Assessments</i>	
<p>The new adaptive use will be accommodated within the existing building without new extensions.</p> <p>The original plan layout of the building is respected and altered as little as possible. The existing timber stair will be retained, repaired and upgraded for means of escape. Additional rails to raise the height of the existing balustrade for compliance with safety codes may be required if alternative safety measures are not agreeable. The additional rails will be of minimal design and have as little visual impact as possible.</p> <p>Existing internal structural walls will be retained, with some new openings justified for the new adaptive uses.</p> <p>Existing timber floors will be retained, repaired and strengthened, and upgraded to provide the required fire resistance for code compliance.</p> <p>Later suspended ceilings are to be removed, and new ceilings will be reinstated in their original form. The later ceilings detract from the original interior character of the building.</p> <p>All elevations, including features and finishes, balconies and balustrades, and roof tiling, will be repaired and refurbished to the original design. Because the north balcony design has unproven strength for safe public use the balconies may be restricted for maintenance access only.</p> <p>The existing covered way, with its tiled roof, linking Building 07 with Building 06 will be retained and repaired.</p>	<p>A new platform lift will be provided for equal access. The desirability of installing lift in the building is debatable. This is a small building and it could be argued that disabled access to the ground floor would be sufficient for the small number of occupants. However there is the view that wherever possible the principle of equal access for all users should be adhered to. A conventional passenger lift to reach all floors would require the serious intervention of a lift pit in this small building. The proposal is to provide a platform lift that will serve the first floor but not the second. This provides 2/3 of the building with disabled access. The possibility of inserting a lift into the bathroom tower was considered</p> <p>This option was rejected as it took up an unnecessarily large amount of useful space in the tower, and the tower was more suitable for WCs. The compromise proposal is to fit a platform lift in the southwest corner of the smaller of the two rooms in a reversible manner.</p> <p>New accessible WCs will be provided on G/F and 1/F located in the south side tower. WC provision in this building is limited so as not to unnecessarily divide the principal rooms.</p> <p>Later partitions will be removed throughout. These detract from the original layout of the building, and will help to return the spaces to their original configuration.</p> <p>The existing doorways into the new WCs in the south tower will need to be widened for equal access purposes. New doors will match the original detailing.</p> <p>Existing mechanical and electrical services will be removed, and new services including air-conditioning, water, power and lighting are to be installed suitable for new adaptive uses. Chilled water will be supplied from central chiller plant. The proposed location of the plant room is in a new attic under the roof, and a new floor will be installed for it.</p>	<p>The range of Impact Category Ratings for the interventions after mitigations in Block 07 are 1 (Beneficial), 2 (Acceptable), and 3 (Acceptable with Mitigation Measures). The overall Heritage Impact of the proposed interventions in Block 07 is therefore regarded as acceptable to enable the building to have a new adaptive use.</p>	

<i>Conservation Approach (continued)</i>	<i>Major Proposed Changes (for Mitigations see Annex A1) (continued)</i>	<i>Other Heritage Impact Rating Assessments (continued)</i>
	<p>This will avoid having to use one of the rooms for plant. Supply and exhaust air could be provided with louvred openings in the east and west gable walls or with new 'chimneys' matching the existing chimneys. Externally accessible access doors for service risers in the bathroom tower are to be provided at ground floor level on the west elevation of the south tower, detailed to match the other external doors.</p> <p>All original windows will be repaired. Later windows are to be replaced by replicas of original windows to regain the original building appearance throughout.</p> <p>Original external doors will preferably be retained and overhauled or upgraded, but where their condition is unacceptably poor they will be replaced. New doors will match the original detailing.</p> <p>Original internal panelled doors will preferably be retained and overhauled or upgraded for compliance with fire code as necessary, but where their condition is unacceptably poor they will be replaced. New doors will match the original detailing.</p>	

**Table 3.17 Summary of the Assessment for Building No. 08**

<i>Building No., Name &amp; Designation</i>	<i>Date of Construction and Original Use</i>	<i>Reference Drawings</i>
<p>08 Ablutions Block Within Central Police Station Declared Monument</p>	<p>c. 1930s Sanitary Block for the police officers in Barracks Block</p>	<p>08-GA-201 Ground Floor 08-GA-202 First Floor 08-GA-204 Second Floor 08-GA-206 Roof Plan 08-GA-220 North Elevation 08-GA-221 South Elevation 08-GA-222 West Elevation</p>
<i>Brief Overview</i>	<i>Proposed Adaptive Uses</i>	<i>Significance (refer to Section 3.11 of the Conservation Management Plan dated June 2008)</i>
<p>Three storey red brick building set on a granite plinth. The building forms a physical separation between the CPS and Prison areas of the Site. Internally, the building is a single storey deep, with an external stair to the northwest and balconies along the north side. This space was lastly used as an ablutions building, containing WCs and showers.</p> <p>The building was updated with new facilities, allowing it to continue in use as a sanitary block. There were also some administration spaces and a gym.</p> <p>The building has a reasonably robust construction of load-bearing brickwork and reinforced concrete floors, under a pitched tiled roof.</p>	<p>Mixed Use:</p> <ul style="list-style-type: none"> <li>• G/F - Plant rooms; Site management office and store rooms; Toilet</li> <li>• 1/F - Plant rooms</li> <li>• 2/F - Plant rooms; Store room</li> </ul>	<p><b>MEDIUM/LOW</b></p> <p>This building is of little architectural interest, though the west elevation adds to the overall character of the Old Bailey Street side of the Site, and consciously responds to the domestic scale here.</p>
<i>Conservation Approach</i>	<i>Major Proposed Changes (for Mitigations see Annex A1)</i>	<i>Other Heritage Impact Rating Assessments</i>
<p>The scheme for the whole Site requires a completely new electrical provision with new transformers and associated switchgear rooms, and emergency generators. After considering several options for locating these functions around the Site there was found to be no adequate locations in operational terms to suit the HEC's requirements for access to their centralized equipment. It was therefore decided that the Ablutions block 08 should be altered in a major way to accommodate all the electrical supply equipment for the Site integrated in one location. In putting it all into the Ablutions Block major damage to other more sensitive blocks can be avoided.</p> <p>The Ablutions Block also has the dual advantages that it is one of the very few buildings where vehicle access is available, which is an essential requirement of the Hong Kong Electric Company, and it is also relatively central to the whole Site, making the electrical sub-main distribution routes effective and least damaging.</p> <p>Although the interior 1/F and 2/F floors will be completely removed, the exterior fabric, including the north side balconies, will be retained and refurbished as an element of the historic site and surrounding streetscape. The existing balconies provide an important alternative means of escape for the Type 1 grade Barracks block 03, which would otherwise require additional interior interventions with significant impacts. The existing bridges from Barracks block 03 will be retained and new bridges added.</p> <p>The G/F corridor from the north side balcony to the south side yard will be retained.</p>	<p>The existing single story extension on the south side at the west end will be removed to provide the essential turning into the yard for HEC and other delivery vehicles. The existing yard will be excavated to lower the level in relation to Old Bailey Street, and the south side of the Ablutions Block will be underpinned. The new loading/unloading yard will be provided with a vehicle turntable.</p> <p>Existing internal 1/F and 2/F floors and walls will be removed. These alterations are being made in order to create the required heights of space for centralized electrical equipment serving the whole Site. The existing partition configuration and storey heights do not allow for the installation of the required electrical transformers and associated switchgear and cable trenches and the emergency generators. The new concrete floors are to be supported on a new internal independent steel structure that will both support the new floors and provide structural stability to the existing brick envelope, removing the risk of collapse of the original structure. Where possible, some cross walls are to be retained, such as the one to the western side of the new service stair.</p> <p>Significant elements of the ground floor plan arrangement are to be retained, including the cross walls and in particular the passageway that provides access through the building, together with the associated arches to the north and south elevations.</p> <p>The existing timber king-post trussed roof structure is considered to be of some architectural interest, and is to be retained in its entirety.</p> <p>A new internal stair from the G/F north side balcony is to be located centrally in the building to provide service access to the first floor transformer rooms and meet code compliance for means of escape.</p> <p>All original windows will be repaired. Later windows are to be replaced by replicas of original windows to regain the original building appearance throughout. All windows to upper floors are to be locked shut with security mesh fitted behind for the safety of users and to meet code compliance.</p>	<p>The range of Impact Category Ratings for the interventions after mitigations in Block 08 are 1 (Beneficial), 2 (Acceptable), and 3 (Acceptable with Mitigation Measures). The overall Heritage Impact of the proposed interventions in Block 08 is therefore regarded as acceptable to enable the building to have a new adaptive use.</p>

<i>Conservation Approach (continued)</i>	<i>Major Proposed Changes (for Mitigations see Annex A1) (continued)</i>	<i>Other Heritage Impact Rating Assessments (continued)</i>
	<p>Original external doors will preferably be retained for reuse and overhauled or upgraded as necessary, but where their condition is unacceptably poor they will be replaced. New doors will match the original detailing.</p> <p>Elevations will be retained in their existing condition as far as possible, with repair work only being carried out as required. Although the south elevation will need to be altered for the operation of the electrical equipment, the remainder of the building will retain its historic appearance on the exterior. On the south elevation there will be several interventions for new louvres and access doors for the essential operation of the new transformer and switchgear equipment. The aim is to use the existing fenestration openings and widen them or form new openings only where necessary. The south elevation has the least significant aspect for the Site given that it faces an existing high revetment wall.</p> <p>For the construction method to remove the existing floor slabs and add the new floor slab, it is proposed that the external walls will be retained, however the internal structure of the Ablutions block will be removed and replaced with a strengthened structure. The roof will be temporarily removed during construction, however will be replaced once adequate support has been provided to the internal shell of the structure. The façade and balconies are proposed to be retained and refurbished in their current form. To mitigate the impact, full recording before the work commence will be conducted.</p>	

**Table 3.18 Summary of the Assessment for Building No. 09**

<i>Building No., Name &amp; Designation</i>	<i>Date of Construction and Original Use</i>	<i>Reference Drawings</i>	
09 Central Magistracy Former Central Magistracy Declared Monument	1912 – 1914 Hong Kong Central Magistracy	09-GA-201 Lower Ground Floor 09-GA-202 Ground Floor 09-GA-203 First Floor 09-GA-204 Second Floor 09-GA-206 Roof Plan	09-GA-220 North Elevation 09-GA-221 South Elevation 09-GA-222 East Elevation 09-GA-223 West Elevation
<i>Brief Overview</i>	<i>Proposed Adaptive Uses</i>	<i>Significance (refer to Section 3.11 of the Conservation Management Plan dated June 2008)</i>	
<p>Three storey Neo-Classical red brick building set on angled granite plinth with basements. This building uses the same architectural detailing as the Headquarters Block, and is one of the most notable elevations overlooking the exterior of the Site. The interior consists of two large double-storey courtrooms and a central lightwell in the upper levels, with offices around it (some of which were previously dormitories). The building is serviced by three main staircases. There have been several alterations to the building, but most are reversible and the majority of high significance areas remain intact.</p> <p>The building ceased judicial use in 1979, and was converted into use for Immigration and Police Officers' Associations. In the 1990s it was converted into various administration uses by the police.</p> <p>The building has a reasonably robust construction of load-bearing brickwork and reinforced concrete floors, under a pitched tiled roof.</p>	<p>Mixed Use:</p> <ul style="list-style-type: none"> <li>• LG/F – Retail and ancillary support; Interpretation room; Site management office and store rooms; Toilets; Plant Rooms</li> <li>• G/F – Multipurpose and ancillary support; Retail and ancillary support; Toilets; Public circulation</li> <li>• 1/F – Multipurpose and ancillary support; Toilets</li> <li>• 2/F – F&amp;B and ancillary support; Toilets</li> </ul> <p>The mix of adaptive reuses is seen as providing a good and viable balance between cultural and commercial uses. The two courtrooms have sufficient of the original fabric remaining to allow both of them to be fully restored, and they will be excellent spaces to hold a variety of activities including lectures, music performance and private functions. These spaces, along with the holding cells in the basement, will also be a very important part of the interpretation of the history of the Site for the administration of the Law through the Courts. The restaurant will provide a good support use for the functions. Retail units will be suitable in the low height spaces of LG/F.</p> <p>A conservation approach strategy is required for providing adequate means of escape whilst retaining the use of all the existing staircases and maximizing the use of the building, and minimizing the damage to its most significant elements.</p>	<p><b>HIGH</b></p> <p>The Magistracy forms an important contribution to the history of law and order in Hong Kong, and is a fine example of Neo-Classical colonial architecture, the design of which influenced that of the Headquarters Block. The building also provides one of the most dominating and architecturally interesting external facades of the Site.</p>	
<i>Conservation Approach</i>	<i>Major Proposed Changes (for Mitigations see Annex A1)</i>	<i>Other Heritage Impact Rating Assessments</i>	

<p>All new adaptive uses will be accommodated within the existing building without new extensions.</p> <p>All the existing will be retained. The stairs do not individually comply with code requirements for means of escape, but using a fire engineering approach suggests that if they are linked with corridors to act together and when they are given some upgrading, they can provide sufficient and adequate means of escape for the new uses. Some additional rails to raise the height of the existing balustrades for compliance with safety codes may be required if alternative safety measures are not agreeable.</p> <p>The circulation pattern on the principal entrance G/F will be retained, but on 1/F and 2/F there will be new circulation patterns which resolve the means of escape and the accessibility between the east and west sides of the building accommodation across the central lightwell, which will be covered with a new glass roof to become an atrium. The circulation patterns on the upper floors have been previously altered to suite changing uses. The circulation on LG/F uses the existing corridors with some new openings to provide suitable means of escape.</p> <p>The balconies overlooking the two courtrooms will be reinstated by removing the plant currently installed there and the inserted balcony walls. Equal access will be provided by extending the adjacent floor level into platforms on the balconies. Platforms will be constructed in timber for reversibility.</p> <p>The original narrow stair up to the north courtroom on G/F from the holding cell on LG/F is to be unblocked, and the original prisoner access route reinstated for interpretation. A trap door in the floor of the courtroom will enable a recreation of the courtroom layout to be set up when required.</p> <p>Later timber lobbies at the entrance doors to the courtrooms on G/F within the central entrance lobby are to be removed to regain the appearance of the lobby.</p> <p>The modern rooflights over the central entrance lobby are to be removed, and the central dividing panel will be removed to reinstate the single large aperture. This will be left open under a new high level glazed atrium roof. This roof will also improve the collection and safe discharge of rainwater which currently overflows the guttering and causes dampness in the building.</p> <p>The existing balconies and bridge in the lightwell are not original to the building and were installed as later modifications, and are no longer required in the planning of the building for new uses. They detract from the integrity of the lightwell and will be removed.</p> <p>Existing structural walls will be retained, with some new openings justified for the new adaptive uses.</p> <p>Existing original ceilings, plaster cornices and plaster features are to be retained and repaired wherever possible.</p> <p>All elevations, including features and finishes, balconies and balustrades, and roof tiling, will be repaired and refurbished to the original design.</p> <p>The original stone balustrades on the east side balconies will be retained and repaired. Higher barriers are required for compliance with safety codes. Additional higher rails will be of minimal design and have as little visual impact as possible on the overall façade. The original metal balustrades on the west side balconies will be retained and repaired, but because these balconies have unproven strength for safe public use they will only be used for maintenance access.</p> <p>Windows at south end of the principal east elevation's second floor balcony are to be removed. These windows were added later to increase office accommodation, and they detract from the original design of the elevation.</p> <p>Two later small windows on the north elevation detract from the historic elevation, and are not required, and they will be removed and the openings bricked up.</p>	<p>Access into the building at LG/F and G/F levels generally uses the existing external entrances which currently have steps. Equal level access is provided at the north east corner at LG/F by modifying an existing window, and at the west side at G/F by providing a short external ramp to the existing doorway.</p> <p>Two new lifts will be installed in the building for the purposes of equal access, goods access and fire access, and one change-of-level platform goods lift will be required in LG/F. The locations and types of lift are selected for optimizing user circulation and code compliance with minimum impact to the building structure and features. The location of the passenger lift in the north west corner enables it to be an element on the route providing equal access from the Parade Ground up through the Magistracy building, and thence into adjacent buildings, including the Superintendent's House (building 10) and through to buildings 13, 11 and 12, and also southwards to D Hall (building 14). It is located beside the existing principal stairs so that at lower ground level it shares the north access into the Magistracy building with the staircase. This location is in an area of relatively low significance, and provides disabled access both into the building from the north side and to every floor of the building with the use of a single lift. Other options for locating this important element of accessibility would be in areas of high historic significance and therefore more damaging.</p> <p>The location of the fireman's/goods lift is in an area of the building which has little historic significance on each floor previously used as mechanical space, toilets and later offices.</p> <p>New steps are needed for access circulation across the central lightwell, now to become an atrium, whose level is raised above the various first floor rooms around the lightwell. New steps will be provided from the west side circulation up to the lightwell level, and new steps will be provided into each of the east side function rooms. Chair lifts to meet code compliance for access will be provided on these new steps. New steps will be constructed in timber for reversibility.</p> <p>Public accessible WCs will be provided on all floors for the new uses in the building and for site wide uses. Their locations are in areas of little historic or architectural interest.</p> <p>Later partition walls and suspended ceilings to be removed to regain the original internal spaces, and to enable the layouts for the new uses.</p> <p>New walls required for new uses generally are to be of reversible lightweight stud and plasterboard construction.</p> <p>Existing mechanical and electrical services will be removed, and new services including air-conditioning, water, power and lighting are to be installed suitable for new adaptive uses. New plant rooms are required for ventilation and air-conditioning, with chilled water supplied from central chiller plant. The plant rooms will be in LG/F, in spaces which are utilitarian with no existing significant features. Kitchen extract flues will discharge into new louvres located on the inner slopes of the roof facing the lightwell to avoid detracting from the external appearance of the building.</p> <p>All original windows will be repaired. Later windows are to be replaced by replicas of original windows to regain the original building appearance throughout.</p> <p>Original external doors that have been replaced are to be reinstated in their original form. Original internal panelled doors will be retained and repaired, and upgraded for compliance with fire code as necessary.</p>	<p>The range of Impact Category Ratings for the interventions after mitigations in Block 09 are 1 (Beneficial), 2 (Acceptable), and 3 (Acceptable with Mitigation Measures). The overall Heritage Impact of the proposed interventions in Block 09 is therefore regarded as acceptable to enable the building to have a new adaptive use.</p>
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**Table 3.19 Summary of the Assessment for Building No. 10**

<i>Building No., Name &amp; Designation</i>	<i>Date of Construction and Original Use</i>	<i>Reference Drawings</i>	
<p>10 Superintendent’s House Within Victoria Prison Declared Monument</p>	<p>c. 1860s House for the Superintendent of the Prison/Police; historic main entrance into Prison</p>	<p>10_13-GA-201 Lower Ground Floor 10_13-GA-202 Ground Floor 10_13-GA-203 First Floor 10_13-GA-204 Second Floor 10_13-GA-205 Roof Plan</p>	<p>10_13-GA-220 North Elevation 10_13-GA-221 South Elevation 10_13-GA-222 East Elevation 10_13-GA-223 West Elevation</p>
<i>Brief Overview</i>	<i>Proposed Adaptive Uses</i>	<i>Significance (refer to Section 3.11 of the Conservation Management Plan dated June 2008)</i>	
<p>Three storey rendered brick building, fully attached to the adjacent building 13 (C Hall - a much later and poorer quality building dating from the 1920s), and so has no aspect of any significance to the west. The building is of a domestic scale and design, with elements similar to buildings 03 and 04, which are contemporary. The general layout of two principal rooms on the upper floors has been retained, and a large archway, originally the main entrance to the prison, remains at ground floor but has been blocked. Many early features survive such as panelled door and window surrounds, a first floor balcony, skirting boards and timber staircase to the southwest. A later extension to the south east is of less significance.</p> <p>The building was last used as administration and dormitory rooms.</p> <p>The building construction is relatively fragile. The load-bearing brickwork walls support relatively fragile timber upper floors, under a pitched tiled roof. The timber floors in this building will probably need to be strengthened for any new use.</p>	<p>Mixed Use:</p> <ul style="list-style-type: none"> <li>• G/F – Retail and ancillary support; Public circulation; Toilet</li> <li>• 1/F – Arts-related support spaces; Toilets</li> <li>• 2/F – Arts-related support spaces</li> </ul> <p>The mix of adaptive reuses is seen as providing a good and viable balance between cultural and commercial uses in this relatively fragile building and in this area of the Site. The G/F location of Retail units makes them readily accessible to the public without difficulties for means of escape, and the character of the upper floors will be suitable for Arts-related Support spaces. The relatively small occupancy and relatively low floor loadings of such support spaces, makes the retention and upgrading of the existing timber stair viable for means of escape, and will limit any floor strengthening required.</p> <p>To make building 10 viable for new uses its circulation will be linked to the adjacent accommodation in building 13 (C Hall). A new staircase in building 13 is to be linked to operate with the existing main staircase in building 10 to provide the necessary alternative means of escape from both buildings, and this new staircase is beneficially located to provide a connection to Barrack Lane on the north side.</p>	<p><b>MEDIUM / HIGH</b></p> <p>This is one of the earliest buildings on the Site, and would have been an essential part of the early prison/police site. The pediment is the only remaining characteristic of the early site. Those at the original Magistracy (now demolished) and the Barracks Block (lost when the third floor was added) are now lost.</p>	
<i>Conservation Approach</i>	<i>Major Proposed Changes (for Mitigations see Annex A1)</i>	<i>Other Heritage Impact Rating Assessments</i>	
<p>All new adaptive uses will be accommodated within the existing building without new extensions.</p> <p>The original plan layout of the building is respected and altered as little as possible. The later single storey extension the southeast corner and the two storey extension to the south are to be removed. The removal of these extensions will restore the building to its original configuration and improve the appearance of the exterior elevations. The later plain concrete planter on the east elevation detracts from the elevation and will be carefully removed and the wall made good.</p> <p>The existing main timber stair will be retained, repaired and upgraded. It does not completely comply with code requirements for means of escape for the new uses, but a fire engineering approach suggests that if it is linked with corridors to the new compliant stair in building 13, they can act together. Some additional rails to raise the height of the existing balustrades for compliance with safety codes may be required if alternative safety measures are not agreeable.</p> <p>The later masonry infills to the original G/F arched openings in the east side external wall and in the connecting wall to Building 13. The east side external steps will be retained, and this will reinstate the original G/F through route, and when linked to the G/F circulation spaces in building 13, will provide improved public access across the Site. The use of a platform change-of-level lift at G/F adjacent to the east side arch in an existing opening, requiring minimal widening and the removal of the modern unsightly external steps, will provide for equal access into the building on the east side.</p>	<p>The removal of the existing suspended timber floor to the G/F south east room of the building will allow for an equal level access floor into this room from Magistracy Terrace. The existing window will be altered for a door designed to have original design details.</p> <p>A new lift is to be inserted in the south side of the building for the purposes of equal access. The location has been selected to minimise the impact on the original building fabric, as the space here has little historic or architectural significance. The location of a passenger lift on the south side also enables it to be an element on the route providing equal access from the Parade Ground up through the Magistracy building to Magistracy Terrace, into the Superintendent’s House using a platform lift, and from there up to the D Hall and Prison Yard level.</p> <p>Accessible public WCs will be installed on G/F adjacent to public WCs provided in the adjacent building 13, and also on 1/F. The ground floor toilet is in an area of low significance, and provides an accessible WC adjacent to the other grouped public WCs to be provided in the adjacent building 13 which has less historical significance than building 10. The first floor WCs are located in the south east extension which is of a later date and an area of least significance in the building. By installing the necessary WCs here, the rest of the first and second floors retain their original layout and the Principal rooms remain intact.</p> <p>New walls required for new uses generally are to be of reversible lightweight stud and plasterboard construction.</p>	<p>The range of Impact Category Ratings for the interventions after mitigations in Block 10 are 1 (Beneficial), 2 (Acceptable), and 3 (Acceptable with Mitigation Measures). The overall Heritage Impact of the proposed interventions in Block 10 is therefore regarded as acceptable to enable the building to have a new adaptive use.</p>	

<i>Conservation Approach (continued)</i>	<i>Major Proposed Changes (for Mitigations see Annex A1) (continued)</i>	<i>Other Heritage Impact Rating Assessments (continued)</i>
<p>The existing circulation pattern on 1/F and 2/F will be retained, and two new single door openings will link it to the new circulation on 1/F and 2/F in building 13.</p> <p>Existing internal structural walls will be retained, with some new openings justified for the new adaptive uses.</p> <p>Existing timber floors will be retained, repaired and strengthened, and upgraded to provide the required fire resistance for code compliance.</p> <p>The later G/F wall and corridor in north east room will be removed, and this will restore the room to its original size with the chimney breast within it. Later modern partitions and suspended ceilings on 2/F are to be removed to regain the room sizes of the original design, and new ceilings will be reinstated in their original form. The later partitions and ceilings detract from the original interior character of the building.</p> <p>All elevations, including features and finishes, balconies and balustrades, and roof tiling, will be repaired and refurbished to the original design. Because the 1/F east side balconies and 2/F east and north side balcony design has unproven strength for safe public use the balconies will probably have to be restricted for maintenance access only.</p>	<p>Existing mechanical and electrical services will be removed, and new services including air-conditioning, water, power and lighting are to be installed suitable for new adaptive uses. The plant room for the services in building 10 will be located in the adjacent building 13.</p> <p>All original windows will be repaired. Later windows are to be replaced by replicas of original windows to regain the original building appearance throughout. Wire security mesh will be removed from windows because this is no longer necessary and detracts from the elevations.</p> <p>Original external balcony doors will preferably be retained and overhauled or upgraded, but where their condition is unacceptably poor they will be replaced. New doors will match the original detailing.</p> <p>Original internal panelled doors will preferably be retained and overhauled or upgraded for compliance with fire code as necessary, but where their condition is unacceptably poor they will be replaced. New doors will match the original detailing.</p>	

**Table 3.20 Summary of the Assessment for Building No. 11**

<i>Building No., Name &amp; Designation</i>	<i>Date of Construction and Original Use</i>	<i>Reference Drawings</i>
11 A Hall Within Victoria Prison Declared Monument	1928 Reception Block , including: Baths, dressing boxes, disinfecting rooms, visiting boxes, prisoners' clothes store, solicitors' rooms, reception, registration and photographing room.	11-GA-201 Lower Ground Floor 11-GA-202 Ground Floor 11-GA-203 First Floor 11-GA-204 Second Floor / Roof Plan 11-GA-220 North Elevation 11-GA-221 South Elevation
<i>Brief Overview</i>	<i>Proposed Adaptive Uses</i>	<i>Significance (refer to Section 3.11 of the Conservation Management Plan dated June 2008)</i>
Two storey brick building with regular fenestration to the north and south, attached to building 13 to the east and 9 to the west. It is plain in design, with a single room on the first floor as all original internal walls have been removed, and with ground floor rooms being as deep as the building. There is a staircase at the south west and south east corners.  In later years the building contained a room used as a chapel on the ground floor, with the last known use of the building as an Immigration Office.  The building has a reasonably robust construction of load-bearing brickwork and reinforced concrete floors, under a flat concrete roof.	Education Centre and ancillary support on both floors, with Classrooms on G/F and Education Offices on 1/F; Toilets; Site management office and store room.  New underground Foyer for Site circulation.  The narrow yard between A Hall and B Hall is seen as one of the spaces where it will be best to interpret the function and nature of the Prison. As one of the buildings with little or nothing of significance internally A Hall, with its robust construction, central location and modest size, offers the possibility for a cultural and interpretation use. An Education Centre will be an appropriate use.  The selected adaptive reuse is suitable for this reasonably robust building.  A new underground foyer beneath A Hall will create an entrance at the Parade Ground level in Barrack Lane for a new principal public circulation route with a wide stairway and a lift rising within B Hall to the upper site levels where the new building elements of the project are situated. This foyer will also be connected up to A Hall via a new staircase at the west end. Which will replace the existing non-compliant one in A Hall.	<b>LOW</b>  This functional building was designed without any architectural detailing of note, and was built of materials which were readily available and matched the surrounding context. There is little original fabric remaining, and the main point of interest is the granite revetment wall below the north elevation which is of an earlier construction date.
<i>Conservation Approach</i>	<i>Major Proposed Changes (for Mitigations see Annex A1)</i>	<i>Other Heritage Impact Rating Assessments</i>
All new adaptive uses will be accommodated within the existing building without new extensions.  All elevations will be repaired and refurbished to the original design. Modern razor wire and fencing is generally to be removed from the buildings' facades and roofs, but some wire and broken glass and the fencing on the north edge of the A Hall roof may be retained for interpretation purposes in this particular context in A Hall Yard. It will be done in a way that is acceptable and readily removable to comply with Health and Safety requirements and to not impede proper maintenance. The flat concrete roof will be refurbished.	The two existing west and east end stairs are to be removed and replaced with code compliant stairs in similar locations for the building to be converted to a sustainable new use with compliant means of escape. The new west stair will provide means of escape for building 11, and also for building 03 via the new bridges to the building 8 balconies, and also for Building 08 down to the Barrack Lane level. Connection to the new staircase from the second floor balcony of building 08 will result in the new staircase being raised one storey above the roof level of building 11, and it will be constructed as a clearly identifiable modern addition so as not to impinge on the clarity of the original design of A Hall. The new east stair will enable a new connection to be provided into the adjacent building 13 where a new lift is being provided which will also serve building 11 and avoid needing a lift specifically for building 11. The internal character and fabric of the building is of low historical importance, and the removal of the existing narrow concrete stairs that are not code compliant together with small structural interventions is considered to be acceptable in this building.  Linking the buildings 11 and 13 and putting a new lift in the northwest corner of Building 13 negates the need for an additional lift in Building 11.  New WC facilities are required for the proposed new use of an Education Centre, and will be provided at the east end of the building. On the G/F new male and female WCs, an accessible toilet and cloakroom facilities, are provided adjacent to the teaching rooms, and on the first floor a single WC and a disabled WC will be provided for the Education Centre staff.	The range of Impact Category Ratings for the interventions after mitigations in Block 11 are 1 (Beneficial), 2 (Acceptable), and 3 (Acceptable with Mitigation Measures). The overall Heritage Impact of the proposed interventions in Block 11 is therefore regarded as acceptable to enable the building to have a new adaptive use.

<i>Conservation Approach (continued)</i>	<i>Major Proposed Changes (for Mitigations see Annex A1) (continued)</i>	<i>Other Heritage Impact Rating Assessments (continued)</i>
	<p>Internal walls are to be removed and new walls constructed as shown on the plans to suit the new uses and circulation. New walls required for new room layouts are generally to be of reversible lightweight stud and plasterboard construction.</p> <p>Existing mechanical and electrical services will be removed, and new services including air-conditioning, water, power and lighting are to be installed suitable for new adaptive uses. A new plant room is required for ventilation and air-conditioning, with chilled water supplied from central chiller plant. If the new plant room serving buildings 13 and 10 is not capable of serving building 11 also, a new plant room will be located on the roof of A Hall at the east end adjacent to the 2/F wall of building 13. This will maximise usable floor space on the lower floors and avoids excessive subdivision of the building. The plant room will be constructed as a clearly identifiable modern addition so as not to impinge on the clarity of the original design.</p> <p>All original windows will be repaired. Later windows are to be replaced by replicas of original windows to regain the original building appearance throughout. The original steel bars are to be retained and refurbished.</p> <p>Original doors that have been replaced are to be reinstated in their original form where this is known. Wherever later doors detract from the historic appearance of the building, these will be replaced with more sympathetic replacements. Steel-barred gates to the stairs are to be retained and fixed open flat against the facade, with new timber doors placed within the reveals.</p> <p>The walls of A-Hall will be propped by steel beams prior to any excavation works being carried out below the building. This will ensure that the superstructure remains stable during works below. The methodology for the construction of the tunnel will be finalized in discussions with the contractor, however the primary principle is to first stabilize the existing structure, prior to trying to form any new structure or openings below. In terms of mitigation measures, the existing structure will be propped prior to construction activities, and monitoring will be carried out during the construction phase. If any there is any risk of potential damage to the existing structure, the construction approach may need to be revised.</p> <p>Documentation will be conducted prior to works commencement and the project proponent will ensure that the works will not affect the significance of the CDE.</p>	

**Table 3.21 Summary of the Assessment for Building No. 12**

<i>Building No., Name &amp; Designation</i>	<i>Date of Construction and Original Use</i>	<i>Reference Drawings</i>
<p>12 B Hall</p>	<p>1910 Cell block</p>	<p>12-GA-201 Ground Floor 12-GA-202 First Floor 12-GA-203 Second Floor / Roof Plan 12-GA-204 Roof Plan 12-GA-220 North Elevation 12-GA-221 South Elevation 12-GA-222 East Elevation 12-GA-223 West Elevation</p>
<i>Brief Overview</i>	<i>Proposed Adaptive Uses</i>	<i>Significance (refer to Section 3.11 of the Conservation Management Plan dated June 2008)</i>
<p>This three storey brick building was one of three cell blocks of this design on the Site, with another being demolished and E Hall following it. The exterior features regular fenestration on all sides, and the interior has a central corridor and flights of straight open staircases with cells either side (a total of 26 each floor). Much of the original fabric survives.</p> <p>This building continued in use as a cell block until decommissioning.</p> <p>The construction of B Hall is reasonably robust with load-bearing brickwork cell walls and reinforced concrete floors, under a flat concrete roof which replaced the original tiled roof bomb-damaged in WW2.</p>	<p>Mixed Use:</p> <ul style="list-style-type: none"> <li>• G/F – Public Circulation; Interpretation rooms; Site management office</li> <li>• 1/F – Interpretation rooms</li> <li>• 2/F – Interpretation rooms</li> </ul> <p>A new principal public circulation route will be created to link the lane at the south side of the Barrack Block to the upper site levels. It will be in a tunnel under A Hall and A Hall Yard before rising up into the G/F of B Hall with a new wide stairway. Adjacent to the stairway will be a new lift rising to the G/F.</p> <p>Except for the interventions associated with the new public circulation, B Hall is to be generally left in its current state, and as such it will provide a primary interpretation resource of a cell block in a most useful location adjacent to the Education Centre in A Hall. Site management office and store room will also be provided in the building.</p>	<p><b>MEDIUM / LOW</b></p> <p>This building is one of the earliest surviving examples of this style of prison block, though it was not unique or architecturally interesting. Though the roof has been replaced it is substantially as built and a good example of cell block design of the time.</p>
<i>Conservation Approach</i>	<i>Major Proposed Changes (for Mitigations see Annex A1)</i>	<i>Overall Heritage Impact Rating Assessments</i>
<p>Except for the interventions associated with the new public circulation, B Hall is to be generally left in its current state. The ground floor cells to the east of the new stairway will be left intact for interpretation purpose, and the cells to the west of the new stairway and lift will also be left intact and can be used for stores. The first and second floors cannot be made safely and equally accessible without additional code compliant staircases and a lift, and this would be very damaging to the interior. It may be possible to allow occasional organised visits for small numbers of supervised visitors to the upper floors.</p> <p>The characteristic central open stairways and balconies on the upper floors will be retained intact.</p> <p>There is no requirement for plant rooms in B Hall for the proposed uses because air-conditioning is not required.</p> <p>All elevations will be repaired and refurbished to the original design. The flat concrete roof and clerestory rooflights will be retained and refurbished, on the basis that the replacement roof is authentic evidence of the building's history.</p>	<p>The main interventions for the public circulation stairway and lift will be located within the width of three cells to be removed across the building at G/F level. Although the corridor walls of the cells will be removed up to door height the walls above will be retained. A new opening in the south elevation at G/F level across the width of three cells will be made at the top landing of the new stairway and lift for access to the regraded level of B Hall Yard and the yards round to C Hall and A Hall which remain their existing levels.</p> <p>The alterations to the facades have been designed and are seen as being a clear modern intervention that removes the minimum of fabric consistent with making the new access, stair and lift work properly. The intervention is intended to remove the fabric with a clean cut finish so that there is no confusion between the original fabric and the modern intervention.</p> <p>Documentation will be conducted prior to works commencement and the project proponent will ensure that the works will not affect the significance of the CDE.</p>	<p>The range of Impact Category Ratings for the interventions after mitigations in Block 12 are 1 (Beneficial), 2 (Acceptable), and 3 (Acceptable with Mitigation Measures). The overall Heritage Impact of the proposed interventions in Block 12 is therefore regarded as acceptable to enable the building to have a new adaptive use.</p>

**Table 3.22 Summary of the Assessment for Building No. 13**

<i>Building No., Name &amp; Designation</i>	<i>Date of Construction and Original Use</i>	<i>Reference Drawings</i>	
13 C Hall Within Victoria Prison Declared Monument	c. 1929 Prison hospital, including: Operating Theatre, Wards, offices, mortuary, armoury, etc.	10_13-GA-201 Lower Ground Floor 10_13-GA-202 Ground Floor 10_13-GA-203 First Floor 10_13-GA-204 Second Floor 10_13-GA-205 Roof Plan	10_13-GA-220 North Elevation 10_13-GA-221 South Elevation 10_13-GA-222 East Elevation 10_13-GA-223 West Elevation
<i>Brief Overview</i>	<i>Proposed Adaptive Uses</i>	<i>Significance (refer to Section 3.11 of the Conservation Management Plan dated June 2008)</i>	
<p>Three storey brick building, 'U'-shaped in plan with a central atrium on the upper levels. It abuts building 10 to the east and building 11 to the west. It has regular fenestration on the exterior facades and overlooking the atrium. The ground floor is self-contained, and was last used for prisoner reception; the first and second floors have open ward rooms accessed by a staircase in the south west corner. The first floor also has a large Prison kitchen which is a later alteration. The building has undergone several alterations.</p> <p>This space was lastly used as the Prison kitchen, immigration reception and workshops. The building has a reasonably robust construction of load-bearing brickwork and reinforced concrete floors, under a flat concrete roof.</p>	<p>Mixed Use:</p> <ul style="list-style-type: none"> <li>G/F – Retail and ancillary support; Public circulation; Toilets</li> <li>1/F – Interpretation room; Plant room</li> <li>2/F – Site management offices and store room; Arts-related support spaces; Toilets</li> </ul> <p>The mix of adaptive reuses in this building is seen as providing only limited commercial uses, because it hemmed in by surrounding buildings and has very poor outlooks. It is not one of the most significant buildings on the Site and offers little architectural value. However it does provide useful functional value for the uses in the adjacent buildings 10, 11 and 03 for circulation purposes and resolving adequate means of escape. A new compliant staircase and lift are provided in the building located to serve these surrounding buildings, as well as providing a link to Barrack Lane on the north side. New bridges, used as means of escape from the upper two floors of building 03 (Barrack Block), are aligned with this new means of escape stair. The central G/F area when linked to the G/F circulation space in building 10 will provide improved public access across the Site.</p> <p>The G/F will have a small amount of retail space and a sizeable provision of public WC accommodation serving this area of the Site. The 1/F houses the Prison kitchen, and this will be used as an Interpretation space. The rest of the first floor will be used for plant room. The upper floor will mainly be used for site management offices and store rooms with a small area designed for arts-related support spaces and WC..</p>	<p><b>MEDIUM / LOW</b></p> <p>The design of the building is functional and without any unique architectural characteristics. The building still retains some elements of its original use such as the ward rooms and cross-ventilation, but this use changed prior to decommissioning. Of some significance is the Ladder Store at ground level, which is representative of various functions of the Site.</p>	
<i>Conservation Approach</i>	<i>Major Proposed Changes (for Mitigations see Annex A1)</i>	<i>Other Heritage Impact Rating Assessments</i>	
<p>All new adaptive uses will be accommodated within the existing building without new extensions.</p> <p>The removal of later masonry infill to the original granite arched opening connecting to building 10 will reinstate the original through-route to building 10, and provide improved public access across the Site. The later central prisoner holding cages on the ground floor in the atrium space will be removed to create this access. The removal of these cages reinstates the early G/F layout of the building.</p> <p>The 1/F houses the Prison kitchen, and this will be retained and refurbished as an Interpretation space.</p> <p>The existing stair in the southwest corner of the building is to be retained. Although it is not of any great historic or architectural interest. It remains a viable part of the building's circulation.</p> <p>All elevations will be repaired and refurbished to the original design, and the flat concrete roof will be refurbished.</p>	<p>A new code compliant stair will be inserted into the north side of the building. It is linked to the existing retained and upgraded stair in building 10 by new circulation corridors in building 13 which enables the stairs to function together for means of escape justified by a fire engineering approach. This is preferable to replacing the historically important staircase in building 10. The new staircase is located in a position which will maximise the use of the main spaces of the building. It is located in the north wing, which will allow the west and south wings to remain as large integrated spaces. The selected location also provides secondary means of escape from the Barrack Block (building 03), across two new footbridges into building 13 and thence down to Barrack Lane, thus negating the need for a new staircase within the highly significant Barrack Block. The stair also provides an additional escape route for people in the A Hall and B Hall Yard area. The new stairs are to be of lightweight steel construction, ensuring that they have a minimum impact on the building and are easily reversible.</p> <p>The windows will be retained so that the north elevation fenestration will not be greatly affected.</p>	<p>The range of Impact Category Ratings for the interventions after mitigations in Block 13 are 1 (Beneficial), 2 (Acceptable), and 3 (Acceptable with Mitigation Measures). The overall Heritage Impact of the proposed interventions in Block 13 is therefore regarded as acceptable to enable the building to have a new adaptive use.</p>	

<i>Conservation Approach (continued)</i>	<i>Major Proposed Changes (for Mitigations see Annex A1) (continued)</i>	<i>Other Heritage Impact Rating Assessments (continued)</i>
	<p>The central G/F area will be re-graded to create a sloping ground. This is necessary to provide equal level access into the building from the west and through to building 10 on the east, and the overall impact on the appearance of the space is minimized. The floor surface here is of a later date and of little historical importance.</p> <p>A new lift is to be inserted into the north west corner of the building for the purposes of providing equal access. The location of the lift has been selected to minimise the impact on the original building fabric. It is positioned adjacent to the other major intervention of the new staircase, so that all of the new interventions can be contained within one area of the building. A lift model has been chosen in which the shaft dimensions have been kept to a minimum and the overrun reduced to avoid any interventions to the roof structure, which will remain untouched. The lift shaft will require two existing windows to be blocked from the inside whilst retaining them from the outside. Alternative lift locations which should relate to the adjacent new staircase, will take up more floor space.</p> <p>Accessible public WC's will be provided on the G/F which has low significance, and allows the greatest flexibility for alteration. The location of the WCs here makes them easily accessible from outside this building and therefore available to a wide surrounding on this level of the Site. The design of the WCs retains the original walls beside the central open space, the granite revetment wall to the south, and it also retains the original door layout. Though the demolition of dividing walls in the southeast corner is necessary to provide the WC spaces, they are not of great historic interest. The original door openings in the wall to the central circulation area will be blocked but their forms exposed. Two staff WC's will be provided on the 2/F for the Site Management Offices.</p> <p>New walls required for new room layouts are generally to be of reversible lightweight stud and plasterboard construction.</p> <p>Existing mechanical and electrical services will be removed, and new services including air-conditioning with chilled water supplied from central chiller plant, water, power and lighting are to be installed suitable for the new adaptive uses in building 13 and the adjacent building 10. The plant for both buildings is to be centralised and located on the 1/F in building 13, which has less architectural and historical significance than building 10, and has a very poor outlook for other uses. The plant could be located in a new room built on the flat roof of C Hall which is probably of a later date and of little historic significance. However it would need a stair access and the additional bulk would significantly alter the heritage roof line.</p> <p>All original windows will be repaired. Later windows are to be replaced by replicas of original windows to regain the original building appearance throughout. Wire security mesh will be removed from windows because this is no longer necessary and detracts from the elevations.</p> <p>Original doors that have been replaced are to be reinstated in their original form where this is known. Wherever later doors detract from the historic appearance of the building, these will be replaced with more sympathetic replacements. Some new internal door openings will be necessary for the new uses. Two new external doors at 1/F and 2/F will be formed on the north side for the new means of escape bridges from the Barrack Block.</p>	

**Table 3.23 Summary of the Assessment for Building No. 14**

<i>Building No., Name &amp; Designation</i>	<i>Date of Construction and Original Use</i>	<i>Reference Drawings</i>	
<p>14 D Hall Within Victoria Prison Declared Monument</p>	<p>1858 Cell block; part of the original radial plan prison</p>	<p>14-GA-201 Lower Ground Floor 14-GA-202 Ground Floor 14-GA-203 Ground Floor 14-GA-204 First Floor 14-GA-205 First Floor 14-GA-206 Second Floor 14-GA-207 Second Floor 14-GA-208 Roof Plan</p>	<p>14-GA-209 Roof Plan 14-GA-220 North Elevation 14-GA-221 North Elevation 14-GA-222 South Elevation 14-GA-223 South Elevation 14-GA-224 East Elevation 14-GA-225 West Elevation</p>
<i>Brief Overview</i>	<i>Proposed Adaptive Uses</i>	<i>Significance (refer to Section 3.11 of the Conservation Management Plan dated June 2008)</i>	
<p>This building is divided into an east and west wing which are connected by a narrow link; both have three storeys with a basement in the east wing. Both wings are accessed only by a single staircase at the far west end. It is all constructed of brick with cement render, with regular fenestration on all elevations. All floors in both wings are based on a central corridor with rooms either side; these have all been individual cell blocks at some stage, but now all levels of the east wing and the second floor of the west wing have either two, three or four bay rooms. The second floor of both wings and first floor east wing were lastly used as a hospital with the larger spaces being wards. At the east end of the east wing is an extension originally used as WCs. The ground and first floors of the west wing and east wing basement are the most intact as cell blocks, with major alterations occurring elsewhere.</p> <p>The last known use for the building was as cell blocks, offices, and the prison infirmary and maternity ward.</p> <p>The building has a reasonably robust construction of load-bearing brickwork and reinforced concrete floors, under a flat concrete roof with rooflights which replaced the original tiled roof bomb-damaged in WW2.</p>	<p>Mixed Use:</p> <p><b>West Wing</b></p> <ul style="list-style-type: none"> <li>G/F – Arts related support space; Interpretation Rooms; Public circulation</li> <li>1/F – Arts-related support space; Arts-related Organization Archive; Plant rooms</li> <li>2/F – Arts-related Organization Record Centre; Plant rooms</li> </ul> <p><b>East Wing</b></p> <ul style="list-style-type: none"> <li>LG/F – Public Circulation; Store room; Toilets; Plant</li> <li>G/F - Public Circulation; Store room; Toilets; Plant</li> <li>1/F – Arts-related support space, Arts-related Organization Archive; Plant rooms; Toilets</li> <li>2/F – Arts-related Organization Record Centre; Plant rooms; Toilets</li> </ul> <p>The adaptive reuse of the upper two floors for an Arts-related Organization Archive and Record Centre is seen a most suitable function for this building in this part of the Site. The location is adjacent to the new buildings which will help bring the planned arts-related revitalization to the former bleak Prison site.</p> <p>D Hall is a high significance prison building, with some areas which are remarkably intact and impressive, particularly the range of cells on G/F of the West Wing. It is important that some of these cells are retained for interpretation of the Prison in its last use before closure. It will be difficult to find feasible adaptive uses for all the cells with their narrow doors and minimal high level windows and the aim is to continue to search for suitable sustainable arts-related uses for the cells not retained for interpretations. As well as providing entrance lobbies at LG/F and G/F levels for the Arts-related Organization accommodation on the upper floors, the uses on the LG/F and G/F levels of the East Wing are related to the new entrance into the Site from Arbuthnot Road, and the cultural, interpretation and leisure activities planned in the adjacent areas of the Prison Yard and the Laundry Yard. These activities will require toilet and storage facilities, and the lower floors of the East Wing can provide such spaces. Store for site management office will also be provided in the building.</p>	<p><b>HIGH</b></p> <p>This is one of the earliest buildings on the Site, and has remained one of the most commanding structures both for its representation of prison use and for its size. It is notable as the only remnant of the radial plan prison which was most probably one of the earliest of its kind in Asia. The interior changes from single to shared cells are evidence of the constantly changing opinions of prison reform, and – though it has necessitated significant alterations – the hospital parts of the building are important for their function as well.</p>	



<i>Conservation Approach</i>	<i>Major Proposed Changes (for Mitigations see Annex A1)</i>	<i>Other Heritage Impact Rating Assessments</i>
<p>All new adaptive uses will be all accommodated within the existing building. The whole building has only one staircase at the west end of the West Wing serving all floors, and this will be retained and refurbished. Two additional new code compliant means of escape staircases are required. One will be inserted into the building at the east end of the East Wing, and one will be provided externally to the building in an existing recess on the north side between the East and West Wings. It will be designed to have minimum visual impact on the north elevation, and be clearly distinguishable as a contemporary feature.</p> <p>The existing access and circulation layout in both wings will be retained, although additional entrances to the LG/F of the East Wing will be made in the north and south elevations by lowering the cills of existing windows. This is to provide suitable equal access entrances into the East Wing from the improved site circulation. The existing West Wing stair will be retained and conserved, and justified for use in conjunction with two new compliant staircases on the basis of a fire engineering analysis of the means of escape for the whole of D Hall. Some additional rails to raise the height of the balustrades of the existing staircase for compliance with safety codes may be required if alternative safety measures are not agreeable.</p> <p>In the West Wing a set of 6 G/F cells under their impressive vaults will be retained for Interpretation, and the other 3 similar sets of 6 cells will be difficult to find feasible adaptive uses for all the cells with their narrow doors and minimal high level windows and the aim is to continue to search for suitable sustainable arts-related uses for the cells not retained for interpretations. The original impressive archway passage across the building at LG/F level at the west end of the East Wing will be regained by removing the non-compliant stairway up to G/F level. This will also provide the location for an additional means of escape stair required for the adaptive reuse of D Hall.</p> <p>All wall elevations will be repaired and refurbished to the original design. The flat concrete roof and clerestory rooflights will be retained and refurbished, on the basis that the replacement roof is authentic evidence of the building's history.</p> <p>It will be necessary to provide some work places on some of the floors which have only high level cell windows, and these workplaces should be provided with some outlook. The existing windows will not have their cills lowered, but instead additional small window openings will be made under the existing windows. It will therefore be evident what the original window pattern is and what is new, no damage will be done to the existing windows, and the intervention is effectively reversible.</p>	<p>One of the additional new code compliant means of escape staircases required for D Hall will be inserted into the east end of the East Wing. It is designed to be shared as a means of escape for the new Multipurpose space in the new building to be built over the Laundry Yard, and as such it will be a PPE staircase. It will discharge to the Laundry Yard level via a new exit door by altering an existing window on the east elevation. Several options for locating this staircase were considered, and this option was chosen because it does not absorb the more useful spaces in the central area of the building, can provide the shared egress required without having to designate D Hall as PPE use, and is in an area where the building requires considerable strengthening repairs due to substantial damaging subsidence. The intervention for this new PPE staircase is fairly significant, with some rooms in a stack on the north side at all levels being opened up for the stair shaft. However without this stair there would be a very limited prospect for new uses in the East Wing. Some small windows which are crossed by the flights of the new stair will be blocked on their inside reveals, but the windows themselves will be retained.</p> <p>The second additional compliant means of escape stair is required under a fire engineering assessment of the whole building. It will be located on the north side of the building in the recess between the East and West Wings where there is an existing non-compliant stair from G/F to LG/F. It will be designed to have minimum visual impact on the north elevation, and be clearly distinguishable as a contemporary feature.</p> <p>Three new lifts are required to provide convenient and equal access into D Hall which has an extensive overall length on the two upper floor levels. One will be inserted at the west end of the West Wing adjacent to the existing staircase, and two will be inserted in the East Wing. One of these is a firemen's lift. The two lifts are required for the significant change of level from the external ground to the internal LG/F level on the north and south sides of the East Wing. The lifts are generally motor-room-less lifts and can be accommodated within the height of the building. The lift shafts will require some cell division walls to be removed to create sufficient space for the lift sizes, and some existing windows will be blocked from the inside whilst retaining them from the outside. They are located to have the least impact on the significant elements of the building.</p> <p>Accessible public WC's will be provided on the LG/F and G/F of the East Wing which are beneficial locations for making them easily accessible from the Laundry Yard and Prison Yard, and therefore available to a wide surrounding area on the upper levels of the Site. Some toilets will also be provided on 1/F and 2/F of the East Wing specifically for the users of the Archive and Record centre. All toilets will be in rooms.</p> <p>To create spaces for the adaptive reuses, particularly for the Arts-related Organization Archive and Record Centre on 1/F and 2/F, some wide openings in existing walls between rooms and cells will be made, and some wide openings will be formed in the corridor walls. At 1/F level for the West Wing Archive Centre some wide openings in cell walls will be made to provide double cell rooms for archive storage with close-controlled environments. At 2/F level for the West Wing Record Centre, where previous interventions have already opened up rooms to form larger spaces, some wide openings will be formed in the corridor walls to create an open library environment with good outlooks appropriate for the users.</p> <p>The sense of the corridor and the original cells and rooms will be retained by making wide openings rather than removing walls completely. The widths of the new openings and the floor loadings will be restricted by the limits of what the existing structure can accommodate without significant structural strengthening interventions.</p>	<p>The range of Impact Category Ratings for the interventions after mitigations in Block 14 are 1 (Beneficial), 2 (Acceptable), and 3 (Acceptable with Mitigation Measures). The overall Heritage Impact of the proposed interventions in Block 14 is therefore regarded as acceptable to enable the building to have a new adaptive use.</p> <p>The range of Impact Category Ratings for the interventions in Block 14 are 1 (Beneficial), 2 (Acceptable), and 3 (Acceptable with Mitigation Measures). The overall Heritage Impact of the proposed interventions in Block 14 is therefore regarded as acceptable to enable the building to have a new adaptive use.</p>

<i>Conservation Approach (continued)</i>	<i>Major Proposed Changes (for Mitigations see Annex A1) (continued)</i>	<i>Other Heritage Impact Rating Assessments (continued)</i>
	<p>Existing mechanical and electrical services will be removed, and new services including air-conditioning with chilled water supplied from central chiller plant, water, power and lighting are to be installed suitable for the new adaptive uses in building 14. In the G/F area of the West Wing, where there are vaults, it is proposed to design an air-conditioning provision without ductwork. Plant Rooms are provided in both West and East Wings of D Hall.</p> <p>All original windows will be repaired. Later windows are to be replaced by replicas of original windows to regain the original building appearance throughout. The original steel bars are to be retained and refurbished.</p>	

**Table 3.24 Summary of the Assessment for Building No. 15**

<i>Building No., Name &amp; Designation</i>	<i>Date of Construction and Original Use</i>	<i>Reference Drawings</i>	
15 E Hall Within Victoria Prison Declared Monument	1913 – 1915 Cell block	15-GA-201 Lower Ground Floor 15-GA-202 Ground Floor 15-GA-203 First Floor 15-GA-204 Second Floor 15-GA-205 Roof Plan	15-GA-220 North Elevation 15-GA-221 South Elevation 15-GA-222 East Elevation 15-GA-223 West Elevation
<i>Brief Overview</i>	<i>Proposed Adaptive Uses</i>	<i>Significance (refer to Section 3.11 of the Conservation Management Plan dated June 2008)</i>	
<p>This three storey brick building was one of three cell blocks of this design on the Site, with another being demolished and B Hall preceding it. The exterior features regular fenestration on all sides, and the interior has a central corridor and flights of straight open staircases with cells either side (a total of 26 each floor). Much of the original fabric survives, including the original Chinese tile roof. The building is visible as a prison structure from Arbuthnot Road and Chancery Lane.</p> <p>This building continued in use as a cell block through to decommissioning.</p> <p>The construction of E Hall is reasonably robust with load-bearing brickwork cell walls in the upper floors and reinforced concrete floors, under a pitched tiled roof.</p>	<p>Mixed Use:</p> <ul style="list-style-type: none"> <li>• LG/F – Multipurpose uses and ancillary support</li> <li>• G/F – Art Gallery and ancillary support; Interpretation rooms; Toilets; Plant rooms.</li> <li>• 1/F and 2/F – Multipurpose and ancillary support; Toilets; Plant rooms</li> </ul> <p>The LG/F open area is seen as being most useful in providing visitors entering the Site from the new Arbuthnot entrance, either as individuals walking in or as coach parties being dropped off, with an impressive covered space to assemble in and be given some preliminary information about the history of the Site before going on guided tours.</p> <p>The selected adaptive reuses for the upper floors will be considered suitable for this reasonably robust building if the new occupancy and structural loads are not excessive, and the interventions retain the characteristic open stair and balcony circulation, and the structural integrity. The main interventions will be the provision of a change of level lift at G/F level, and a new code compliant staircase for adequate means of escape.</p> <p>The G/F of cells is seen as providing a good accessible location for some interpretation of the former Prison activities in the context of the Prison Yard, alongside some smaller spaces which can be used for an arts-related programme of small scale activities or exhibitions.</p> <p>The 1/F and 2/F of cells will be used as small scale support spaces for the adjacent new Multipurpose area with access bridge links at each level.</p>	<p><b>MEDIUM / LOW</b></p> <p>This building forms part of a larger group of cell block accommodation on the Site, along with B Hall and D Hall. The construction of three buildings of the same design is indicative of their perceived effectiveness. While there are no architectural features of note, it nonetheless forms an important part of the external façade of the prison.</p>	
<i>Conservation Approach</i>	<i>Major Proposed Changes (for Mitigations see Annex A1)</i>	<i>Other Heritage Impact Rating Assessments</i>	
<p>All new adaptive uses will be accommodated within the existing building without new extensions. However the building has open non-compliant internal stairways which will not provide the required means of escape. These stairs will be retained for use as far as possible, and alternative means of escape will be provided by using the new stair in the adjacent new building on the north side, and inserting a new internal stair leading to a final flight of external stair on the south side. This arrangement enables all floors to have adaptive new uses.</p> <p>The removal of all existing walls in LG/F will regain the full extent of this impressive space with its characteristic brickwork piers, and provide an open area for cultural, interpretation and leisure activities.</p> <p>The original characteristic cell block plan layout, access and circulation on G/F, 1/F, 2/F will be respected and altered as little as possible. The existing central flights of open stairs between floors and the narrow balconies overlooking these stairs will be retained, although the open cores of the stairway and lightwells at G/F level will need to be enclosed with fire resisting glass to separate the different uses.</p>	<p>The existing open stairs are not code compliant for means of escape, but will be retained. Alternative means of escape will be achieved by providing links to the new stair serving the Multipurpose area in the adjacent new building on the north west side at each floor level, and by providing a new code compliant stair within a shaft formed from a group of cells in the building on the south side. The final flight of this stair from G/F down to Laundry Yard level will be external within a fire glass enclosure on the south side. It will be hidden from view from outside the Site by the Chancery Lane boundary wall. The alternative of taking this final flight through the G/F structure would be a very damaging intervention structurally and to the LG/F area for its intended use.</p> <p>Lift access for E Hall will be provided by the passenger lifts provided for the new adjacent building on the north side via landing bridges linking to the north west corner of E Hall, where protected lobbies will be provided using the cells.</p> <p>Doors to the bridges will be formed by adapting the existing windows.</p>	<p>The range of Impact Category Ratings for the interventions after mitigations in Block 15 are 1 (Beneficial), 2 (Acceptable), and 3 (Acceptable with Mitigation Measures). The overall Heritage Impact of the proposed interventions in Block 15 is therefore regarded as acceptable to enable the building to have a new adaptive use.</p>	

<i>Conservation Approach (continued)</i>	<i>Major Proposed Changes (for Mitigations see Annex A1) (continued)</i>	<i>Other Heritage Impact Rating Assessments (continued)</i>
<p>All elevations, including the tiled roof, will be repaired and refurbished to the original design, and the clerestory rooflights will be retained and refurbished.</p> <p>The original characteristic cell block plan layout, access and circulation on G/F, 1/F, 2/F will be respected and altered as little as possible. The existing central flights of open stairs between floors and the narrow balconies overlooking these stairs will be retained, although the open cores of the stairway and lightwells at G/F level will need to be enclosed with fire resisting glass to separate the different uses.</p> <p>All elevations, including the tiled roof, will be repaired and refurbished to the original design, and the clerestory rooflights will be retained and refurbished.</p>	<p>Accessible public WC's will be provided on the G/F, 1/F, 2/F levels within cells. This will require the narrow cell doors to be widened, but it will be possible to retain and preserve the barred prison doors held back against the walls.</p> <p>To create larger spaces for the adaptive reuses wide openings will be formed in the structural brick cell division walls rather than removing all the walls full width. Groups of two and three cells will be opened up to form larger rooms, and some of the narrow cell doors will be widened with the barred prison doors retained and preserved and held back against the walls. Where cell doors are not required the barred prison doors will be retained in a closed position with the openings blocked up on the inside with a reversible construction. The new wider doors will be sympathetically designed.</p> <p>Existing mechanical and electrical services will be removed, and new services including air-conditioning with chilled water supplied from central chiller plant, water, power and lighting are to be installed suitable for the new adaptive uses in building 15 on the G/F, 1/F and 2/F levels. No air-conditioning will be installed for the open LG/F area, but overhead colonial style fans may be provided. Plant Rooms are provided.....</p> <p>All original windows will be repaired. Later windows are to be replaced by replicas of original windows to regain the original building appearance throughout. The original steel bars are to be retained and refurbished. Some window openings facing the new open stair on the north side will need to have fire protection glass installed in their reveals.</p>	

**Table 3.25 Summary of the Assessment for Building No. 16**

<i>Building No., Name &amp; Designation</i>	<i>Date of Construction and Original Use</i>	<i>Reference Drawings</i>
16 Workshops/Laundry Within Victoria Prison Declared Monument	1917 Laundry and Workshops	
<i>Brief Overview</i>	<i>Proposed Adaptive Uses</i>	<i>Significance (refer to Section 3.11 of the Conservation Management Plan dated June 2008)</i>
<p>The Laundry is on a steep slope with a large granite revetment wall on the west side. There is a steel post and beam structure with a concrete slab over this space which is likely later, as the steel structure has been reinforced. The workshops are a single storey brick building with steel truss and corrugated metal pitched roof. The space has been partitioned into smaller spaces. Across the east end of the workshops and extending south is a concrete roof supported by a variety of brick and concrete piers; this creates a covered walkway.</p> <p>The laundry continued in its use until decommissioning and the workshops became recreation space in later years.</p>	<p>Site for new building and circulation across the site associated with a new entrance from Arbutnot Road.</p>	<p><b>LOW</b></p> <p>This building was constructed as a functional building with little architectural interest, and has been altered over time with substantial repairs following the war. There is some interest in its representation of how prisoners lived within the Site.</p>
<i>Conservation Approach</i>	<i>Major Proposed Changes (for Mitigations see Annex A1)</i>	<i>Other Heritage Impact Rating Assessments</i>
	<p>The Workshops and Laundry Yard structure will all be recorded and demolished to reopen the lower yard. It is a key vision and approach for the Site to be revitalized with some new buildings suitable for multipurpose associated with Contemporary Visual Arts. The existing Workshops and the Laundry structure underneath cannot provide the spaces suitable for the range of multipurpose required. There would need to be significant work to the existing structures to adapt and strengthen them for new uses. Their removal will provide an open area for visitors entering the Site from the new Arbutnot Road entrance, and will expose more of the elevations of D Hall and E Hall currently obscured by the Workshops and Laundry. The open area will also be used in conjunction with the open multipurpose space under E Hall.</p> <p>A new wide external staircase will be provided between the Laundry and Prison Yards, under the canopy of a new arts-related building to be built overhead between D and E Halls. This space will encourage pedestrian flow from Arbutnot Road to Old Bailey Street whilst providing a protected space for casual meeting and public gathering. The new building will house a multipurpose space with connections to the Laundry Yard, Prison Yard, D Hall and E Hall. This new building will also provide the centralised chilled water cooling towers for the whole Site. The space under the new staircase adjacent to the revetment wall to the Prison Yard will be a passageway across the Laundry Yard leading to public accessible toilets serving this area of the Site.</p>	<p>Impact Rating 3 - Acceptable Impact with mitigation measures</p>

**Table 3.26 Summary of the Assessment for Building No. 17**

<i>Building No., Name &amp; Designation</i>	<i>Date of Construction and Original Use</i>	<i>Reference Drawings</i>	
17 F Hall Within Victoria Prison Declared Monument	1931 Printing Shop	17-GA-201 Ground Floor 17-GA-202 First Floor 17-GA-203 Roof Plan 17-GA-220 North Elevation	17-GA-221 South Elevation 17-GA-222 East Elevation 17-GA-223 West Elevation
<i>Brief Overview</i>	<i>Proposed Adaptive Uses</i>	<i>Significance</i>	
<p>This two storey red brick building has a flat roof. The ground floor is a series of brick concrete piers which have been infilled, and the first floor has regular fenestration on all elevations in the form of large multi-paned windows. At the southwest corner is the principal entrance into the prison from Old Bailey Street. The interior is divided into visiting rooms, reception and interrogation rooms on the ground floor. The first floor is a large open space with floor-to-ceiling barred enclosures used as holding cells for large groups.</p> <p>In 1956 the building became a Reception Building for the prison, which was the use until decommissioning.</p> <p>The building has a reasonably robust construction of load-bearing brickwork and reinforced concrete floors, under a flat concrete roof with rooflights.</p>	<p>Mixed Use</p> <ul style="list-style-type: none"> <li>G/F – Art gallery and ancillary support; F&amp;B and ancillary support space; Interpretation room; Toilets; Plant rooms</li> <li>1/F – Art Gallery and ancillary support; Toilets</li> </ul> <p>F Hall will be retained as a freestanding building and refurbished for uses in conjunction with the arts –related revitalization of the Prison site. A new building will be located adjacent to but separated from F Hall on its north side, and at G/F level between F Hall and the new building there will be a new open covered entrance lobby into the Site from Old Bailey Street.</p> <p>The G/F uses of F Hall are related to the art galleries on the upper floors, but also provide facilities for the wider Prison Yard area. The important social significance of F Hall for the former Prison will be recognized by retaining the G/F reception areas at the Blue Gate Site entrance and the booths for visitors and prisoners for interpretation.</p> <p>At 1/F level the art galleries in the two buildings will be linked by short bridges.</p>	<p><b>MEDIUM / LOW</b></p> <p>Though the building does have some social significance as the main post-war reception building for the prison, it was initially constructed as a very utilitarian printing shop with little architectural or technological interest.</p>	
<i>Conservation Approach</i>	<i>Major Proposed Changes (for Mitigations see Annex A1)</i>	<i>Other Heritage Impact Rating Assessments</i>	
<p>F Hall will be retained as a freestanding building and the only links to the adjacent new building will be a single bridge link between the first floors via existing window openings widened between the brick piers. This is a minimal optimal intervention to achieve the integration of the art galleries at first floor level.</p> <p>On G/F the important social significance of F Hall for the former Prison will be recognized by retaining the external and internal reception areas and the booths for visitors and prisoners for interpretation in the north west corner. The external visitors’ toilets will also be retained. Some existing partitions on the west side will be retained, but the remaining existing ad hoc internal non-load bearing partitions will be removed to make way for the open spaces suitable for the new uses.</p> <p>On 1/F the existing open barred cell areas on the first floor will be recorded and then cleared away for an art gallery.</p> <p>The concrete columns on both floors will be repaired and strengthened.</p> <p>The new lifts and access staircases for the 1/F art gallery will be provided in the adjacent new building, which will avoid any significant interventions in F Hall. The existing open external stairway on the east side will be retained as an alternative means of escape for F Hall, and so will also contribute an element of interpretation of the former Prison function. The existing windows of F Hall will be retained but adapted for the internal conditions required for the new uses.</p> <p>All wall elevations will be repaired and refurbished. The flat concrete roof and rooflights will be retained and refurbished.</p>	<p>Accessible public WC’s will be provided on the G/F and 1/F levels.</p> <p>Existing mechanical and electrical services will be removed, and new services including air-conditioning with chilled water supplied from central chiller plant, water, power and lighting are to be installed suitable for the new uses in F Hall. Plant Rooms are provided at G/F level.</p> <p>On the G/F elevations the existing window openings will be retained but infilled to match the façade material and finishes adjacent to the respective openings (brick or painted plaster). Where required for adaptive reuse of the building, plain glass panels will be installed to match the existing openings in a manner which allows the interventions to be clearly seen and to be reversible.</p> <p>On the 1/F north, east and south elevations the existing window openings will be retained but filled to match the façade material and finishes adjacent to the respective openings (brick or painted plaster). This will allow efficient walls for the new art gallery to be created whilst allowing the interventions to be clearly seen and to be reversible.</p>	<p>The range of Impact Category Ratings for the interventions after mitigations in Block 17 are 1 (Beneficial), 2 (Acceptable), and 3 (Acceptable with Mitigation Measures). The overall Heritage Impact of the proposed interventions in Block 17 is therefore regarded as acceptable to enable the building to have a new adaptive use.</p>	

**Table 3.27 Summary of the Assessment for Building No. 18**

<i>Building No., Name &amp; Designation</i>	<i>Date of Construction and Original Use</i>	<i>Reference Drawings</i>
18 General Office Within Victoria Prison Declared Monument	c. 1980s	
<i>Brief Overview</i>	<i>Proposed Adaptive Uses</i>	<i>Significance (refer to Section 3.11 of the Conservation Management Plan dated June 2008)</i>
This utilitarian building was constructed on what became an empty site following the demolition of the west wing of D Hall, but makes no reference to the earlier building.	Site for new building and circulation across the site associated with a new entrance from Arbutnot Road.	<b>LOW</b> This building does not have any architectural or historical significance. The main importance lies in the potential for archaeology of the Site of the former west wing of D Hall.
<i>Conservation Approach</i>	<i>Major Proposed Changes (for Mitigations see Annex A1)</i>	<i>Other Heritage Impact Rating Assessments</i>
	The modern office and other adjacent ancillary buildings will all be demolished to gain a site for a new arts-related building to be used in conjunction with F Hall. All the modern offices and the separate stores in the office yards will be removed. This is justified within the key vision and approach for the Site to be revitalized with some new buildings suitable for Contemporary Visual Arts. The existing office buildings on this area of the Site have no architectural or historical merit.	Impact Rating 2 – Acceptable Impact

**Table 3.28 Summary of the Assessment for Building No. 19**

<i>Building No., Name &amp; Designation</i>	<i>Date of Construction and Original Use</i>	<i>Reference Drawings</i>
19 Bauhinia House Within Victoria Prison Declared Monument	c. 1858 Guard tower	19-GA-200 Ground Floor 19-GA-201 First Floor 19-GA-202 Roof 19-GA-220 Elevations
<i>Brief Overview</i>	<i>Proposed Adaptive Uses</i>	<i>Significance (refer to Section 3.11 of the Conservation Management Plan dated June 2008)</i>
<p>This masonry building has an irregular plan and is two storeys in height. It is located external to the Site at the junction of Arbuthnot and Chancery Lane, attached to the perimeter wall. There are windows on both floors and a guard turret on the south elevation. The interior is a single room on both floors with a later staircase and first floor WC to the west.</p> <p>The building was originally an open guard tower with was later converted into a shed with guard tower above. It was used at some point as a half-way house for youth and later female offenders.</p> <p>The construction of Bauhinia House is reasonably robust with load-bearing brickwork walls under a pitched tiled roof.</p>	<p>Public Circulation into the Site.</p> <p>By itself Bauhinia House cannot provide the width required for a public entrance at this important location on the Site, and a new wide opening will be made in the revetment wall adjacent to it on the north side with steps down to the new footpath on Arbuthnot Road. However it can provide the essential equal access entrance in this location, and it will used for this purpose with minor alterations to its external door width, alterations to the external Chancery Lane steps for a level access into the doorway, provision of an internal ramp, and a new door opening at the north west corner.</p>	<p><b>MEDIUM / LOW</b></p> <p>The outer walls of the building are one of the earliest structures of the Site, likely c. 1851, though the building itself was constructed later. Its location on the exterior has made it a visible representation of the prison for over 150 years, always being on view to the public. The architectural design is simple, though notable for early features such as loopholes and the turret.</p>
<i>Conservation Approach</i>	<i>Major Proposed Changes (for Mitigations see Annex A1)</i>	<i>Other Heritage Impact Rating Assessments</i>
<p>The adaptive use for circulation will be accommodated within the existing building without new extensions.</p> <p>All original windows will be repaired. Later windows are to be replaced by replicas of original windows to regain the original building appearance throughout. The former arrow-slit windows will be reinstated.</p> <p>All elevations, including the tiled roof, will be repaired and refurbished to the original design.</p>	<p>The south east door to the street will need to be marginally widened for code compliant wheelchair access. This will probably involve resetting the stone surround to provide a wider opening, and possibly providing a set of new arch stones for the blank spandrel above if the existing stones cannot be adjusted to suit the new width.</p> <p>An existing blocked doorway at the north west corner will be reopened.</p> <p>The internal 1/F construction and stair will be removed, and the wall finishes refurbished as a double height gatehouse entrance.</p> <p>The floor will be regraded for an equal access ramp.</p>	<p>The range of Impact Category Ratings for the interventions after mitigations in Block 19 are 1 (Beneficial), 2 (Acceptable), and 3 (Acceptable with Mitigation Measures). The overall Heritage Impact of the proposed interventions in Block 19 is therefore regarded as acceptable to enable the building to have a new adaptive use.</p>



**Table 3.29 Summary of the Assessment for Parade Ground**

<i>Building No., Name &amp; Designation</i>	<i>Date of Construction and Original Use</i>	<i>Reference Drawings</i>
Parade Ground Within Central Police Station Declared Monument	c. 1858 Parade and exercise yard	Drawings provided by RDA/HdeM
<i>Brief Overview</i>	<i>Proposed Adaptive Uses</i>	<i>Significance (refer to Section 3.11 of the Conservation Management Plan dated June 2008)</i>
A large, vaguely rectangular open space in the northern (police) part of the Site. It is paved with some remnants of car parking spaces (used as such from the mid-century onwards), and bordered by buildings on all sides. There are some trees to the northeast and northwest, though many have recently been lost. There is survival of some early cast iron drainage grilles on the north side.  The space has been used for awards ceremonies, exercising, temporary accommodation (mat sheds), entertainment and car parking.	Open space for multipurpose uses.  New major underground plant room serving the lower site.	<b>HIGH</b>  The Parade Ground is significant both as an open space in busy Central Hong Kong, and as an open space within the Site. It is the focal point of the Central Police Station and has been used for numerous important events and ceremonies over the years.
<i>Conservation Approach</i>	<i>Major Proposed Changes (for Mitigations see Annex A1)</i>	<i>Other Heritage Impact Rating Assessments</i>
The Site is to remain as an open space, and it is important that it retains as much of its character as possible even though there will be a large new underground plant area and services tunnel from the centralized chilled water and electrical services plant located on the upper site. This will involve deep excavation and the consequential renewal of the ground finish.	The large plant space below ground level will reduce the need for inappropriate interventions for additional plant rooms in the highly significant Headquarters Block and the other adjacent blocks, and it also provides the fire fighting water storage required for the lower site area. It will involve deep excavation. The plant room and tunnel have been carefully located and will be carried out using methods to avoid any risk of damage to the foundations of the adjacent buildings and also to the shelter tunnel in the Parade Ground which will be retained. The services tunnel under the Barrack Block will need particular care.  There is little impact on the Parade Ground as there will be little change taking place. The replacement of the late 20th century round surface will be beneficial to the overall appearance of the space.  It is proposed that the current condition of the Parade Ground be recorded prior to any works, in order to have a clear understanding of the last use (car park) and ground covering of the space. Moreover, an archaeological investigation will be conducted by a qualified archaeologist to obtain field data for detailed impact assessment to be carried out during the detailed design stage, appropriate mitigation measures will be recommended subject to the findings of the archaeological investigation. Historic photographs, archives and any documentation produced prior to demolition and during the watching brief can be used in any site-wide interpretation of the Central Police Station history.	Impact Rating 3 - Acceptable Impact with mitigation measures

**Table 3.30 Summary of the Assessment for Prison Yard**

<i>Building No., Name &amp; Designation</i>	<i>Date of Construction and Original Use</i>	<i>Reference Drawings</i>
Prison Yard Within Victoria Prison Declared Monument	Mid 19th century Prison exercise yard	Drawings provided by RDA/HdeM
<i>Brief Overview</i>	<i>Proposed Adaptive Uses</i>	<i>Significance (refer to Section 3.11 of the Conservation Management Plan dated June 2008)</i>
Large rectangular space south of D Hall in the prison part of the Site. The yard has been finished in concrete paving slabs, and has three large trees with concrete planters, benches and tables to the southeast. It is bounded to the south by the large revetment wall on Chancery Lane.  Parts of the space would have always been used as exercise and workshops by the prisoners, but this space as it is today was only formed with the systematic demolition of various parts of the radial plan prison.	Open space.	<b>HIGH</b>  Like the Parade Ground, this space is significant as an open space both within the Site and in the greater context of central Hong Kong. It provides a contrast to the Parade Ground both in use and in surrounding context and provides a general understanding of the previous layout of the Site, if only as a negative space where buildings previously stood.
<i>Conservation Approach</i>	<i>Major Proposed Changes (for Mitigations see Annex A1)</i>	<i>Other Heritage Impact Rating Assessments</i>
The proposed use of the Site is to remain as an open space, and it is important that it retains as much of its character as possible. There will be a large services duct for the distribution of centralized chilled water and electrical service routed to the south of D Hall west wing. This will involve excavation and the consequential renewal of the ground finish. Elsewhere the ground surface finish will be relaid.	There is little impact on the Prison Yard as there will be little change taking place. The replacement of the late 20th century surface will be beneficial to the overall appearance of the space, and the historic trees will be retained.  It is proposed that the current condition of the Prison Yard be recorded prior to any works, in order to have a clear understanding of the last use and ground covering of the space. Moreover, an archaeological investigation will be conducted by a qualified archaeologist to obtain field data for detailed impact assessment to be carried out during the detailed design stage, appropriate mitigation measures will be recommended subject to the findings of the archaeological investigation. Historic photographs, archives and any documentation produced prior to demolition and during the watching brief can be used in any site-wide interpretation of the Victoria Prison history.	Impact Rating 2 – Acceptable Impact

**Table 3.31 Summary of the Assessment for Walls and Revetments**

<i>Building No., Name &amp; Designation</i>	<i>Date of Construction and Original Use</i>	<i>Reference Drawings</i>
Walls and Revetments Within either Central Police Station or Victoria Prison Declared Monument	Various External walls, internal division and revetment walls	Drawings provided by RDA/HdeM
<i>Brief Overview</i>	<i>Proposed Adaptive Uses</i>	<i>Significance (refer to Section 3.11 of the Conservation Management Plan dated June 2008)</i>
There is a variety of masonry and brick walls throughout the Site, the function of which varies from security to structure to division of the various parts of the Site. Many of these – mostly the external and granite revetment walls – are some of the earliest structures on the Site.		<b>HIGH</b> Though there are some areas of wall which are later and of less significance, the general location, pattern and construction of the walls throughout the Site is of interest for their age, relationship to the Site and the sense of foreboding portrayed to the outside world.
<i>Conservation Approach</i>	<i>Major Proposed Changes (for Mitigations see Annex A1)</i>	<i>Other Heritage Impact Rating Assessments</i>
There are a number of walls of high significance around and across the Site which are seen as highly significant structures. The intention is to keep the external walls to the whole Site very much as they are at present. The internal revetment walls will also all be retained though some more modifications will be undertaken here to provide entrances and exits.	Modifications to the revetment walls will include: <ul style="list-style-type: none"> <li>• The opening of a new pedestrian gateway in the revetment wall on Arbuthnot Road close to Bauhinia House in the location of a former historic opening to the Site. This will also provide an emergency exit from the Site.</li> <li>• The taking down and rebuilding of a section of high revetment wall onto Old Bailey Street at the northwest corner of the site of the General Offices. This part of the wall has been prejudiced by a wall tree and is leaning over to some degree. As there is to be a deep basement next to this wall it would seem to be more sensible to take down the unstable section and rebuild it rather than trying to stabilize it in situ.</li> <li>• The single storey red brick extension adjacent to the south side of the Ablutions building on Old Bailey Street will be removed to provide a vehicle access to the new service yard.</li> <li>• The retaining wall to the south of the new service yard is currently heavily buttressed with steelwork. A new service entrance is to be cut in this wall for access to the back of house spaces of the new arts-related building. As the wall is already in poor condition and new basements are to be excavated on its south side, it will more practical to take it down and rebuild it rather than stabilizing it in situ.</li> <li>• A new gateway will be made in the wall on Old Bailey Street adjacent to the west end of Barrack Block. This is necessary to provide access to the Site for people coming from Staunton Street. The gateway will follow the pattern of the historic gates – one gate pier of which remains.</li> <li>• The curved modern concrete wall that has been built to allow the sweep of Arbuthnot Road into Wyndham Street will be rebuilt to allow new footpath to be provided. The intention is to rebuild the wall with a feature facing treatment, using a material similar to that proposed for use on the facades of the new buildings. This will identify this particular section of wall as not being original or on the original alignment of the historic granite wall.</li> <li>• The wall which run east west across the Site to the south of the Barrack Block is an early retaining wall. This is to be repaired but there will be three new openings created in it (two of these will be about 1.5m wide to accommodate escape routes from the new stairs through A and C Halls. The third will be wider to accommodate the new public circulation access tunnel with a stairway and lift to the upper site levels.</li> <li>• The new footbridge from the mid-levels escalator to the Site will require the existing balustrade between the Police Headquarters and the Armoury buildings on Old Bailey Street to be removed.</li> </ul>	Impact Rating: Generally 3 - Acceptable Impact with mitigation measures  The impacts of these modifications to the walls should not greatly compromise their historic significance, and the greater accessibility of the site will greatly benefit its future adaptive uses. The new openings will not be wider and higher than they need to be for the pedestrian traffic using them for access and emergency evacuation , and the scale and continuity and materials of the revetment walls will still retain their strong character of containment.

	<ul style="list-style-type: none"> <li>• The north face of the buttressed boundary wall running the full length of Chancery Lane will be fitted with a frame on which plants can be grown. The frame will be fitted with reversible fixings to the wall and will incorporate an irrigation system designed to protect the wall from moisture penetration. Although the new “green wall” will hide the severe rendered face of the Prison wall, there will be the merit for the Prison Yard becoming a place with a softer setting which the public can use and sit in. The existing razor wire and broken glass will be removed from the top of the wall to remove the danger to workmen, although consideration will be given to retaining a section for interpretation purposes. The retaining wall will be strengthened with ground anchors, and pointing defects will generally be repaired.</li> <li>• Significant alteration to heritage value to the walls where repair and strengthening is to be carried out is not anticipated. The most significant alterations to heritage value are where new openings are being created for Old Bailey and Arbuthnot new wings; in association with the footbridge and to the curved wall by buildings Nos. 4, 5 and 6. There is also significant impact on the wall to the service yard and to Old Bailey Street where a section has to be taken down and rebuilt, partly for repair and partly to assist with the new build. The new openings are part of the key design decisions about people flowing through the new buildings across the site. In structural terms, the stability and integrity of the walls is a primary concern. For the walls around the OBW stability during construction is an issue, and the service yard wall is currently unstable and hence needs to be taken down and rebuilt. In terms of the openings through walls, these will be designed so as to ensure the integrity of the wall remains, and also ensure that the existing wall and foundations are still adequate to cope with any slight additional loading.</li> </ul>	
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**Table 3.32 Summary of Impact Assessment for Other Built Heritage Resources within 50m but Outside the Site**

Site Name	Conservation Status	Distance from Site	Impact Evaluation		Impact Category
			Construction Stage	Operation Stage	
Pottinger Street	Grade 1 Historic Street	5m	Direct impact is not anticipated as it is located outside the Site. The updating of the CPS may actually prove beneficial in the long run, as it will encourage more people to experience the historic stairs on their way to the Site.		1 – Beneficial Impact
No. 20 Hollywood Road	Proposed Grade 3 Historic Building	5m	<p>Direct impact is not anticipated as it is located outside the Site. However, potential visual impact may be a concern as the proposed new footbridge from the existing Central to Mid-Levels Escalator to the CPS site will span over the junction of Hollywood Road and Old Bailey Street to the gap between CPS Blocks 1 and 2, with an intermediate structural support on the proposed widened footpath on the east side of Old Bailey Street. This alignment of the footbridge will tend to partially obscure the upper floors of the south east corner and east side of 20 Hollywood Road looking from the east side of Hollywood Road. For the detailed visual impact assessment, please refers to the visual impact assessment for VPa (VSRT2) in Section 4.7.4.</p> <p>Potential construction noise impact to the residence may be a concern. As it is a tenement building similar to N2as listed in Section 5.4, Table 5.7, N2 is considered as the worse case compare to N1 from noise impact assessment perspective. Please refers to N2 in Section 5.7 for detailed noise impact assessment.</p> <p>Construction vibration impact may also be a concern due to the construction works involved in the Site.</p> <p>Potential air quality impact to the residence may be a concern. Please refers to A13 in Table 6.2 and Section 6.5 for detailed air quality impact assessment.</p>	<p>The operation of the CPS will likely encourage more people to experience the historic streets. No adverse impact is identified.</p> <p>Potential operation noise impact to the residence may be a concern. As it is a tenement building similar to N2 as listed in Section 5.4, Table 5.7, N2 is considered as the worse case compare to N1 from noise impact assessment perspective. Please refers to N2 in Section 5.8 for detailed noise impact assessment.</p> <p>For the detailed visual impact assessment, please refers to the visual impact assessment for VPa (VSRT2) in Section 4.7.4.</p>	2 – Acceptable Impact with mitigation measures
Hollywood Road	Nil	1m	There is a new footbridge proposed from the mid-levels escalator into the Site, which will impact visually on the junction of Hollywood Road and Old Bailey Street. There will be no direct physical impact, however, and this area is already affected by the mid-levels escalator which stands adjacent to the northwest of the Site. There is also a proposal to widen the road crossing leading south from Pottinger Street steps to the Site. This will impact on the road finish – though this is of no historic or aesthetic value – and will create a safer environment for pedestrians.	No adverse impact is anticipated.	2 – Acceptable Impact
Old Bailey Street	Nil	1m	In Old Bailey Street there are new gates, steps and ramp proposed adjacent to the Barracks Block (building 01), a new service entrance into the loading bay south of the Ablutions Block (building 08) and a main entrance into the Site at the new building just south of this. These alterations will have no direct impact on Old Bailey Street itself, though the new ramp and stairs will have some impact on the pavement. There is also a proposal for a new pick-up drop-off lay-by at the north end of Old Bailey Street to accommodate deliveries and other services into the Site. This will have a greater impact on Old Bailey Street, altering the layout of the pavement and width of the street. However, this is a change to accommodate larger trucks which will be accessing the Site, and in doing so it will reduce the build-up of traffic on Arbuthnot Road during deliveries.	No adverse impact is anticipated.	2 – Acceptable Impact
Chancery Lane & Steps	Nil	1m	There will be very little impact to Chancery Lane, as there are no proposed new openings or other major interventions. There will be some positive impact in that the regeneration of the Site will necessitate the repair of the wall here, and more pedestrian traffic around the Site will make it a more lively and usable pedestrian route.	No adverse impact is anticipated.	1 – Beneficial Impact
Arbuthnot Road	Nil	1m	Though the steps have an important historic link with the CPS, they do not form a part of the Site and therefore are not included within proposals for redevelopment. It is planned, however, that the south boundary wall of the prison yard will be repaired, and this may lead to a desire to repair and update the steps themselves, which would be of beneficial impact.		
Arbuthnot Road	Nil	1m	There is a new signaled pedestrian crossing and a bus stop proposed at the south end of Arbuthnot. While these will change the road finish, they will have no impact on the historic road pattern and will actually be of benefit to the Site as they will increase safe pedestrian access. There is also a proposed new staircase leading down to Wyndham Street, which will have no impact on the street layout.	No adverse impact is anticipated.	1 – Beneficial Impact
Walls (and potential tunnel) at Old Bailey Street	Nil	1-5m	There is no foreseeable impact on these resources, except for the potential discovery of the tunnel under Old Bailey Street. Alterations to the area south of the Ablutions Block (building 09) may reveal the historic entrance of the tunnel if it still exists, though the likelihood of this is unclear.	No adverse impact is anticipated.	2 – Acceptable Impact

### 3.6.4 Impact on Archaeological Resources

No sites of archaeological interest listed by AMO are identified on the Site, no impact on sites of archaeological interest is anticipated.

At present based on the desk-based findings and GPR Survey result as described in *Section 3.4.5*, ten archaeological potential areas have been identified as shown in *Figure 3.16*, but the survival condition and extent cannot be clearly understood, unless an archaeological investigation is carried out to obtain the field data.

On two of the ten archaeological potential areas (Garage building 05) and the Married Inspector's Quarters and Deputy Superintendent's House (building 04) there is no development proposal that involves soil excavation, other than possibly for new underground services which will be designed during the detailed drawing stage and no impact on this archaeological potential area is anticipated.

However, the Parade Ground, Prison Yard, Barracks Lane, the area between A Hall (building 11) and B Hall (building 12), the area between Ablutions block (building 08) and the revetment wall to the south, the single storey extension at the west end of D Hall (building 14), Laundry (building 16) and General Office (building 18) with archaeological potential as shown in *Figure 3.16* may potentially be impacted by the proposed development as soil excavation will be involved in these areas. Further archaeological investigations will be conducted during the detailed design stage of the Project to obtain field data for subsequent detailed impact assessments. Based on the findings obtained at present, as the potential impacted areas are considered to have archaeological potential but expected to be few and fragmented, the impact is considered acceptable but subject to verification after field data is obtained from the archaeological investigation to be conducted in the detailed design stage.

At present the extent of the existing archaeological resources is unknown. However, based on the findings from the Archaeological Desk-Based Assessment (DBA) and the Ground Penetrating Radar Survey (GPR) assessment as described above, it is anticipated that the areas identified to have some archaeological potential are considered to be of low or fairly low potential. Therefore, the impact on the archaeological potential areas is likely to be acceptable with mitigation measures being taken.

The areas which are discussed in more detail here are those which are proposed for major redevelopment or are areas which have archaeological potential. They include the Parade Ground, Prison Yard, Barracks Lane (the cell blocks south of building 03), the area between A Hall (building 11) and B Hall (building 12), the area south of Ablutions (building 08) and the revetment wall, the west end of D Hall (building 14), Laundry (building 16) and General Office (building 18). Archaeological assessment including desk-based study for individual building and open space is also presented in *Section 3.4.6 Archaeological Resources* and *Annex A1*. Provided below are details of the proposed impact for these areas.

#### Parade Ground

It is proposed that a large plant space will be excavated south of the Headquarters Block beneath the surface level of the Parade Ground. Though the proposed alterations would cause considerable intervention in the north part of the Parade Ground, the assumed lack of below ground remains means that there would be little impact on archaeological resources here. Based on the findings of the DBA and the GPR survey, there is little of archaeological interest in the Parade Ground. While some

early (1840s – 50s) buildings would have been located in this area of the Site, their presumably low-quality construction, thorough demolition, damage caused during the Second World War and multiple re-surfacing of the Parade Ground imply that little or no evidence of these early structures remain. The main possibility of artefacts would likely be in the form of small personal or police objects which had accumulated over the continued use of the space.

#### 3 – Acceptable Impact with Mitigation Measures

##### Prison Yard

The proposals for this area of the Site are minimal, thus reducing the impact on archaeological resources. The DBA suggests that the area may retain remnants of the earlier radial plan prison or a later cell block of c.1901, in addition to smaller personal or prison related artefacts deposited throughout the history of the Site. However, the proposals for change intended in this area would not require a great deal of disturbance, therefore reducing the impact on any archaeological remains which may exist.

#### 3 – Acceptable Impact with Mitigation Measures

##### Barracks Lane

It is proposed that the area south of the Barracks Block (building 03) is to be cleared, necessitating the demolition of the 1980s cell block and other free standing structures. A new 'feature' exterior staircase is to be built at the east end. The DBA suggests that there is little likelihood of archaeological remains in this area, as the space was only previously home to a detached cell block at the east end, any remains of which would have been destroyed with the construction of the 1980s cells.

#### 3 – Acceptable Impact with Mitigation Measures

##### Area between A Hall (building 11) & B Hall (building 12)

The project proposal includes the construction of a staircase leading from the lower terrace (at the north end) to the upper terrace (at the south end) of the Site, to be located beneath and within the existing A and B Halls. This area of the Site has been continually built on from the 1840s onwards, with several phases of construction and demolition taking place. It may be that some archaeology from previous building phases remains in situ beneath the buildings, but the likelihood is that much of the remains would be out of context.

#### 3 – Acceptable Impact with Mitigation Measures

##### Area between and beneath Ablutions Block (building 08) and the revetment wall to the south

It is proposed that the single storey red brick extension to Ablutions (building 08) is removed and a new vehicle entrance from Old Bailey Street provided to a delivery yard in this area. The level of this yard will be at a lower level than existing and there is a remote possibility that some archaeological remains of the original stables, coolies' quarters and kitchen for the Barracks may be found during excavation. As the GPR survey did not record this space, it is not clear what remains might exist.

#### 3 – Acceptable Impact with Mitigation Measures

### **West End of D Hall**

It is proposed that the 1980s extension at the west end of D Hall (building 14) west wing be demolished, and the area will also be re-surfaced. This space provides some potential for archaeological remains, as it was originally the site of the central watch tower of the 1858 radial plan prison. It is certainly possible that the 1980s extension disturbed any evidence which may have been present.

### **3 – Acceptable Impact with Mitigation Measures**

#### **Laundry (building 16)**

It is proposed that the existing Laundry building be demolished, and construction of a new exterior 'feature' staircase with a partial underground plant room. The DBA reveals that this area of the site has either been vacant (1840s – 50s) or has been used as a laundry yard (1858 – 2006). While this might have provided some archaeological evidence of previous laundry uses, the renovation and covering over of the space in the 1970s almost certainly removed any previous archaeological remains.

### **3 – Acceptable Impact with Mitigation Measures**

#### **General Office (building 18)**

It is proposed that the existing buildings be demolished and the area converted into a Service Yard. Historically, this area has been the location of a work shed for the central Governor's House and later as stables, cookhouses and 'coolies quarters' for the Barracks Block. However, these buildings would have been of a low quality construction, and by a plan of 1936 they had been completely demolished; likely because of deterioration. There is some potential for artefacts or remains of these uses, though the likelihood is low. The removal of building 18 – which is of no architectural quality – is beneficial to the Site both in terms of appearance and function.

### **3 – Acceptable Impact with Mitigation Measures**

#### **3.6.5 Impacts during the Operational Phase**

##### **The Site**

There could be potential impacts on the exteriors and interiors of the heritage buildings and on the site features during the operational phase, due to great numbers of visitors on the Site, from the tenants and users of the particular buildings, and the operational management of the Site services facilities and landscape (as stated in *Section 3.5.2*). The detailed potential impacts from these sources will be assessed during the detailed design stage, when the details of the operational and servicing requirements will be developed by the design team and client's advisors for each building and for the management and distribution of goods and services into and across the Site (see *Section 3.7.4* for Operational Phase Strategies).

Any use of a building inevitably creates wear on the fabric which needs to be managed. In the short term routine maintenance will deal with many of these items - renewal of internal paintwork, carpet, doormats etc. Good external routine maintenance will ensure that windows, gutters, downpipes

drains etc. are kept in good order and, with regular maintenance, their life can be prolonged. Similarly mechanical and electrical services need to be kept in good condition with regular maintenance and minor renewals. All this ensures that the life of any building is prolonged in the short term. However, most elements of buildings have a natural life span and even when they are properly maintained they will need to be renewed and replaced in due course. Electrical systems have an effective life of 30 years- with some parts lasting significantly less than this. Mechanical systems such as air handling plant may have a life expectancy of 20 years or less. Historic buildings are no different to any other in this respect. The historic fabric will need to be regularly maintained but even with good maintenance it will gradually erode. Roof coverings and elements like windows may have to be renewed after fifty years; gutters and downpipes may have a life span of a hundred years with good maintenance; the granite walling has already 150 years of history behind it in places - but only as a result of regular repointing and rebuilding in some areas. Natural forces are difficult to resist and an enormous amount of damage can be done to a wall by a tree growing out of it and drains can be rapidly disrupted and blocked by tree roots.

However, the disruption and wear to occupied buildings is generally much less of a problem than it is with unoccupied premises. Where a building has a use there is a real incentive to keep it in good order. People want the systems to work and so will have them checked, they want the buildings to look presentable and so will paint the external surfaces and keep the interior in good order. The occupants will notice and complain to the landlord if leaks occur or drains are blocked. The key here is, surely, to have a proactive management that not only fulfills its own responsibilities with regard to maintenance but also keeps a close eye on the activities of its tenants. Have the systems been tested and repaired?, Does the cleanliness and maintenance of individual premises extend beyond the public area? Are the tenants sticking to the provisions of their leases? Provided there is a proactive management this should ensure that things do get properly looked after.

#### **Other Built Heritage Resources within 50m but Outside the Site**

Please refers to *Table 3.31* above.

#### **Archaeological Resources**

Based on the present available information, no operation phase impact is anticipated. However, it is subject to verification after field data is obtained from the archaeological investigation to be conducted in the detailed design stage of the Project.

#### **3.6.6 Cumulative Impacts**

Only one project is identified to be implemented concurrently with the Project, which is the former Police Married Quarters on Hollywood Road situated at about 250m to the west of the Project Site. This concurrent project aims to revitalize the site and bring it into operation in early 2014. The planning of the revitalisation work is on-going and detail information regarding its environmental impact is not available yet. Hence, the cumulative impact cannot be assessed at this stage.

However, it is envisaged that the revitalisation work would be relatively small in scale. Given that the former Police Married Quarters site is located at about 250m away from the CPS and with dense

high rise buildings in between, it is expected that there will be no adverse cumulative impact arising from the construction or operation of the former Police Married Quarters project and the CPS project.

### 3.7 CONSERVATION POLICY AND MITIGATION MEASURES

#### 3.7.1 Conservation Management Plan

As mentioned in *Section 3.3*, a CMP (June 2008) was completed as enclosed in *Annex A6*, the CMP provided the basis for understanding the history and significance of the CPS, as well as drawing up policies which formed a framework for the conservation and restoration of the existing buildings. Following the completion of the redevelopment works for the Site, the CMP should be updated in order to remain a viable working document for the owners and users of the Site.

Considering the span of time between completion of the CMP June 2008 and of this EIA Report, as well as the further research which has been carried out in that time, there are some elements of the CMP which have changed. The sources for the additional information include AMO (for the designations of the buildings), the Hong Kong Public Records Office, the UK National Archives, the Cartographic Archive of the Hong Kong Central Library and the Hong Kong University Library Digital Initiatives. The changes to the CMP June 2008 are:

- The buildings within the Site were originally given a designation of Type A and Type B. As of 2009 these designations have been removed. The only statutory designations at the Site now are the three Declared Monuments.
- Further research about all buildings within the Site has been carried out in order to complete the baseline studies for the EIA. This is especially true of the Headquarters Block (building 01), Barracks Block (building 03), Magistracy (building 09) and D Hall (building 14), for which draft CMPs have also been written. All new research has been incorporated into the Baseline Studies for these buildings, and for any discrepancies in information, the baseline studies should take precedence over the CMP.
- The Married Sergeants' Quarters (building 06) and Single Inspectors Quarters (building 07) were constructed c.1904 – 1908, not 1903.
- The construction for the Superintendent's House has been more specifically dated to the 1860s, rather than the less defined timescale of pre-1895.
- The CMP refers to the area at the north end of the prison as being of unknown date, with some confusion over the Ablutions Block (building 08), A Hall (building 11), and C Hall (building 12). There has been some clarification of this, including that the Ablutions Block was constructed in the early 1930s, A Hall was the Reception Block built 1927 – 29 (and for which there are Public Works reports), and C Hall was constructed likely around the same time, c.1928 – 9.
- The Armoury and Store (building 02, also known as the Stables) was built 1924 – 6, rather than being completed in 1925.

#### 3.7.2 Conservation Policy and Guidelines

The bullets listed below and *Section 6* of the CMP for the Site prepared in 2008 as presented in *Annex A6* provided a set of policies which were intended to act as a guide for any future development of the

Site and the individual buildings or features within it. The document also addressed opportunities present within the Site which would benefit the nature of the CPS as an important heritage resource in Hong Kong. These policies have provided the framework for developing the most appropriate and sensitive ways to conserve and redevelop the Site, and should be the first point of reference for guidelines regarding the future use and development of the CPS.

Policies for guidance on the future uses of the buildings on the CPS site:-

- Any use being considered for one of the buildings on the CPS site will take into account what the impact on the building fabric is likely to be in terms of use type, floor loading, numbers using the building, fire escape etc;
- Uses will be given preference when they have similar requirements to those previously approved for any area;
- Certain buildings have been allocated to be used as Food and Beverage. The spaces likely to require heavy servicing (such as kitchens) will be introduced with diligent assessment against the impact on the structure and building fabric, necessary mitigation measures will be adopted to balance off any adverse impact from the intended service requirement;
- Tenancy agreements will make it clear to all site users that alterations of any kind will require permission and this will extend to things like redecoration and alterations to any built in features;
- Character defining features of each area will be made clear to every tenant and the protection of such elements will be part of tenancy agreements;
- The external maintenance of the buildings will all be organised centrally by the Project Company to which all tenants will make a financial contribution as part of the rental agreement;
- All mechanical and electrical system installed by the individual tenants shall be maintained regularly. The tenant guidelines will stipulate that the tenant will be obliged to produce evidence of appropriate annual maintenance to the Project Company;
- Communal areas will be maintained and kept in a good state of repair by the Project Company;
- The Project Company will be responsible for the maintenance and management of all external spaces, the hard surfaces, the trees and other planting, lighting, signage etc. No alterations (other than those normal as the result of tree and plant growth and similar) will be made to external surfaces or layout or planting without further consultation and where appropriate permission;
- External advertising signage other than that approved for use will not be permitted; and
- The Project Company will effectively police the site to ensure that the regulations on vehicle access, rubbish collection, deliveries are fully complied with.

#### Potential Uses

One of the top priorities for redevelopment of the CPS is that it becomes a financially sustainable Site, the uses of which are compatible with its significance as a heritage resource. Very few buildings have a long term future unless they have some beneficial use, but finding new uses appropriate for the buildings and which will produce enough financial return for their long term maintenance and ongoing repair is a challenge for many historic buildings. In the case of the CPS this is particularly difficult as the prison buildings have been designed and constructed for a very specific purpose, with small spaces that are difficult to reuse. Inevitably this will require some significant alteration to some of the buildings to allow new uses to be accommodated.



Another key aspect of redevelopment is the provision of new uses which best suit the needs of the local community; and while national and international tourism are always a consideration with large scale public projects, the focus of the CPS is providing facilities and open spaces for Hong Kong residents. Therefore, potential uses include arts-based spaces including galleries and performance spaces as well as an education centre and interpretation spaces which will allow for helping visitors understand the history of the Site. In order to off-set the costs of running the Site and maintaining the buildings in the long term there is a necessity for uses which generate revenue for the Site - primarily restaurant and café spaces as well as retail.

### **Heritage Resources to be Conserved**

Across the Site, the locations of various new uses have been carefully considered in order to allow for the best possible preservation of the heritage resources consistent with fitting new uses into the buildings and allowing the buildings to comply with building codes. The intention is to fit the least intrusive use into the most significant spaces and to accommodate the most intrusive uses in those spaces which are the least important. The general intention for the Site is to conserve all of the heritage resources within it in accordance with the policies and guidelines of the CMP. This means carrying out restoration and conservation of the buildings, the other features of the Site and the surrounding walls as necessary to enhance their historic and architectural character. This work includes:

- The restoration of the character-defining elements (such as the existing cultural significant features and relics) and the selected artefacts (for future site interpretation) within the Site, the individual historic buildings and structures. A repair schedule for all character-defining elements (including method statement, work drawings and detailed specifications) and a protection proposal of the selected artefacts will be prepared during the detailed design stage of the Project once closer access to all parts of the historic building will be made possible and when further ground investigations will have been carried out and the subsequent detailed impact assessment and appropriate mitigation measures will be recommended;
- The replacement (where necessary) of any decayed character-defining elements which are beyond repaired;
- The removal of any alterations which detract from the heritage significance of the Site; and
- The alteration of any elements (including utility and piping of building services outside the historic buildings in the Site) which do not meet building codes or which are necessary to allow the buildings to have a beneficial use. Where such alterations are necessary these will be carried out in a way to minimize the damage to cultural heritage significance. A schedule of protection works for the character-defining elements and the selected artefacts will be prepared during the course of the alteration works. A detailed structural assessment regarding the flooring will be conducted during detailed design stage. The new information will assist in finalising the floor strengthening proposal adopted.

A schedule of historic character defining elements has been identified for each historic building and feature, and the impact of the proposed interventions will be assessed in detail during the design development stage for approval by AMO.

Where major alteration is necessary to allow the existing buildings to accommodate a new use, these alterations have been designed to cause the least possible damage to the overall quality of the Site. An example of this approach is the decision to use the Ablutions Block (Building No. 8 – one of relatively low significance) as a central location for all the electrical plant rather than requiring high levels of internal and external alteration to every building on the Site to accommodate electrical services.

Inevitably some alterations are unavoidable. All the buildings that are going to be used must comply with the codes for fire compartmentation and escape provision. All occupied buildings will need to be fitted with sprinkler systems and fire detection systems. Staircases need to be added in some locations for escape and lifts are needed in all the occupied buildings to allow compliance with equal access legislation.

Conservation of underground archaeological remains (such as foundation remains of older demolished buildings and underground tunnels) if identified from the upcoming archaeological investigation should be taken into account.

### **Interpretation**

The redevelopment of any site for new uses will inevitably change the understanding of its historic use and this will certainly be the case for the CPS. New uses will be found for the majority of the buildings and the clear distinction between the Police compound and the Victoria Gaol will inevitably be eroded. This makes the interpretation of the Site an essential part of maintaining the heritage resource and providing a means for visitors and users to understand and appreciate its history. A full 'Interpretation Plan' will be prepared during the detailed design stage of the Project. There is also a summary of the Interpretation Strategies for the Site included in *Section 3.7.5* of this report.

### **Maintenance**

The redevelopment of the CPS will create the need for a different management and maintenance regime. Previously the buildings have been maintained by the government for the police and prison service. The work was carried out with economy and efficiency in mind and elements were changed as necessary to suit new needs and conditions. The new maintenance regime will have to deal with a greater variety of users and with the safety and comfort of the general public. There will also be a need to maintain the heritage significance of the Site and to ensure that alterations are carefully controlled, that repair work is carried out by skilled craftsmen working to proper specifications and that maintenance work is completed in a timely fashion. It is the intention of HKJC to set up a 'Not for profit' organisation to retain control of the overall management and maintenance of the Site. It is intended that a detailed maintenance plan will be prepared for use immediately following completion of the redevelopment, and that this will provide routine maintenance schedules with recommendations as to what tasks should be carried out weekly, monthly, annually, etc.

### **Future Use and Developments**

The intended use of the buildings is set out in the proposals accompanying this application. These have been chosen to provide a balance between uses appropriate to the buildings and uses which will provide sufficient income to make the Site sustainable in the future. The Site is to be used as a centre

for the visual arts, for performance and for interpretation and education. Inevitably the uses of individual spaces and buildings will change over a period of years. The purpose of the Project Company and the maintenance guidelines is to ensure that new uses may be accommodated without any danger of alterations that may damage the underlying significance of the individual buildings and the Site as a whole.

### **Adoption and Review**

The guidelines described above have been adopted throughout the process of design for the redevelopment of the Site, and will continue to form the basis for all future decisions. It will be essential for the successful running of the Site that documents such as the Maintenance Plan, the Interpretation Strategy and the CMP be adopted by the Project Company and that these documents are reviewed on a regular and formal basis.

### **3.7.3 Construction Phase Strategies and Mitigation Measures**

The mitigation measures to be used during the construction phase will include:

- Prior identification and recording of the all the significant features, finishes, fittings and contents in the existing buildings, and assessment of their vulnerability during construction. This should include for instance the recording of historic doors which are vulnerable to damage if left in situ or carelessly removed and stored.
- Permanent or temporary removal off site of loose or vulnerable items.
- Preparation of a schedule of protection works to preserve or secure items and finishes remaining in situ during construction.
- Preparation of a schedule of protection measures to the exteriors and interiors of the buildings to be put in place before the enabling and investigation works during design stage or before the construction operations. Ensuring the responsible contractor understands the significance and vulnerabilities of the building structures, constructions, features and finishes prior to starting the work to avoid overloading or inappropriate storage or construction activities.
- Use of appropriate heritage related construction methods for the modification and refurbishment works.

The construction phase strategies will be developed in detail design stage when a construction personnel is available.

### **General Construction Methods**

In general, the modification and refurbishment works to the existing buildings include strengthening of existing elements due to the change of usage, forming openings in existing walls and floors for additional essential facilities including lift shafts and some staircases to fulfil the current statutory code requirements. Prior to the commencement of the modification/refurbishment works at an existing building, a site survey will be carried out by the design team, and all building dimensions and levels shown will be checked and confirmed by the contractor. Protective measures to the existing buildings adjacent to the work area (including the proposed Grade 3 historic building (No. 20 Hollywood road) and the granite boundary walls between the Ablutions Block of the police station

(building no. 08) and the General Office of the prison area (building no. 18) which is adjacent to the new construction of the Old Bailey Wing and for an old granite walls at Old Bailey Street within 15m from the new construction) shall be provided to avoid damage to the existing features during the course of construction. Small scale handhold pneumatic tools with minimal vibration impact to the existing buildings are selected so as to have a better logistic and handling inside the existing buildings, which usually have only narrow working areas. In cases of the local demolition of structural elements, demountable platforms will be erected to temporarily support the affected area and divert the loading from above to avoid instability and create excessive cracking and settlement of the building.

### **Works to Ablutions Block Building No. 8**

In order to house the transformer and switch rooms which are necessary to support the future operation of the whole development, the Ablutions Block, which used to house sanitary facilities and which has comparatively less cultural and heritage significance, was selected to provide rooms with necessary storey height for the heavy electrical equipment. The internal walls and floor slabs will be removed, but the external façade will be retained.

#### *Enabling Work:*

Prior to the commencement of the site works, enabling works to allow the installation of the façade retention structure will be carried out. All utilities and services inside the building will be identified, protected or diverted as necessary. Access scaffolding, crash deck and damage protection to the façade will be erected. Full-height sheeting or scaffolding outside the façade will be provided to reduce the amount of dust leaving the Site and reduce the risk of injury to the public from dropped tools and debris. Essential repairs or strengthening work will be carried out to the façade to allow safe attachment of the temporary façade retention structure.

#### *Erection of the façade retention structure*

A temporary façade retention structure with temporary foundations to the retained façade will be constructed and erected prior to the demolition of the internal parts. Tying into the façade with temporary connections and permanent ties should be provided and “soft” protection between the façade and the retention structure such as compressible sheeting or timber wedge will be necessary. The installation and commissioning of movement monitoring points and equipment on the retained façade and façade retention structure will be carried out.

#### *Rebuilding of the internal floors of Ablutions Block*

Prior to the commencement of the demolition works, precautionary measures such as hoardings, catch fans, heavy duty protective netting should be put properly in place to ensure site safety during demolition. The demolition of the buildings will be carried out by handheld pneumatic devices and in the reverse order of construction of the building to be demolished. Temporary bracings or supports will be added to maintain local stability wherever necessary. In order to reduce the dust and noise produced by the works, water spraying may be required to suppress the dust generation but it will be controlled so as not to damage the facade structure, and the noise produced will be closely monitored to acceptable levels.

The internal part of the building will be re-built in concrete on new foundations. Traditional concrete construction with falsework and formwork installation will be carried out in stages. Props will be provided to support the newly cast beams and slabs until adequate strength is achieved. The retained façade will then be connected to the new structure and detached from the retention structure, which will be dismantled and removed from Site.

During the whole course of construction of the Ablutions Block, close monitoring to the retained façade is necessary to ensure the vibration and deformation will be kept within allowable limits.

#### **Passageway under A Hall and B Hall avoiding damage to the buildings**

A passageway is proposed to connect the lower courtyard to the upper courtyard which passes underneath existing A Hall and B Hall.

In order to prevent damage to existing historic buildings during the course of the passageway construction, a comprehensive study will be carried out in detailed design stage for the Ground Improvement and Excavation and Lateral Support (ELS) systems to be adopted using results from ground investigation work and trial pits.

ELS design, construction sequence, method statement and monitoring proposal will be submitted to the authorities (Buildings Department, Geotechnical Engineering Office and Antiquities and Monuments Office) for approval before commencement of work on site.

Underpinning of existing structure / foundation for both A Hall and B Hall will be carried out before any excavation work. In order to prevent any damage to A Hall during construction of the passageway underneath, horizontal pipe piles and grouting work will be carried out to enhance the excavation work and improve the strength of / stabilize adjacent ground. Steel portal frames will be installed to support the ground during excavation. For the passageway construction underneath B Hall, excavation and lateral support system with temporary piled walls and balanced strutting will be used to facilitate the excavation work.

A closed ground settlement and building monitoring system will be implemented to ensure that the settlement and vibration induced by the passageway construction will be kept within allowable limits. A qualified site supervision team will also be provided during the construction phase to ensure that the works are carried out in accordance with approved plans and in such a manner as not to cause damage to existing buildings and retaining walls.

#### **Sequence of works on Site**

##### *Site setup and enabling work*

Prior to the commencement of site work, the Site will be enclosed by hoarding and covered walkways as necessary for the protection of general public. Site clearance work should be carried out, and setting up of the temporary drainage system is necessary to connect all the surface water within the Site and direct to the government's storm water drains. Site surveys, including the existing buildings and retaining walls, will be conducted by the contractor. Monitoring check points to monitor any

building settlement, ground settlement, utility settlement and construction-induced vibration will be installed and closely monitor during the course of work.

#### **Additions and alterations works of the existing buildings at the Site**

There are total of 16 no. of existing buildings requiring repair, refurbishment and alterations works, and these will be carried out throughout the whole course of the construction. Protective measures to the existing building adjacent to the work areas shall be provided to avoid damage to the existing features during the course of construction. Small scale handhold pneumatic tools with minimal vibration impact to the existing buildings are selected so as to have a better handling at the small working area inside the building.

#### **Demolition of the existing buildings at the upper courtyard**

Additions and alterations works of the existing buildings at both the upper and lower courtyard, and demolition of some of the existing buildings or extension to existing buildings to allow new building construction at the upper courtyard will be carried out concurrently. All demolition works will be carried out in accordance with the regulations and guidance set out by the government, which include Hong Kong Health and Safety Regulations, Building (Demolition Works) Regulations and Code of Practice for Demolition of Building 2004. The contractors will ensure that the parts of buildings to be demolished do not contain any harmful substances. The work will be carried out by handheld pneumatic devices, and the demolition sequence so arranged shall be in the reverse order of the construction sequence of the building so that the remaining structure is stable. Upon completion or at intermediate phases of the demolitions, the Site will be cleared of debris.

#### **Construction of the new cultural buildings**

Construction of the new cultural buildings will commence upon the completion of demolition. Non-percussive piling methods will be adopted for the construction of the foundation for the new buildings and a lateral support system will be used to minimise the potential vibration impact to adjacent historic buildings during construction. Pile foundations and soldier pile walls will be installed at existing ground level before the excavation commence. Excavation of the soil will be carried out with care to avoid excessive settlement to the surrounding existing features. Traditional bottom-top concrete construction for basement (i.e. temporary propping erection and formwork shuttering, rebar fixing, concreting and striking formwork) up to ground floor will be carried out. Temporary formwork will not be removed prior to the concrete structures having gained enough strength. The superstructure, which is composed of steelwork, will be erected with temporary support and working platform for workers. To avoid extensive on-site fabrication work at height, some of the steelwork/truss may be pre-assembled at the Parade Ground or the upper courtyard and will be lifted up in segments by cranes.

#### **Site Clearance**

Upon completion, all the construction debris and waste will be cleared away, and temporary supports, catch fans, scaffoldings, construction machinery and cranes will be dismantled and mobilized off the Site.

## Site Circulation

As the conservation policy of separating the new from the old is adopted for the proposed development, new interventions will all be crisply detailed simple openings in a clear modern style to ensure no confusion with historic openings and full documentation prior to, during and upon completion of the new interventions works will be conducted to record on the conservation works.

## Mitigation Measures for Built Heritage Resources within the Site

The mitigation measures to avoid and minimise the adverse impacts as described in *Section 3.6.2*. are recommended in *Tables 3.10 to 3.31* in *Section 3.6.2* above and detailed in *Annex A1*; with proposed drawings included as *Annex A2*.

## Mitigation Measures for other Built Heritage Resources within 50m but Outside the Site

A baseline condition survey and baseline vibration impact for the Proposed Grade 3 historic building (No. 20 Hollywood Road) will be conducted by a specialist for the approval of AMO and Buildings Department prior to commencement of the construction works to define the vibration control limits and recommend a vibration monitoring proposal for the concerned historic buildings and structures in CPS and outside CPS but close to the new constructions. The proposal will be submitted to the AMO for approval.

With regard to mitigation measures for visual, air, noise and impacts on the Proposed Grade 3 historic building (No. 20 Hollywood Road), they are addressed in *Sections 4.7.4, 5.9.1* and *6.7* respectively.

## Mitigation Measures for Archaeological Resources

No sites of archaeological interest on CPS are identified on the AMO List of Sites of Archaeological Interest in Hong Kong, and therefore no sites will be impacted by the Project, and no mitigation measures (is) are considered necessary.

As no impact has been identified at the archaeological potential area of the Garage (building 05) and the Married Inspectors' Quarters and Deputy Superintendent's House (building 04), no mitigation measures are considered necessary. However, if new underground services are proposed at the later stage, subject to the outcome of the archaeological investigation to be conducted in detailed design stage for the Project, the need for archaeological investigation and subsequent impact assessment due to the new underground services should be reviewed. If considered necessary, appropriate mitigation measures should be provided.

However, eight archaeological potential areas, comprising the Parade Ground, Prison Yard, Barracks Lane, the area between A Hall (building 11) and B Hall (building 12), the area between Ablutions block (building 08) and the revetment wall to the south, the west end of D Hall (building 14), Laundry (building 16) and General Office (building 18) areas will potentially be impacted by the Project. An archaeological investigation conducted in these areas to obtain field data for a further detailed impact assessment during detailed design stage of the Project. Subject to the findings of the

archaeological investigation, appropriate mitigation measures will be recommended and agreed with the AMO.

## 3.7.4 Operational Phase Strategies and Mitigation Measures

This section presents a summary of the Heritage Operation Strategies for the Project. Further detail of the Strategies is presented in *Annex A4*.

### Heritage Operational Strategy

In accordance with the Government's Heritage Conservation Policy "To protect, conserve and revitalize as appropriate, historical and heritage sites and buildings, through relevant and sustainable approaches", and the recommended policies of the Conservation Management Plan, there is a need for appropriate operational measures to be developed for the long term management and sustainability of the CPS heritage site. Following the requirements of the EIA Study Brief No ESB-205/2009 Appendix B clause 4.2 these measures, involving operational strategies and manuals, will aim to ensure that there are appropriate new uses within the heritage site, and to safeguard the heritage site against the impacts of deterioration and improper use and damage. The aim is to develop appropriate operational policies, an appropriate operational management team, appropriate guidelines and manuals for users, and provide adequate resources during the operational stage for this heritage site.

The details of the operational phase strategies and manuals will be developed during the detailed design stage by the design team and client's advisors for each building and for the management and distribution of goods and services into and across the Site. In the mean time an approach to the Operational Phase Strategies has been prepared by Knight Frank and is attached in *Annex A4*. It is in the form of draft mission statements with key issues identified to guide the development of the policies and details of the manuals under the following headings:

- **A. Maintenance Strategy for the Heritage Site and Heritage Items**

Draft Mission Statement: To keep all building, structures, facilities, equipment, utilities in excellent working order having due regard to the heritage and cultural significance of the CPS. Key issues include:

Identification and regular monitoring of fragile areas or areas subject to heavy footfall in the buildings.

All maintenance work will respect the existing fabric and materials to preserve the architectural authenticity.

Ensuring all those working on the heritage buildings, including designers and construction teams, will have appropriate conservation skills and experience.

The lease documentation with the tenants will clearly state the areas which are to be maintained by them. All other areas will be the responsibility of the landlord and the operation team.

The manual to be developed will comprise details for planned maintenance, capital renewal and replacement programmes, and preventative maintenance programmes. The manual will also provide for a checking process which will ensure such tasks are carried out on time and to an acceptable standard.

- **B. Strategy to Manage Visitors**

Draft Mission Statement: To share knowledge about the cultural and historic values of the CPS with visitors, provide visitors with facilities that are safe, and ensure that the cultural and historic values of the CPS are not compromised by the impacts of visitor activities.

Key issues include:

Suitable guidance for visitors based on the awareness that the site is a Heritage site.

Managing the size of visitor groups and school tours around the site, and managing pedestrian flows to reduce congestion.

Consideration to be given for a ticket allocation strategy if it proves necessary to control access into some buildings or events.

The provision of adequate seating, shading and lavatories.

Good signage and location boards for visitors

A good litter control policy.

The site will have 24 hour security with CCTV, and a management presence during the normal working hours.

- **C. Strategy to Guide Proper Use by Future Operators / Users**

Draft Mission Statement: To attract appropriate uses that add to the cultural and historic values of the CPS and or provide visitors with amenities that enhance their visitor experience.

Key issues will include:

Tenant selection policies and leasing procedures.

Tenant Guidelines to be provided in terms of fit-out and day-to-day operations.

- **D. Strategy to Control Further New Development or Alterations during Operations**

Draft Mission Statement: At this stage this is not applicable.

It is not envisaged that any new development or alterations will take place during the operational stage.

- **E. Subject to the Condition of Heritage Site(s), a Risk Management Strategy**

Draft Mission Statement: Incorporate sound risk management practices into all aspects of the CPS operations that identify risks and seek to put in place strategies that maximize safety of visitors and staff, protect buildings, minimize risk of loss, and provide optimum services.

- **F. Staffing Structure of the management and maintenance teams**

Draft Mission Statement: To achieve the appropriate Management structure for the long term sustainability and enjoyment of the Site.

The likely structure and the key roles of the management and maintenance organisation are identified:

CPS Ltd. will establish a Property Company to manage and operate the Site after completion.

The Government will enter into a Tenancy Agreement with the Project Company. The Project Company shall be responsible for the maintenance of the Site including the buildings therein during the term of the Tenancy Agreement.

The Project Company shall report to a project steering committee consisting of representatives designated by the Government and CPS Ltd. to assist the board of the Project Company.

After completion of the Revitalisation Work, the Project Company shall form an advisory committee made up of members designated by the Government and CPS Ltd. and other members of the public including representative(s) from the District Council with the relevant skills and expertise to advise the board of the Project Company on the operation and management of the Site.

Within the organization the roles and responsibilities of the staff will be clearly set out. Subject to their role, the CPS Ltd will ensure that all staff will be suitably qualified and the CPS Ltd. shall be assisted by the competent person(s) in conservation management and the related field.

- **G. Heritage Operations Manual**

Draft Mission Statement: The heritage operation manual will be completed to include the approved heritage operation strategies as well as a chart showing the organization and structure of the CPS Ltd, role and responsibilities of each member in respect of conservation management.

- **H. Implementation programme**

A draft implementation programme for the completion, by the design team, property team and leasing team, of the Tenant Handbook, the Fitting-out and Alterations Guidance, and the Heritage Operations Manual, shows that they will all be completed 12 months prior to Practical Completion of the construction works.

### Mitigation Measures in the Operational Phase

#### The Site

The potential operational phase impacts identified in Sections 3.5.2 and 3.6.5 will have mitigation measures through the implementation of the Heritage Operational Strategy when developed as described above and agreed with AMO.

In the case of the historic structures on the CPS Site, there are a number of specific things that are essential to ensure the long term health of the buildings is properly monitored. It is important that:

- The management team is properly informed about what is significant about the buildings under its care. This means proper information available to and induction of any new team member.
- A Conservation Management Plan (or a simplified version of such a plan) should be available to all members of the management team so that the objectives with regard to the fabric of the buildings is clear to everyone.
- The Conservation Management Plan (CMP) should be regularly reviewed and agreed with all interested parties so that the plan and its policies are kept up to date with changing circumstances.
- Part of the routine maintenance of the site should be a series of regular inspections of the fabric. These will vary from the weekly inspection by the maintenance man for blocked gutters, broken glass, dripping overflows etc through to the five yearly "Quinquennial Inspection" by a historic building specialist. These Quinquennial Inspections should be the basis of setting out the repair plans for the next five year period. It may well be sensible to tie the review of the CMP in to the same dates as the Quinquennial Inspection.
- The fabric of the buildings on the Central Police Station site (which includes the Gaol and the Magistracy) is generally robust and has been designed for heavy usage. However, there may be areas of the historic fabric where new uses create more wear and tear than they have experienced before. A common example will be where areas that have had private domestic use become public. Regular inspections should pick up such undue wear and tear and it may be necessary to change some policies or provide temporary protection to help prolong the life of individual elements.
- Where the environmental conditions in any area are to be significantly varied (by the introduction of comfort cooling or the insertion of a kitchen for example) it will be desirable to pay particular attention to the historic fabric in these areas. This will be best done by more frequent inspections and in some circumstances by environmental monitoring. However, for most areas of the building having them back in use and with relatively stable conditions is likely to be better for them than standing empty as they have for the past decade.
- The Project Company will ensure that floor loadings should be carefully monitored by the site team. Appropriate uses will have been selected when letting the buildings to tenants to ensure that the use and the floor loading that can be permitted are in balance. Regular inspections should be made to ensure that tenants are not inadvertently adding to floor loadings

#### **Other Built Heritage Resources within 50m but Outside the Site**

With regard to mitigation measures to mitigate visual and operation noise impacts, please refers to Sections 4.7.4 and 5.9.2 for details.

#### **Archaeological Resources**

At present, no operational phase impacts are identified. Thus, operation mitigation measures are considered not necessary.

#### **3.7.5 Interpretation Strategies and Plans**

An extensive Interpretive Plan will be drawn up during the detailed design stage of the Project and with close reference to the ongoing conservation architectural planning. This draws on the best traditions of the original formulator of heritage interpretation, Freeman Tilden, that:

- 1 Any interpretation that does not somehow relate what is being displayed or described to something within the personality or experience of the visitor will be sterile.
- 2 Information, as such, is not Interpretation. Interpretation is revelation based on information. But they are entirely different things. However, all interpretation includes information.
- 3 Interpretation is an art, which combines many arts, whether the materials presented are scientific, historical, or architectural. Any art is to some degree teachable.
- 4 The chief aim of Interpretation is not instruction, but provocation.
- 5 Interpretation should aim to present a whole rather than a part, and must address itself to the whole person rather than any phase.
- 6 Interpretation addressed to children (say, up to the age of twelve) should not be a dilution of the presentation to adults, but should follow a fundamentally different approach. To be at its best it will require a separate program.

In essence, the Interpretive Plan is intended to outline initial interpretive strategies to relate, reveal and provoke. Other aims of the interpretation that have been taken into account are to *Oriente, Inform, Entertain, Persuade, Explain, Promote values, Influence behaviour, and develop a sense of identity or place.*

Essentially, the interpretive strategy for the CPS is about communicating a sense of value to users so that they may understand the reason for conserving the buildings and objects above or below ground, and may even be inspired to become actively involved in that process.

The Interpretive Plan therefore maps out an initial strategy to turn the principles of interpretation into a reality for this Site. It aims to be a clear statement of the aims, context, issues, approaches and methods of implementation for this Site. It should act as both a strategic framework for building consensus for the objectives of the CPS, as well as a plan of action for future consultants by:

- Defining the objectives of the interpretation
- Providing an overview of the context within which the interpretation takes place
- Defining opportunities and constraints for interpretation on the Site
- Exploring interpretive approaches
- Laying down a messaging strategy
- Expressing a mission statement for interpretation

- Outlining implications for the Site of the interpretation
- Suggesting methods and media of interpretation

### Visitor Target Groups

There is currently a lack of cultural heritage attractions in Hong Kong with only 2 of 29 museums housed in a preserved site or buildings. Therefore the CPS presents an exciting opportunity for the development of cultural heritage in Hong Kong. However, given that most visitors to Hong Kong only stay for between 3 and 5 days the Site must be marketed and interpreted well so that it makes the 'must-see' list of things to do in Hong Kong in order to bring in a sufficient proportion of the market. The four main user groups for the Site are identified as tourists, Hong Kong Groups, casual visitors and VIPs. The key needs of these users are recognized as being:

- Accessibility
- Clarity of orientation
- Authenticity
- Entertainment
- Interactivity
- A sense of purpose
- Online presence
- Taxis
- Take-away items

### Site Interpretation

The CPS is a highly significant Site which presents the opportunity to provide interpretation for several narrative themes, including (but not limited to) the history of Hong Kong, the development of the Site, the story of Law and Order, the urban development of Central, the development of colonial architecture, and key personalities in the history of Hong Kong.

While these are all important themes it must be acknowledged that some are already explored in alternative museums in Hong Kong, such as the Police Museum and Hong Kong Correctional Services Museum, and that some may not be a sufficient draw for visitors. A wider interpretive perspective may therefore be appropriate for the CPS, which incorporates not only the 'official' records of the Site but the stories of ordinary people who had contact with the Site, and is therefore more relevant to peoples' experience of the present. These themes may include:

- The community of uniformed services
- Conflicts with the community
- Cooperation and contribution
- Ethnic groups and new neighbourhoods
- Links with current communities
- Portrayals in the media and popular cinema
- Secrets and superstitions
- The conservation work on the Site

The interpretation of the CPS should mark a step forward in the way heritage interpretation is carried out in Hong Kong. A much more interactive approach should be adopted in which the community, not just experts, are involved and where visitors are active participants rather than passive consumers. The interpretation should encourage people to assess and question the historic environment rather than dictate a single perspective.

### Interpretation Strategies

The diverse nature of the CPS and its expected range of visitors create the need for a wide range of potential interpretive forms:

- Permanent exhibitions
- Self-guided walks
- Interpreter-led tours
- Portable information devices
- Workshops and demonstrations
- Special programmes for target groups
- Lectures and seminars
- Publications
- Educations kits
- Temporary exhibitions
- Virtual interpretation
- Comprehensive outreach programmes
- Public art
- Theatre

The preferred approach is for an 'Interpretive Centre' rather than a traditional museum as this arrangement can be restrictive. A large collection would have to be sourced and investment would have to go to creating a high standard of display conditions in relatively inflexible museum spaces.

The intangible heritage of the Site would be better presented in a less traditional form of museum as the approach is more flexible and could make use of both the new and old spaces within the Site. An Interpretative Centre represents a fresh and exciting approach to heritage conservation. The Site could become a pioneer of a relatively new kind of interpretation; that of oral history, where the 'collection' is not one of physical objects but of recollections and memories of the Site. As a 'Centre for Cultural Memory' the CPS could place Hong Kong at the forefront of this field of study and make a contribution to global heritage studies. In order to create a high quality interpretative strategy, other necessary elements include the provision of a strong graphic identity with good branding and knowledgeable and skilled staff.

### A Range of Visits

Across the Site, areas have been designated as primary and secondary interpretation spaces which will be used for a mix of planned exhibitions, interpretive displays or spaces purely left in a conserved state.

Primary interpretation spaces are preserved spaces which provide an understanding of how the prison or police station worked. They will likely be used for guided or un-guided tours and exhibition material. For example, the Armoury in the Barracks Block (building 03) will be retained with all fixtures and furnishes as a demonstration of how firearms were stored and distributed to the police force and converted to use as a Visitor's Centre, and the kitchen in C Hall (building 13) will be used to demonstrate what the prisoners ate and how the food was prepared.

Secondary interpretation areas are typically significant spaces which will be conserved to a high quality and retained as good examples of historic spaces. In large part this includes circulation spaces such as the spine corridors in the Headquarters Block (building 01) or the verandahs in the Barracks Block (03).

The main areas of primary interpretation include:

- Police Headquarters (building 01): Chief Inspector's Office
- Barracks Blocks (building 03): Armoury and Visitor Centre
- Deputy Superintendent's House (building 04): Ground Floor Rooms
- Central Magistracy (building 09): Basement cells, stair and courtroom
- A Hall (building 11): Education Centre
- B Hall (building 12): ground floor cells
- Between 12 & 13: Ladder Store
- C Hall (building 13): Prison Kitchen
- D Hall (building 14): ground floor cells
- E Hall (building 15): ground floor cells and basement "church"/ thematic exhibitions
- F Hall (building 17): Prison entrance gate and reception guard point

The varying themes and locations for interpretation at the CPS create opportunities for many different types of visit. These range from guided or self-guided trails, visits to a Site museum or interpretive centre or utilising the retail, food and beverage facilities on Site. Each of these will be utilised to varying degrees by the different visitor groups outlined above.

### The Development of the Interpretive Strategy Going Forward

Following the Interpretive Planning stage, we are able to follow the RIBA design stages for the interpretive design as follows:

- Stage C – Concept
- Stage D – Scheme\*
- Stage E – Detail Design
- Stage F/G – Production Packages
- Stage H – Tender
- Stage J/K – Supervision of Construction
- Stage L – Defect Period

\* Where schedules are tight sometimes this stage is missed out and incorporated as a design development stage in Stage E.

The Concept Design (Stage C) has been commissioned to specialist interpretive planners Winkle-picker Ltd ([www.winkle-picker.com](http://www.winkle-picker.com)) with a delivery deadline of six months split into two phases:

Phase 1 – Research

- Site walk and appraisal of Interpretive Spaces as per the current architectural scheme.
- Desk and photo library research for reference material for interpretive spaces as per the current architectural scheme.
- Liaison with relevant institutions in Hong Kong and overseas.
- Assessment of available objects, furniture and documents available to dress interpretive spaces. Visits as necessary\*.
- Provision of visual reference for Concept Design stage.

Phase 2 – Design

- Site walk and appraisal of Interpretive Spaces as per the current architectural scheme.
- Conceptual brainstorming and team consultation as required to take the project forward.
- Setting out the interpretative design strategy and initial ideas for interpretative approach.
- Conceptual site layout and visitor circulation for each interpretive space.
- Conceptual spatial layout for each interpretation space.
- Conceptual sketch visual for each interpretation space.
- Overall conceptual graphic style approach.
- Conceptual cost estimation broken down to space, exhibit and fit-out trade level.

On the successful completion of Stage C, subsequent stages will be initiated as appropriate.

### 3.8 RESIDUAL IMPACT

Though the redevelopment of the Site has included a great deal of mitigation to deter adverse affects on the Site, there is some slight to moderate residual impact predicted. This includes alteration to the overall visual appearance of the Site and changes in traffic patterns due to more frequent use of the surrounding roadways for deliveries, etc. However, the majority of this impact is beneficial to the CSP and its users, including:

- Conservation of important heritage buildings which were previously in poor repair
- Improved public access into and around the Site



- Opening up an important heritage asset as a public site, and in the process providing Hong Kong residents with two open spaces in the highly built-up area of Central
- Implementing an interpretation strategy which allows for a more complete and entertaining understanding of the history of the Site.
- Providing much needed arts-based display and performance spaces
- Creating enough revenue to maintain the Site in good conservation quality

With the implementation of the CMP, the Heritage Operation Strategy and the mitigation measures recommended in *Section 3.7* the residual impact is considered acceptable.

### 3.9 ENVIRONMENTAL MONITORING AND AUDIT

#### 3.9.1 Detailed Design Stage

##### *Comprehensive Survey, Impact Assessment of Historic Features of the Monuments and Identification of Character Defining Elements (CDE)*

As not all parts of the buildings are accessible during EIA stage of the Project, comprehensive survey and impact assessment and appropriate mitigation measures for all the character defining elements and items of heritage significance of each building will be conducted in detailed design stage. In order to provide appropriate mitigation measures for historical features of the monuments, the relevant comprehensive survey and impact assessment will therefore be conducted during the detailed design stage when closer access to all parts of the buildings will be made possible and when further ground investigations will have been carried out. Closer access at all levels inside and outside the buildings will clarify the condition of the fabric and features and finishes, and the further ground investigations will clarify any strengthening work required. The design and coordination of the services requirements and their integration into each building will be carried during the detailed design stage. The detailed design development of the historic buildings, with the required interventions, strengthening and integrated services for new adaptive uses, will be carried out by the conservation design team and agreed with AMO. The comprehensive survey and the impact assessments on the historical features will make reference to AMO's archival records and the possible mitigation measures will be tabled in four categories in the protection schedule of the historical features for AMO's approval:

- Historical features to be preserved and repaired in-situ;
- Historical features to be altered/ replaced with new replicas;
- Historical features to be temporarily removed for conservation treatment and reinstatement; and
- Historical features to be affected and relocated for reuse, display and/ or preservation by record.

For those historical features of significant cultural heritage value will be defined as the character defining elements of the monuments. All the character defining elements will be well preserved in-situ and repaired in accordance with the work methodologies approved by the AMO

##### *Archival Recording*

In order to provide an archival record of the site and a detailed reference for future restoration works, a detailed cartographic drawings and photographic records showing the existing condition of all the buildings and identified CDE should be conducted and submitted to the AMO before the construction stage for approval. The archival recording shall compile of a full inventory list together with the protection schedule of the historical features of the monuments, and identify the character defining elements (CDEs) of the monuments from the surveyed significant historical features. All the CDEs must be preserved, repair and maintained properly, and the inventory list shall be updated after the construction and include in the Conservation Management Plan (CMP).

##### *Repair and Restoration of Historic Buildings and Structures*

A restoration proposal with detailed work methodologies of the repair and conservation treatments to different kinds of historic building fabrics and historical features should be worked out by the Conservation Architect and submitted to the AMO for approval.

##### *Addition and Alteration (A&A) Works Proposal*

As the A&A works and repair works in the historic buildings and the Site including the proposed underground utilities within the Site and major proposed changes as mentioned in the EIA report is still in conceptual stage, in order to ensure the full compliance of the conservation guidelines and approaches as mentioned in the EIA report is followed, the project proponent shall submit detailed proposal of the A&A works and repairs by means of plans, drawings, photos, specifications, method statements and/or other formats of presentation to the AMO for approval.

##### *Archaeological Investigation*

An archaeological investigation will be conducted during the detailed design stage of the Project to obtain field data for subsequent detailed impact assessment. The archaeological investigation will focus on areas with archaeological potential that may potentially be impacted by the Project (i.e. proposed new development that involves excavation work in archaeological potential areas). These areas are identified on *Figure 3.17*. Subject to the findings of the archaeological investigation, appropriate mitigation measures will be recommended and agreed with the AMO.

If new underground services are proposed in detailed design stage, subject to the outcome of the archaeological investigation to be conducted in detailed design stage for the Project, the need for additional archaeological investigation and subsequent impact assessment due to the new underground services should be reviewed.

No EM&A is required at the archaeological potential area of the Garage (building 05) and the Married Inspector's Quarters and Deputy Superintendent's House (building 04).

### *Heritage Operational Strategy and Manuals*

Detailed Heritage Operational Strategies and Manuals will be developed by the design team and CPS Ltd's advisors for each building and for the management and circulation of the Site (such as distribution of goods and services into and across the Site, control of visitors, etc.) for AMO's approval. To facilitate the future maintenance and repair of the built heritage in the Site at the operation stage, one set of the approved method statement of the repair works to the historic features together with the contact details of the respective work contractors engaged in the project shall be included in the Heritage Operational Manual as part of the heritage maintenance guidelines for the reference of site management and maintenance agents.

#### **3.9.2 Construction Phase**

##### ***Vibration Monitoring***

Potential ground-borne vibration onto the historic buildings and structures in CPS, the granite walls at Old Bailey Street and the Proposed Grade 3 Historic building (No. 20 Hollywood Road) outside CPS is anticipated during site formation and excavation and lateral support works. It is recommended that prior to commencement of the construction works, a baseline condition survey and baseline vibration impact be conducted by a specialist to define the vibration control limits and recommend a vibration monitoring proposal for the concerned historic buildings and structures in and outside CPS for AMO's prior approval before commencement of the construction works.

If the evaluated and/or measured vibrations have been found to exceed the allowable values or if damage to either structural or non-structural elements of the historic buildings have been identified, the construction work should be stopped and the construction method and appropriate mitigation measures should be reviewed and submitted to the AMO for approval.

##### *Compliance of the Approved Measures and Auditing*

Staff training by an experience building conservation expert or relevant competent person(s) in the environmental team of the project should be provided to the on-site staffs, contractors, sub-contractors and workers of the project before commencement of works to ensure their full understanding of the approved protection schedule, restoration proposal and work methodologies related to cultural heritage, and their respective responsibilities in the implementation of the environmental protection measures.

Regular site audit for cultural heritage should be carried out in the construction phase by an experience building conservation expert in the environmental team ("the Heritage Checker") to investigate the site practice of the contractors and workers and their compliance of the approved work methodologies with respect of conservation works, mitigations for cultural heritage and any related works. A detailed proposal of the regular audit such as methodology (e.g. performance and monitoring indicators, control tools, frequency of the audit, etc.) and the conservation professionals to be engaged should be agreed with AMO prior to work commencement.

The Heritage Checker shall also attend the regular site meetings with AMO and report the compliance and effectiveness of the mitigation measures for cultural heritage.

#### **3.9.3 Operation Phase**

An archival recording should be conducted to provide a detailed reference for the update of the Conservation Management Plan and inventory of historical features of the monuments, the preparation of as-built drawings showing the condition of the historic buildings and structures after the completion of the construction works. These archival records will be a reference source for future maintenance of the character defining elements, conservation of the monuments, interpretation and conservation education of the Site. The archival recording shall include but not limit to the video and photographic recording on the detailed process of the repair trials for different kinds of historical features, conservation works of character defining elements and historic fabrics of the monuments, and a written records of any new changes to the detailed design made in the construction phase illustrate with photos and drawings. A full set of the archives records (including both hard and soft copies) should be submitted to the AMO after the work completion for record purpose. Any new findings related to the conservation of built heritage in the Site identified during the detailed design stage and construction phases shall be properly recorded in details for notification to the AMO and update of the Conservation Management Plan.

Regular audit is recommended for checking the compliance and effectiveness of the strategies and mitigation measures mentioned in *Sections 3.7.4 and 3.7.5* should be conducted. The detailed proposal of the regular audit such as methodology (e.g. performance and monitoring indicators, control tools, frequency of the audit, etc) and the conservation professionals to be engaged should be agreed with AMO prior to operation commencement.

The management team shall ensure the audit to be carried out by an experience building conservation expert in order to investigate the site practice and work methodologies of the work contractors, the tenants and any other stakeholders of the Site with respect of conservation works, site interpretation of cultural heritage, and any related works in the operation phase.

At present no operational phase EM&A for archaeological resources and built heritage outside the CPS Site is considered necessary.

#### **3.10 CONCLUSION**

The proposed development attempts to achieve a balance between the redevelopment of the Site into a vibrant and fully accessible area and the conservation of the historic and cultural significance of the Site. The challenge is to ensure that the Site has a long term future and to do this the buildings must have viable uses that generate sufficient revenue to allow for their proper upkeep. This has to be done with the minimum of alteration to the existing fabric of the historic buildings consistent with allowing them to be code compliant and able to be used safely. This has been achieved by selecting proposed uses that fit the current layout of the buildings and where the original fabric can largely be conserved with interventions kept to a minimum.

To achieve the arts hub that is necessary to energise the southern part of the site it is proposed to erect two new buildings to house gallery and multi-purpose spaces. The new buildings have been

sited to avoid major impacts on the fabric of the existing historic buildings whilst providing new access and allowing new uses in the adjacent historic buildings.

The proposed development leave the site accessible to all members of the public as open space that they can walk through and with many common areas of the buildings available to the public even if they are not using any of the facilities on the Site. There are also spaces that will be retained and have their interiors conserved as interpretation spaces that will allow both formal and informal interpretation of the site. These interpretation spaces are in all the major buildings on the Site.

The proposed development will leave all of the significant historic buildings intact and with very little alteration to their external fabric. There will be some intrusion into the historic interiors but this will be minimal and will be offset by the restoration of much of the interior of the buildings to something close to the original design intention with the removal of modern insertions. The primary external spaces, the Police Parade Ground and the Prison Yard, are left in their present form with no intrusion into the historic space. Similarly the walls that surround the site and divide it between Police, Prison and Magistracy will all be retained and conserved. Such minimal alteration as is proposed to the external walls is to provide good public access to allow the Site to be genuinely open to all people.

## 4 LANDSCAPE AND VISUAL IMPACT ASSESSMENT

### 4.1 INTRODUCTION

This Section presents the Landscape and Visual Impact Assessment (LVIA) for the Project. The assessment includes:

- A review of the relevant environmental legislation and guidelines;
- A review of the relevant planning and development control framework;
- A description of the Project, including a broad description of the alternative options considered;
- A description of the assessment methodology including the limits of the Study Areas;
- A baseline study which provides a comprehensive description of the baseline landscape and visual characters and a rating for their sensitivity; and
- An impact assessment, including identification of potential landscape and visual impacts, prediction of their magnitude and potential significance, recommendation of appropriate mitigation measures and associated implementation programmes. The assessment also discussed the potential impacts before and after the implementation of the mitigation measures.

Colour photographs showing baseline conditions and photomontages and illustrative materials supporting conclusions are provided and the locations of all the viewpoints are clearly mapped. Photomontages at representative viewpoints provide a comparison between the existing views, proposals on day 1 after completion without mitigation, proposals on day 1 after mitigation and proposals on year 10 after mitigation.

### 4.2 ENVIRONMENTAL LEGISLATION & GUIDELINES

The following legislation, standards and guidelines are applicable to the assessment of landscape and visual impacts associated with the Project.

- *Environmental Impact Assessment Ordinance* (Cap.499, S.16) and the associated *Technical Memorandum on EIA Process* (EIAO-TM), particularly:
  - Annex 10 - Criteria for Evaluating Visual and Landscape Impact, and Impact on Sites of Cultural Heritage;
  - Annex 18 - Guidelines for Landscape and Visual Impact Assessment;
- *EIAO Guidance Note No. 8/2010* - Preparation of Landscape and Visual Impact Assessment under the Environmental Impact Assessment Ordinance;
- *ETWB-TC(W) No. 3/2006* - Tree Preservation;
- *ETWB-TC(W) No. 29/2004* - Registration of Old and Valuable Trees, and Guidelines for their Preservation;

- *ETWB-TC(W) No. 10/2005* - Planting on Footbridges and Flyovers;
- *Land Administration Office (LAO), Lands Department Practice Note No. 7/2007* - [Tree Preservation and Tree Removal Application for Building Development in Private Projects](#);
- *WBTC No. 7/2002* - Tree Planting in Public Works;
- *Hong Kong Planning Standards and Guidelines, Chapter 4 - Recreation, Open Space and Greening* and *Chapter 11 - Urban Design Guidelines*; and
- Study on Landscape Value Mapping of Hong Kong.

The study has also been conducted in accordance with the requirements of Section 3.4.2 of EIA Study Brief No. ESB-205/2009, issued under the EIAO.

### 4.3 PLANNING AND DEVELOPMENT CONTROL FRAMEWORK

The Site is located in an urban area in Central and covered by the "Draft Sai Ying Pun & Sheung Wan" Outline Zoning Plan No. S/H3/24. It has been zoned as "OU" annotated "Historical Site Preserved for Cultural, Recreational and Commercial Uses". According to the Notes of the OZP, the planning intention of the zone is intended to preserve, restore and convert the historic site into a heritage tourism attraction that would provide a wide range of cultural, recreational and commercial facilities for the enjoyment of local residents and tourists. The current proposed conservation and revitalisation of CPS is fulfilling the planning intention.

In addition the Site is subject to building height restrictions with maximum building heights of 60mPD and 70mPD imposed on the lower and upper levels of the Site for existing buildings and 80mPD for any new buildings on the upper level. The two existing courtyards within the Site are to be preserved. The current proposed built structures of the CPS are meeting these restrictions.

### 4.4 IMPACT ASSESSMENT METHODOLOGY

#### 4.4.1 Landscape

The landscape impact assessment (LIA) considers the potential impacts of the Project on the existing landscape within 500m of the Site (the Study Area). In accordance with *Annex 18* of the *EIAO-TM*, the LIA covers the following tasks:

#### 1. Identification of the baseline landscape resources (LRs) and landscape characters areas (LCAs) within the Study Area

This was achieved through site visits as well as a desk-top study of topographical maps, information databases and photographs. A tree specialist was appointed to undertake a tree survey to evaluate the trees within the Site with respect to species characteristics, tree structure, to assess the site conditions for each tree and provide information regarding arboricultural concerns and recommendations for treatment of each tree, if required. Where relevant, information from the tree study has been extracted to supplement information regarding the baseline conditions, impact assessment and mitigation measures.

## 2. Assessment of the sensitivity of LR/LCAs

This is influenced by a number of factors including whether the LR/LCA is common or rare, whether it is considered to be of local, regional, national or global importance, whether there are any statutory or regulatory limitations/requirements relating to the resource, the quality of the LR/LCA, the maturity of the LR, and the ability of the LR/LCA to accommodate change.

The sensitivity of each LR and LCA was classified as follows:

- **High:** Important landscape resource or landscape of particularly distinctive character or high importance, sensitive to relatively small changes;
- **Medium:** Landscape resource or landscape of moderately valued landscape character, reasonably tolerant to change; and
- **Low:** Landscape resource or landscape, the nature of which is largely tolerant to change.

## 3. Identification of potential sources of landscape impacts

These are the various elements of the construction and operation works that have the potential to cause landscape impacts.

## 4. Identification of the magnitude of landscape impacts

The magnitude of the impact depends on a number of factors including the physical extent of the impact, the landscape context of the impact, the compatibility of the Project with the surrounding landscape; and the time-scale of the impact, ie whether it is temporary (short, medium or long-term), permanent but potentially reversible, or permanent and irreversible. Landscape impacts have been quantified wherever possible. The magnitude of landscape impacts is classified as follows:

- **Large:** The landscape resource or landscape will experience a major change;
- **Intermediate:** The landscape resource or landscape will experience a moderate change;
- **Small:** The landscape resource or landscape will experience slight or barely perceptible changes; and
- **Negligible:** The landscape resource or landscape will experience no discernible change.

## 5. Identification of potential landscape mitigation measures

These may take the form of adopting alternative designs or revisions to the architectural design to prevent and/or minimise adverse impacts; remedial measures such as colour and textural treatment of building features; and compensatory measures such as the implementation of landscape design measures (eg tree planting) to compensate for unavoidable adverse impacts and to attempt to generate potentially beneficial long-term impacts. A table of proposed mitigation measures is provided with the suggested agencies responsible for their funding, implementation and management/ maintenance identified.

## 6. Prediction of the significance of landscape impacts before and after the implementation of the mitigation measures

By synthesising the magnitude of the various impacts and the sensitivity of the various landscape resources the potential impacts will be categorised in a logical and consistent fashion. *Table 4.1* shows the rationale for dividing the degree of significance into four thresholds, namely insignificant, slight, moderate, and significant, depending on the combination of a low-medium-high degree of sensitivity of LR/LCA with a negligible-small-intermediate-large magnitude of impact.

*Table 4.1 Impact Significance of Landscape or Visual Impact*

		Receptor Sensitivity (LR/ LCA/ Visual Sensitive Receptor)		
		Low	Medium	High
Magnitude of Impact	Large	Slight/Moderate *	Moderate/ Significant*	Significant
	Intermediate	Slight/Moderate *	Moderate	Moderate/ Significant *
	Small	Slight	Slight/ Moderate	Moderate
	Negligible	Insignificant	Insignificant	Insignificant

\* *In those instances where the lower level of impact is predicted, this is justified in the description of the impact*

The significant thresholds are defined as follows:

- **Significant:** Adverse/beneficial impact which will cause significant deterioration or improvement in existing landscape quality.
- **Moderate:** Adverse/beneficial impact which will cause a noticeable deterioration or improvement in existing landscape quality.
- **Slight:** Adverse/beneficial impact which will cause a barely perceptible deterioration or improvement in existing landscape quality.
- **Insignificant:** The impact will cause no discernible change in the existing landscape quality.

## 7. Prediction of Acceptability of Impacts

An overall assessment of the acceptability, or otherwise, of the impacts will be carried out according to the five criteria set out in *Annex 10* of the *EIAO-TM* namely beneficial, acceptable, acceptable with mitigation measures, unacceptable and undetermined.

### 4.4.2 Visual

The visual impact assessment (VIA) analyses the potential visual impacts of the Project with respect to the existing views and the visual amenity of the representative Visually Sensitive Receivers (VSR) identified within a visual envelope.

In accordance with *Annex 18* of the *EIAO-TM* the VIA covers the following tasks:

## 1. Identification and plotting of the Visual Envelope

This is achieved by GIS visual envelope analysis, as well as site visits, desktop study of topographic maps and photographs and to determine visibility of the Project from various locations. The visual envelope is largely contained by the high rise buildings in the built environment of the Site location. Only a small number of high rise buildings at a distance greater than 500m from the Site would have a view of it and these VSRs were considered to be too small in number and have a large number of alternative views such they would not be significantly impacted by the Project.

## 2. Identification of VSRs and Vantage Points (VPs) within the Visual Envelope

VSRs are people who would reside, play, work or travel in or through the Visual Envelope. There are many VSRs within a visual envelope and those of similar sensitivity can be grouped. VSR's view points were studied through desktop analysis and on-site inspection, and a number of locations selected from which to analyse the visual impact of the Project. These locations are considered to be indicative of the range of views from accessible locations within the visual envelope and represent the full range of VSR groups. VSRs can be partially categorised by type, as classified in *bullet 3*.

Through further site visits and desktop analysis, five VSR points were also selected as Vantage Points (VPs), from which to compile photomontages to illustrate visual impacts at these points. The five VPs, VPa to VPe, were chosen to represent worst case scenarios for VSRs within the visual envelope, mainly due to their proximity to and degree of visibility of the Site.

## 3. Assessment of the sensitivity of the VSRs

Factors considered include:

- **Type of VSR:** This is classified according to the visual impact imposed by the Project and is influenced by such things as whether a person is at home, at work, at play, or travelling.
  - Those who view the impact from their homes are considered to be highly sensitive as the character of view from their home will have a substantial effect on their perception of quality and acceptability of their home environment and their general quality of life. These are 'Residential' VSRs (H).
  - Those who view the impact from their workplace are considered to be relatively less sensitive as the character of view will have a less important effect on their perception of quality of life. These are 'Occupational' VSRs (O).
  - Those who view the impact while engaging in outdoor recreational activities may display varying sensitivity depending on the type of activity. These are 'Recreational' VSRs (R).
  - Those who view the impact while travelling in public/private vehicles or on foot will display varying sensitivity depending on the speed, nature and frequency of travel. These are 'Travelling' VSRs (T).
- **Other factors:** As required by *EIAO Guidance Note No. 8/2002*, other factors include value and quality of existing views, availability and amenity alternative views, type and estimated number of receiver population, duration or frequency of view, and degree of visibility.

The sensitivity of the VSRs is classified as follows:

- **High:** The VSR is highly sensitive to any change in their viewing experience.
- **Medium:** The VSR is moderately sensitive to any change in their viewing experience.
- **Low:** The VSR is only slightly sensitive to any change in their viewing experience.

## 4. Assessment of the relative numbers of VSRs

This is expressed in terms of whether there are very few, few, many or very many VSRs in any one group of VSRs represented by the VSR point in question.

## 5. Assessment of the potential sources of visual impacts

These are the various elements of the construction works and operation procedures that have the potential to cause visual impacts.

## 6. Assessment of the potential magnitude of visual impacts

The magnitude of visual impacts depends on a number of factors including the compatibility of the Project with the surrounding landscape; duration of impacts; scale of development; reversibility of the impact; distance of the source of impact from the viewer; and degree of visibility of the impact and the degree that the impact dominates the field of vision of the viewer.

The magnitude of visual impact is classified as follows:

- **Large:** The VSRs will experience a major change in the character of their existing views.
- **Intermediate:** The VSRs will experience a moderate change in the character of their existing views.
- **Small:** The VSRs will experience a small change in the character of their existing views.
- **Negligible:** The VSRs will experience no discernible change in the character of their existing views.

## 7. Assessment of the potential visual mitigation measures

These may take the form of adopting alternative designs or revisions to the basic engineering and architectural design to prevent and/ or minimise adverse impacts, remedial measures such as colour and textural treatment of building features; compensatory measures such as tree planting to screening roads and elevated viaduct structures. A table of proposed mitigation measures is provided with the suggested agencies responsible for their funding, implementation and management/ maintenance identified.

## 8. Prediction of the significance of visual impacts before and after the implementation of mitigation measures

By synthesising the magnitude of the various impacts and the sensitivity of the various visual impacts, sensitivity of VSRs, and the number of affected VSRs, the degree of significance of the impacts will be categorised in a logical, well-reasoned and consistent manner. *Table 4.1* shows the rationale for dividing the degree of significance into four thresholds, namely, Insignificant, Slight, Moderate and Significant, depending on the combination of a negligible-small-intermediate-large magnitude of impact and a low-medium-high degree of sensitivity of VSRs. Consideration is also given to the relative numbers of affected VSRs in predicting the final impact significance – exceptionally low or high numbers of VSRs may change the result that might otherwise be concluded from *Table 4.1*.

The significant thresholds are defined as follows:

- **Significant:** Adverse/beneficial impact where the Project will cause significant deterioration or improvement in existing visual quality.
- **Moderate:** Adverse/beneficial impact where the Project will cause a noticeable deterioration or improvement in existing visual quality.
- **Slight:** Adverse/beneficial impact where the Project will cause a barely perceptible deterioration or improvement in existing visual quality.
- **Insignificant:** The impact will cause no discernible change in the existing visual quality.

## 9. Prediction of Acceptability of Impacts.

An overall assessment of the acceptability, or otherwise, of the impacts will be carried out according to the five criteria set out in *Annex 10* of the *EIAO-TM*, namely Beneficial, Acceptable, Acceptable with Mitigation Measures, Unacceptable and Undetermined.

In addition, colour photographs showing baseline conditions, photomontages and illustrative materials supporting conclusions are provided and the locations of all key VPs are clearly mapped. Photomontages at the representative worst case scenario locations will be prepared to provide a comparison between existing views, proposals on Day 1 after completion without mitigation measures, on Day 1 complete with mitigation measures, and in Year 10 after mitigation measures are implemented.

### 4.5 PROJECT DESCRIPTION

*Section 2* gives a full description of the Project, including the Project Site (Site) description and history, need for the Project, consideration of alternative options including design options for both new structures and a description of the Project with the rationale behind the selected options, including the general Project philosophy and concept. Key information is summarised here.

The Site is located in Central (see *Figure 2.1*). It is collectively named the Central Police Station (CPS) and includes three Declared Monuments designated under the *Antiquities and Monuments Ordinance* in 1995

(Central Police Station, Former Central Magistracy and Victoria Prison Compound) with a number of with Victorian/ Edwardian style buildings and a surrounding wall.

The design and planning of the Project, has all been undertaken with the view to providing a contemporary art hub at the CPS and the vision of the Project embraces three major principles, namely heritage, visual arts and history. The requirements of the Project are to ensure it can accommodate international quality exhibitions and conferences/ events/ performance/education space as well as for the necessary machinery and plant to service the whole site. To meet the requirement to be an art hub and host international quality exhibitions for example, the Project has to ensure the Site can have a space with circa (c.) 6 m clearance from floor to ceiling and a minimum floor space of c. 1500 m<sup>2</sup>.

A number of different design options have been identified and examined to best meet all the requirements, including only utilising the existing buildings for adaptive use and alternatively building new structures. Simply using existing buildings was ruled out for reasons including inadequate size for the proposed uses, the need for substantial intervention (conflicting with the prime aim of retaining, conserving and adapting the interiors of the heritage buildings for suitable reuse) and structural constraints amongst others. As a result the construction of limited new buildings is proposed.

A Conservation Management Plan <sup>(1)</sup> (CMP) for the CPS was prepared in 2008 and concluded that there were only two potential sites where new buildings could be inserted. The open spaces were ruled out as being too significant in terms of cultural heritage to build on and the sites were the west side of the Prison Yard where the General Office is located and the east side of the Prison Yard (see *Figure 2.2*).

Two design schemes have been identified for the new buildings; Scheme A with one new building, and Scheme B with two new buildings. Their merits and shortcomings are fully described in *Section 2* and key points summarised here. In terms of visual impact, Scheme A would have a smaller impact than Scheme B, being smaller. From the landscape point of view, the footprint identified for the construction of new buildings is currently occupied by buildings and structures and will not encroach into the open spaces such that overall there will be no net loss of open space under either scheme. In terms of potential glare interference, the extent of impact will depend on the mass of the building as well as the façade material to be chosen and while Scheme B will involve the erection of one more building, the design intention of using non-reflective material for the façade will help to minimise potential glare interference (see *Section 4.7.4 'Glare Impact'*).

Other factors of both schemes, apart from landscape, visual and glare impacts, have to be taken into consideration however, and balancing the demand for the cultural space needed, the level of intervention within the existing historic buildings, integration with other buildings at the upper courtyard, engineering constraints and the potential environmental impacts while achieving the vision of the Project, the implementation of Scheme B is considered preferable.

The design philosophy of Scheme B (including the discussion of refining the massing, configuration and façade treatment to minimise heritage and visual impact) is further elaborated in *Section 2.6* but it is important to note that the use of a modern approach over a historical approach has been recommended for two key reasons. Firstly, it is a well-established concept in conservation that new interventions, whether internal alterations in an historical building or whole new buildings on an historical site, should be “of their time”. This is because all generations of people have expressed their culture through their

<sup>(1)</sup> Purcell Miller Tritton (2008) The Old Central Police Station and the Victoria Prison Conservation Management Plan.

buildings, (amongst other things), and to copy a style of the past would be to devalue it, and indeed the culture of today. By constructing new buildings that speak of today, another chapter in the biography of the site is added. This then can be viewed by later generations and understood within the context of the site and its history.

The second reason a modern approach is preferable to a historical one relates to the building uses. The form and appearance of buildings are derived from the functions they perform and their use. The historical buildings on this site were designed to accommodate people at work (the Police HQ); people attending formal meetings (the Magistracy); and people in confinement (the Victoria Prison). In most cases, the rooms were relatively small, and defined by load bearing walls. The uses for which the new buildings are intended all require large, open spaces, with high ceilings, and much larger rooms than the largest of the rooms in any of the historic buildings. They also require heavy floor loadings, which could only be achieved in the historic buildings by making major interventions in them, which in turn would threaten their cultural significance. Thus the existing buildings cannot accommodate the new uses, as identified earlier. To build new buildings with large, open-plan historical design is possible (there are models for such buildings: for example, churches, market hall), but these forms of building require more ground area than is available at the CPS site unless one was to build on the Parade Ground or Prison Yard. It has already been established that such proposals would be inappropriate having regard to the cultural significance of the site. Thus any new building in the site cannot be made to look like an historical one given their intended uses.

The chosen Scheme B requires two new buildings within the Site, namely:

- The “Old Bailey Wing”, located at the south west portion of the Site, between the preserved F hall and Ablution block; and
- The “Arbuthnot Wing”, located at the south east portion of the Site between the preserved E hall and D hall.

The proposed layout plan of the Site is shown in *Figure 2.11* and cross-sectional plans showing the two new building areas are presented in *Figures 2.22 to 2.24*. Attributes of the new building areas are presented in *Table 4.2*

**Table 4.2 Attributes of New Construction within the Site**

Facilities	Nominal Dimensions	Highest mPD
	L-Length; W-Width	
Old Bailey wing	L-30.4 m W-27 m	+80 mPD
Arbuthnot wing	L-27.3 m, W-19 m	+80 mPD
Footbridge	L-32.8 m, W-3.7 m	+45.2 mPD

A new means of access to the CPS, in the form of a footbridge linking the mid-levels escalator to the north-west corner of the Site with a pier on the east pavement of Old Bailey Street, will also be constructed during this Project. This access point will take the form of a footbridge and this new access point is considered necessary in terms of circulation to and from the Site (See *Section 2.5.4* and *Figure 2.7*). The study of the footbridge design is currently on-going, but the architectural idea is to have an open footbridge which will effectively be an extension of the Parade Ground, meaning a simple, minimal slab or platform reaching out to the existing mid-level escalator will be constructed, with the required handrails

on both sides to provide safety. In order to keep the whole footbridge structure as simple and as light as possible and minimise potential visual impact, the current design only provides the minimum width necessary for the public flow. The design of is subject to detailed design and future ACABAS review as open footbridges require special approval under the current policy.

Some other minor works will also be undertaken outside the existing CPS boundary wall, such as the provision of a narrow pavement on the north west of Arbuthnot Road and wall works as detailed in *Annex A1*.

## 4.6 BASELINE STUDY

### 4.6.1 General Topography of the Site

The Site is located on a steep slope facing north-north-east, with buildings on three levels; a lower level (+42 to 46mPD), middle level (+50mPD) and higher level (+50 to 55mPD). Victoria Prison Compound and the former Central Magistracy are both on the higher level and Central Police Station is on the lower level.

### 4.6.2 Landscape Resources

LRs found within the Study Area are described below along with their sensitivity, and illustrated in *Figure 4.1*. A photorecord of the various landscape resources are shown in *Figure 4.2*. Details of all trees found within the Site are provided in *Section 4.6.4*.

**LR1 – Transport Route:** Refers to all highways, roads and streets within the Study Area. This LR is very tolerant to change and has low sensitivity.

**LR2 – Commercial/ Residential/ Institutional Building Area:** Refers to buildings with the Study Area used for commercial, residential and institutional purposes. The majority of the buildings are medium/ high rise and include shopping centres, residential blocks, mixed use buildings and civic administration buildings. Further north of the Site, this LR is a generic central business district with high density of high rise commercial buildings fronting major and busy vehicular arteries. Further east and west is characterised by commercial high rise dotted with occasional residential high rises. Further south there are medium rise residences at near distance and high rise residential towers further south. This LR also includes the areas near the buildings including some small open spaces (eg car parking facilities) and some amenity planting. This LR is man-made, tolerant to change and has low sensitivity.

**LR3 – Buildings within Declared Monument:** Refers to the former Victoria Prison compound buildings (Superintendent’s House; A, B, C, E, F Halls; D Hall east and west wings; the Laundry; Bauhinia House; Walls & Revetments), the former Central Magistracy, the Central Police Station buildings (Police Headquarters Block; Armoury; Barrack Block; Married Inspectors’ Quarters; Deputy Superintendent’s House; Garage; Single Inspectors’ Quarters; Married Sergeants’ Quarters; Ablutions Block) and the external brick wall within the Site. Buildings are principally between two to four storeys high. This LR has high cultural value and being predominantly a built environment has reasonable tolerance to change. It has medium sensitivity.

**LR4 – Open Space within Declared Monument:** Refers principally to the two existing courtyards within the CPS (Police Parade Ground on lower level and Prison Yard on upper level) with an overall size of 0.7



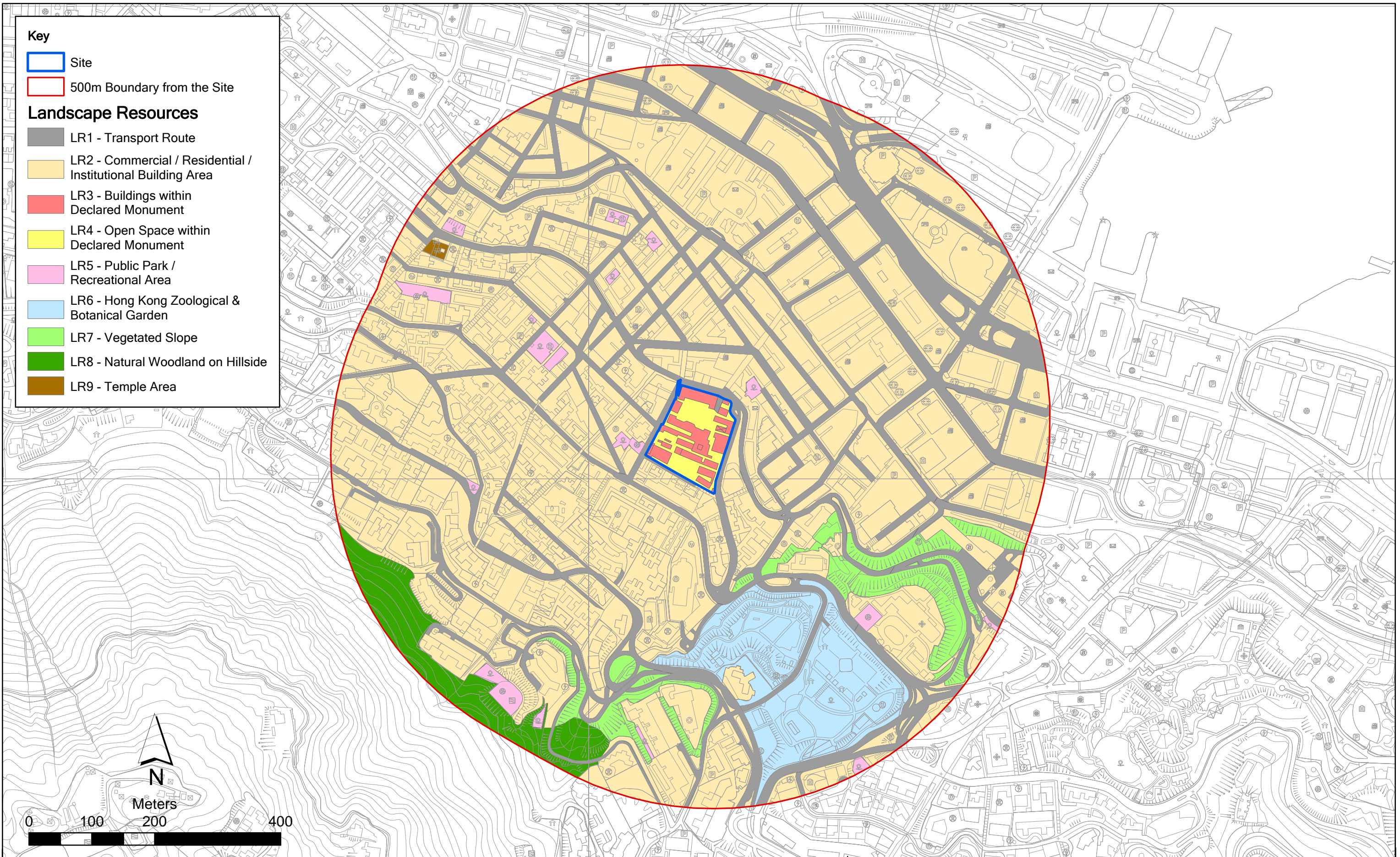


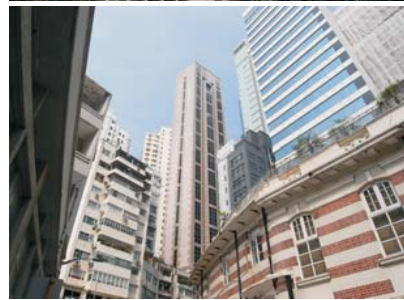
Figure 4.1

Baseline Landscape Resources

LR1 – Transport Route



LR2 – Commercial/ Residential/ Institutional Building Area



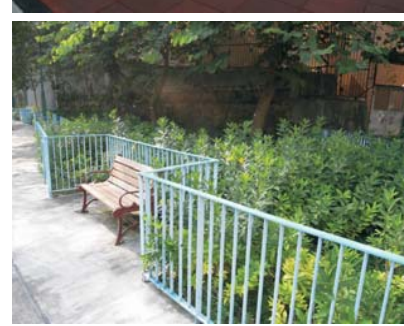
LR3 – Buildings within Declared Monument



LR4 – Open Space within Declared Monument



LR5 – Public Park/ Recreational Area



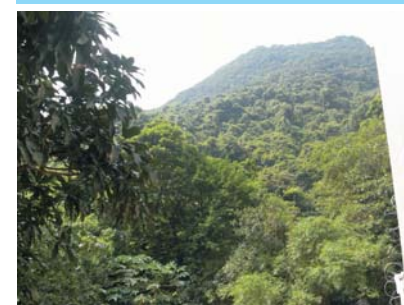
LR6 – Hong Kong Zoological & Botanical Garden



LR7 – Vegetated Slope



LR8 – Natural Woodland on Hillside



LR9 – Temple Area



Figure 4.2

Photorecord of Various Landscape Resources

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hectares. Open space is rare in the built up Study Area and offers visual and spatial relief to the built up environment of the Study Area and this LR also has high cultural landscape value. There are ten trees within this resource (and one further wall tree growing on the boundary wall the west of this LR) conferring increased landscape value to this LR. Section 4.6.4 provides details of all the trees including status, health condition and approximate dimensions, as well as indicating their proposed treatment. This LR has high sensitivity.

**LR5 – Public Park/ Recreational Area:** Refers to areas for active and/ or passive recreational uses serving residents and/or the general public and includes tennis courts, play areas and park areas. This LR is scarce in this area and has high amenity value. It is a man-made resource, which can accommodate some change and has medium sensitivity.

**LR6 – Hong Kong Zoological & Botanical Garden:** Refers to the Hong Kong Zoological & Botanical Garden in the south east of the Study Area. This area has high public amenity value and is a scarce large, green resource within the area, housing many flora and fauna species of conservation interest. It has high sensitivity.

**LR7 – Vegetated Slope:** Refers to a medium sized non-fragmented area around the government buildings in the south east of the Study Area and some small patches near the hillside on the south of the Study area, all planted with trees/shrubs and mainly on sloping terrain. The dominant species in this LR is the exotic *Archontophoenix alexandrae* of approximately 3.5m average height and in fair health, particularly around Government House, as well as the exotic *Delonix regia*, and native *Ficus microcarpa* and *Chrysalidocarpus lutescens*. This LR is important in contributing to the rare green environment of the built up Study Area. It is a man-made and reasonably mature resource and is relatively intolerant to change. It has medium sensitivity.

**LR8 – Natural Woodland on Hillside:** Refers to small area of woodland on the hill to the south west of the Study Area. This is a green belt area of the Mid-Levels West OZP (S/H11/15) and as such is intended primarily for the conservation of the existing natural environment amid the built-up areas/ at the urban fringe, to safeguard it from encroachment by urban type development and to provide additional outlets for passive recreational activities. The dominant species here is the native *Ficus microcarpa* and also *Carica papaya* species in evidence towards the bottom of the hillside. This LR is fairly mature and is a natural resource that would not easily tolerate change. It has high sensitivity.

**LR9 – Temple Area:** Refers to Man Mo Temple to the west of Hollywood Road, a Grade I listed building, which is a key tourist attraction within central Hong Kong and has public amenity and cultural value. This resource is man-made, with low tolerance to change and is a unique resource within the Study Area. It has high sensitivity.

#### 4.6.3 Landscape and Visual Character Areas

Landscape and Visual Character Areas (LCAs) found within the Study Area are described below along with their sensitivity, and illustrated in Figure 4.3. A photorecord of the various landscape character areas is shown in Figure 4.4

**LCA1 – Historical Landscape:** Refers to former Police Married Quarters on Hollywood Road to the west of the Project Site and the CPS. The former Police Married Quarters is currently an unused site with two large buildings and some open space and is due to be revitalized and brought into operation in early 2014. The CPS comprises three Declared Monuments under the *Antiquities and Monuments Ordinance* of 1995

housing many Victorian/ Edwardian style buildings. It is bound by a high wall, of different materials at different boundaries, limiting visual access to the area. To the west, the wall is stone brick, whereas on the corner of Arbuthnot Road and Hollywood Road/Wyndham Street the wall is modern concrete. Details of the trees within this LCA can be found in Section 4.6.4. The overall character of this area is not very tolerant to change and has high sensitivity.

**LCA2 –Park Landscape:** Refers to the Hong Kong Zoological & Botanical Garden in the south east of the Study Area. There are limited areas of such character and size in the central Hong Kong area. This LCA has high public amenity value and houses many important flora and fauna species. It has high sensitivity.

**LCA3 – Medium/High-rise Commercial Urban Landscape:** Refers to landscape on predominantly flat and reclaimed land, with medium and high-rise commercial and retail buildings; principally malls with prestigious commercial/retail outlets, offices above and connected by pedestrian bridges. The architecture is modern, road and streets largely on an orthogonal grid and there is limited open space and amenity planting. There is a predominance of man-made features and artificial colours, a distinct sense of verticality, a high sense of enclosure and busy, vibrant street activity. This LCA is a major commercial district and a high profile area of the HKSAR. Although it is dominated by man-made structures, many of them have high architectural value and it has only average ability to accommodate change. This LR and has medium sensitivity.

**LCA4 – Residential/ Commercial Urban Landscape:** This is the largest landscape character within the Study Area and refers to built up area with primarily residential buildings and limited community and open space uses. There is also some commercial and retail use of the buildings within this landscape. This LCA is able to accommodate change and has low sensitivity.

**LCA5 – Central Civic Administration Landscape:** Refers to landscape including Government House, some Central Government Offices and their surrounding landscape including some planted areas. Although this LCA is predominantly man-made, some buildings are of historical value to Hong Kong and it comprises some mature plantation including a number of old and valuable trees around Central Government Offices and some significant sized trees within the area. This LCA has high sensitivity.

**LCA6 – Natural Hillside Landscape:** Refers to small area of woodland on the hill to the south west of the Study Area with many trees. This is a green belt area of the Mid-Levels West OZP (S/H11/15) and is intolerant to change. It has high sensitivity.

**LCA7 – Major Transport Corridor:** This landscape is made up of the Connaught Road Central highway and junctions near IFC1. The resource is considered to be highly tolerant to change and its sensitivity is low.

#### 4.6.4 Trees within the Project Site

The tree survey undertaken identified eleven trees within the Site, using the government's definition of a tree as a woody plant with a trunk diameter of at least 95 mm at 1.3 m height. None of the trees can be gauged as being in 'excellent' health and only two trees, namely the large T5 (*Mangifera indica*) in the Parade Ground, and the relatively small wall tree T10 (*Ficus microcarpa*) between the Police and Prison sites, have performed sufficiently well to deserve the good rating. The status of the trees is detailed below and their health and approximate dimensions are summarized in Table 4.3 along with the proposed

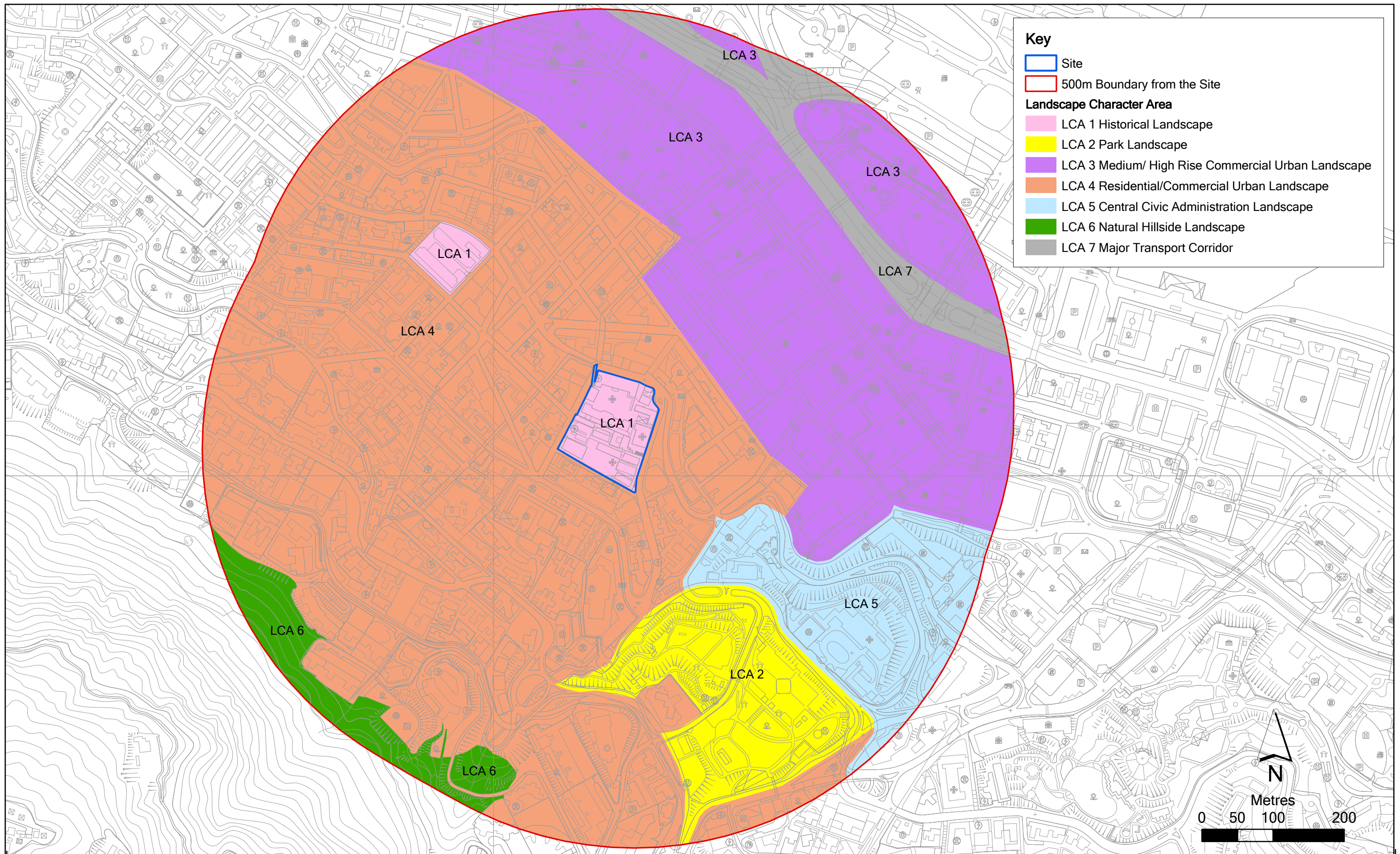


Figure 4.3

Baseline Landscape & Visual Character Areas

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LCA1 – Historical Landscape



LCA3 – Medium/High-rise Commercial Urban Landscape



LCA5 – Central Civic Administration Landscape



LCA6 – Natural Hillside Landscape



LCA2 – LCSD Theme Park Landscape



LCA4 – Residential/ Commercial Urban Landscape



LCA7 – Major Transport Corridor



Figure 4.4

Photorecord of Various Landscape Character Areas

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treatment for each tree. *Figure 4.5* shows the locations of the eleven trees, as well as detailing their proposed treatment as outlined in *Section 4.7.3* and provides a photorecord of the trees.

#### **T1 – *Bombax ceiba***

T1 was a medium-sized *Bombax ceiba*, around 25 years old, that measured 15 m tall and 4 m crown diameter before it was destroyed by Typhoon Fengshen on 25 June 2008. The gale force wind associated with typhoon signal number 8 snapped the trunk and completely removed its crown. Before the typhoon, the crown of T1 overlapped and intertwined with that of its notably larger neighbour T2. It is possible that T1 was brought down as collateral damage due to the collapse of the much larger and heavier T2. For a 15 m tall tree, the trunk diameter of 22 cm was on the low side and branch development was less than optimal, indicating that the tree's performance was of average or fair calibre. Only the lower segment of the trunk without any foliage was left of the tree after the typhoon though it is likely that the root system was able to remain more or less intact. Shortly after the typhoon, the top of the broken trunk was sawn to form a horizontal flat surface in an attempt to trim the breakage wound, leaving a trunk segment of 3.5 m tall. Following this, slender sprouts with new leaves developed from the edge of the wound to rebuild a tiny and unnatural crown. Measuring 1.9 m wide and with only a small amount of leaves, the reconstituted crown serves to resume a minimum amount of plant food production by photosynthesis to sustain the essential physiological functions of the emaciated tree. The wind force that caused the trunk snapping had created cracks that extend downwards from the wound.

Shortly after the typhoon attack, a small tree pit with concrete rim measuring 150 cm by 81 cm was installed for T1, where previously its critical root zone had been completely sealed by concrete paving. With the east side of the tree site bordered by a retaining wall adjacent to the access road and the north side adjacent to a building the root extension of T1 is permanently curtailed on two sides. Its roots could only spread towards the south and west in the compacted and sealed soil lying beneath the continuous concrete paving and the root system of T1 cannot be expected to develop normally.

The installation of an air conditioner resting on a concrete plinth next to T1 would have incurred injuries to its roots. The excavation would have cut away some roots on the south side, and created wounds to permit the invasion of wood-decay fungi and other natural enemies into the root system. The weight of the concrete plinth and the machine could have overburdened the soil to dampen normal root functions and growth. In operation, the heat and air flow generated by the machine would have dehydrated the leaves and imposed additional stresses on tree growth.

By local standards, many *Bombax ceiba* are older and have better structure and health than T1, which is now considered to be damaged and be in 'poor' health.

#### **T2 - *Ficus virens***

T2 was snapped by Typhoon Fengshen on 25 June 2008, and irretrievably lost. It was a large tree, around 70 years old, that measured 17 m tall by 24 m wide and had a trunk of 99 cm diameter. Gauged against the final dimensions of the species and in view of the chronic site constraints, the tree had probably attained its maximum size. The breakage at the time of the typhoon occurred at the trunk base, leaving the above-ground part of the tree lying en masse on the ground. This has now been removed and T2 is considered to be dead.

#### **T3 – *Nageia nagi***

T3 was uprooted by Typhoon Fengshen on 25 June 2008. Previously it stood 20 m tall with an exceptionally limited crown spread of merely 6 m and a trunk diameter of 40 cm and was considered to be around 60 years old. A *Nageia nagi* of similar height would have the ability to develop a crown up to 10 m across. By local standards, T3 was probably the largest and oldest specimen of the species, even though its structure was not too representative of the species at its prime. Soon after the collapse, the tree was lifted to the upright posture and supported by a propping system composed of eight inclined steel bars connected to a steel ring around the trunk. In addition, the tree was pulled by three guy wires linked to a higher position of the trunk. Upon inspection in February 2009, it was concluded that T3 had died.

#### **T4 – *Celtis sinensis***

T4 was snapped at about 1.8 m from the ground by Typhoon Fengshen on 25 June 2008, leaving a stump with jagged fractured wood at its top. It is a native broadleaf deciduous tree that commonly dwells in mature local woodlands and can reach 16 m height. An inspection in February 2009 concluded that prior to its snapping, T4 was already a hazardous tree that could have broken or toppled suddenly without any warning. T4 is now considered to be dead.

#### **T5 – *Mangifera indica***

T5 is a very good specimen of *Mangifera indica*, judged to be about 60 years old and one of the largest specimens of its kind in urban Hong Kong. It measures 17.9 m tall and has an asymmetrical crown averaging 23.8 m in diameter. The thick trunk is split into two upright limbs of comparable dimensions. The biomass structure therefore resembles that of a co-dominant twin-stem tree. The fork at the junction of the two sides, labelled respectively as the north and the south stems, is a well-formed, strong U-crotch with no development of protruded woody tissues.

Located in the west edge of the parade ground of the Police Site, T5 is accommodated in a small circular raised planter of 2.06 m diameter and 0.88 m tall, although the soil level is sunken at only 0.28 m from the ground. The bulk of the critical root zone has to be accommodated in the surrounding soil which has been completely sealed by the impermeable concrete paving. Most roots of the large tree are growing in the soil lying beneath the concrete cap. Root extension towards the building to the west side is constrained by the foundation and the two-storey building also restricts its crown spread. The tree is well exposed to solar radiation on all sides with its crown standing above the adjacent buildings and so avoiding being shaded. Shooting above the height of the surrounding buildings, strong winds including typhoon could impose undue stresses.

Despite some limitations, the health of T5 is rated as good but cannot be considered as excellent due to the presence of many accumulated structural defects and consequences of past mistreatments. It is expected to have the potential to grow into an even bigger tree in due course.

#### **T6 – *Aleurites moluccana***

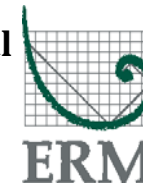
T6 is a large *Aleurites moluccana* tree measuring approximately 16.2 m tall and 12.2 m crown span (close to the biological potential for such a species) with a trunk diameter of approximately 57.4 cm (sub-optimal). It is considered to be approximately 50 years old and in fair health. It is relatively unhampered by the surrounding buildings and retaining wall, which also shelter it from wind, and it is more shaded by proximal trees (T7, T8 and T9) than buildings. T6 is accommodated in a small circular planter that measures 2.7 m across and 0.44 m tall and poor soil conditions are likely to be the principal obstacle to its optimal growth. The trunk is split into two limbs at a low level, the north and south stems,



Figure 4.5  
Trees within the Project Site including Proposed Treatments and Photorecord of Trees

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and the junction of the two limbs has developed a stable U-crotch. The south stem is further split into two main branches higher up, also with a stable U-crotch.

T6 has a number of structural problems including branch crowding problem on the north stem; a number of weak and unnatural branch attachment problems; infection by wood-decay fungi in some branch wounds and stubs with degeneration into cavities at some locations, weakening the ability of the affected branches to support their own weight and resist the dynamic loading imposed by strong winds; and unnatural and potentially unstable alignment in the main branch and some other branches, rendering it susceptible to failure in some locations; and confinement of the large structural roots radiating from the trunk base which have now moved out of the small planter into the surrounding soil to cause cracking and heaving of the concrete.

#### **T7 – *Aleurites moluccana***

T7 is a large *Aleurites moluccana* measuring approximately 15.4 m tall and 15.1 m crown spread with a trunk diameter of approximately 68.8 cm, close to the biological potential of 80 cm. It is estimated to be of similar age to T6 (about 50 years old) and is considered to be in fair health. It is accommodated in a small circular planter measuring 2.7 m across and 0.44 m tall from which the roots have escaped, cracking the planter. The tiny soil volume of the planter and poor soil conditions are likely to be the principal obstacle to its optimal growth. The site condition of T7 is similar to that of its neighbour T6, in terms of exposure to wind and reception of solar radiation.

T7 suffers from a number of structural defects that are similar to those expressed by T6, including: a leafless tree skeleton with weak union at the interface between the old and the new wood and an overall unnatural tree scaffold and form; irregular branching which is potentially unstable and contains weak connections that are prone to snapping in strong winds; many branch stubs which are particularly susceptible to wood decay and cavity development; some exceptionally long and heavy limbs with limited tapering meaning the wood strength of these limbs is stressed and could be prone to cracking or breakage; a canker on the upper surface of the fork between the trunk and a low limb which could reduce wood strength to render the limb hazardous; some leaf wilting and possible insect pest infection.

#### **T8 – *Plumeria rubra***

T8 is a small, tilted and distorted *Plumeria rubra* tree measuring 5.48 m tall and 8.4 m crown diameter, supported by a trunk of approximately 39.8 cm diameter. It is estimated to be of similar age to T6 and T7 (about 50 years old) and in fair health. Its growth has been hampered mainly by T7 situated to its west, which overtops and presses laterally against it and out-competes it for growth space and sunlight, meaning almost all its branches are towards the east. T8 is in a small circular, raised planter, measuring 1.8 m across and 0.42 m tall. Despite no cracking and heaving of the planter rim and surrounding concrete paving, it is likely that the roots have extended into the soil adjacent to the planter. Due to shading by its neighbour trees, especially on the west by T7, it receives a limited amount of sunshine, especially in the afternoon but the shielding could offer a certain degree of protection from winds.

Previous limb removal has left decayed wood encircled by peripheral callus tissues in one location which was improperly sealed by cement. The base of the trunk on the east side has developed unusual buckles which extend from the bark into the wood but since the tree is relatively small and would not impose a lot of loading on the curved trunk base, the buckles are unlikely to cause a structural weakness problem.

The crown also has weak unions of joints caused by inappropriate treatment in the past, and these are susceptible to breakage in strong wind.

#### **T9 – *Araucaria cunninghamii***

T9 measures approximately 17.3 m tall with a slender trunk of approximately 37.2cm diameter (both below average). It has exceptionally low branching and foliage densities and its crown spread is approximately 6.2 m with disturbed integrity and symmetry, reducing its landscape quality and attraction. It is estimated to be of similar age to T6, T7 and T8 (about 50 years old) and in poor health.

T9 is situated near the east edge of the open space, but it is far away enough from buildings and the retaining wall to interfere with its growth. T7 to its west, and to a lesser extent T8, could partly shade the tree in the afternoon and the tall tree could be exposed to wind stresses. The circular planter that holds T9, at 1.85 m across and 0.85 m tall, is rather small for the tree and the planter rim has been cracked, indicating the soil volume was inadequate to accommodate the tree's roots, with some of them spreading into the soil that lies below the concrete paving. Four companion trees that used to share the planter with T9 have now been removed freeing T9 from crowding and competition stresses. The trunk has been covered by encircling barb wires when the trunk diameter was smaller (to prevent climbing by prison inmates). The subsequent secondary thickening of the trunk has tightened the tension in the wires and embedded them into the wood and the rusted wires could impose a constricting strangulation on the trunk to interfere with the transport of plant food as well as the wounds serving as portals for wood-decay fungal spores, insect pests and moisture to enter the trunk.

#### **T10 – *Ficus microcarpa***

T10 is a wall tree that established spontaneously without human assistance. It has multiple trunks to support a full tree crown with dense branches and foliage, in a normal posture similar to a ground-growing Banyan. The tree measures approximately 6 m tall with a 6 m crown span. It is considered to be about 20 years old and in good health.

T10 does not take up ground space having established on an apparently vertical habitat. It is located at the boundary of the Police and the Prison sites, at the junction between the stone retaining wall and the adjacent, perpendicular, free-standing, brick wall that marks the Old Bailey Street perimeter. The stone retaining wall has soil kept behind its façade ("retained soil"), and the roots of T10 have penetrated the joints between the masonry blocks to spread in the retained soil so as to acquire a firm anchorage and capture water and nutrients. The free standing brick wall does not hold soil. The surface roots of T10 have spread from the stone wall side onto the brick wall face and some roots attached to the brick wall have penetrated the slim gap between the wall toe and the concrete paving to enter the soil in the ground ("ground soil"). The retained soil and ground soil are collectively labelled "companion soil". The wall tree has developed three main types of roots, namely: (1) woody lateral roots that run profusely on the wall surface with some penetration into the companion soil ("lateral roots"); (2) fine fibrous roots that spread in the companion soil lying adjacent to the walls ("feeding roots"); and (3) aerial roots that hang down from the branches ("aerial roots"). Aerial roots remain soft and flexible, unless they are connected to the lateral roots whereupon they become woody.

Although T10 appears as if it could be easily detached, toppled or uprooted and is prone to wind attack due to its relatively exposed locality, like several hundred stone wall trees in Hong Kong, it has stabilized itself firmly by its profuse network of roots, many of which have moved into the soil lying behind the



retaining wall. The lower portion of the tree (the masses of roots that cling on the wall surface, some of which have penetrated the wall), lies within a very narrow path which is hardly accessible and is hence protected from humans.

T10 is relying on the feeding roots that spread in the retained soil lying behind the stone wall and the ground soil below the brick wall to capture water and nutrient to sustain its life functions. If the soil has sufficient volume and suitable property for plant growth, the wall tree can prosper, if not, its growth will be retarded. Moreover, it is relying on the lateral roots to grip the two wall surfaces, the gaps between masonry blocks (for the stone wall) and the companion soil to secure a firm anchorage. The growth rate and shoot size of a wall tree relies on and echoes the spread and vigour of its roots. Due to the highly limited site and soil conditions, the growth rate of T10 has been suppressed and its performance can be rated as average. The habitat does not provide the right setting for T10 to thrive in the future and the prognosis is that it will continue to exhibit average growth in the future, should conditions remain the same.

Hong Kong has about 500 old stone retaining walls mainly found in the Mid-levels of three old districts on Hong Kong Island, namely Wanchai, Central and Western districts. A total of about 1200 trees of different age and size are growing on the vertical habitats, most of which are *Ficus microcarpa* species. T10 is considered a relatively small wall tree since the largest wall tree of the same species has attained over 20 m in height, with many times the crown size of T10.

#### T11 – *Dracaena marginata*

T11 is an exceptionally large specimen of *Dracaena marginata*, reaching approximately 7.6 m high and with a crown only able to extend away from the two adjacent buildings, tilting and with a spread of approximately 4.6 m and branch and foliage densities slightly below the norm. T11 has three trunks with respective diameters of 16.4 cm, 10.1 cm and 10.4 cm, giving an aggregate 36.9 cm. It is up to 50 years old and with stems demonstrating some signs of limited decay, it is considered to be in poor health.

The tree is trapped in a tiny rectangular planter situated next to the entrance of a building in the Police site. The planter measures 1.54 m by 0.8 m and is 0.95 m deep with compacted soil and limited drainage. The site is well sheltered and shaded on the west and south sides, opens to a narrow canyon-like path to the north and is more open to the east.

**Table 4.3** *Trees within the Project Site*

Tree ID	Species Name	Height (m)	DBH <sup>(a)</sup> (m)	Average Crown Spread (m)	Health	Proposed Treatment
T1	<i>Bombax ceiba</i> 木棉	3.50	0.30	1.90	Very Poor (Damaged)	Remove
T2	<i>Ficus virens</i> 大葉榕	n/a	n/a	n/a	Dead	Remove
T3	<i>Nageia nagi</i> 竹柏	19.80	0.40	3.80	Dead	Remove
T4	<i>Celtis sinensis</i> 朴樹	1.80	0.70	n/a	Dead	Remove
T5	<i>Mangifera indica</i> 芒果	17.90	0.78	23.80	Good	Retain
T6	<i>Aleurites moluccana</i> 石栗	16.20	0.57	12.20	Fair	Retain
T7	<i>Aleurites moluccana</i> 石栗	15.40	0.69	15.10	Fair	Retain
T8	<i>Plumeria rubra</i> 紅雞蛋花	5.48	0.40	8.40	Fair	Retain
T9	<i>Araucaria cunninghamii</i> 花旗杉	17.30	0.37	6.20	Poor	Retain
T10	<i>Ficus microcarpa</i> 細葉榕	6.00	0.20, Wall Tree	6.00	Good	Remove
T11	<i>Dracaena marginata</i> 馬尾鉄	7.60	0.37 <sup>(b)</sup>	4.60	Poor	Retain

Tree ID	Species Name	Height (m)	DBH <sup>(a)</sup> (m)	Average Crown Spread (m)	Health	Proposed Treatment
<b>Note:</b>						
(a)	DBH is Diameter at Breast Height is standardised as the trunk diameter at a height of 1300 mm above ground level in Hong Kong according to <i>ETWB-TC(W) No. 3/2006</i> on Tree Preservation.					
(b)	T11 has three trunks with respective diameters of 16.4 cm, 10.1 cm and 10.4 cm, thus each of the individual trunks of T11 qualifies it as a tree. The aggregate DBH of the three trunks is 36.9 cm. and this dimension has been reported in the table.					

#### 4.6.5 Visually Sensitive Receivers

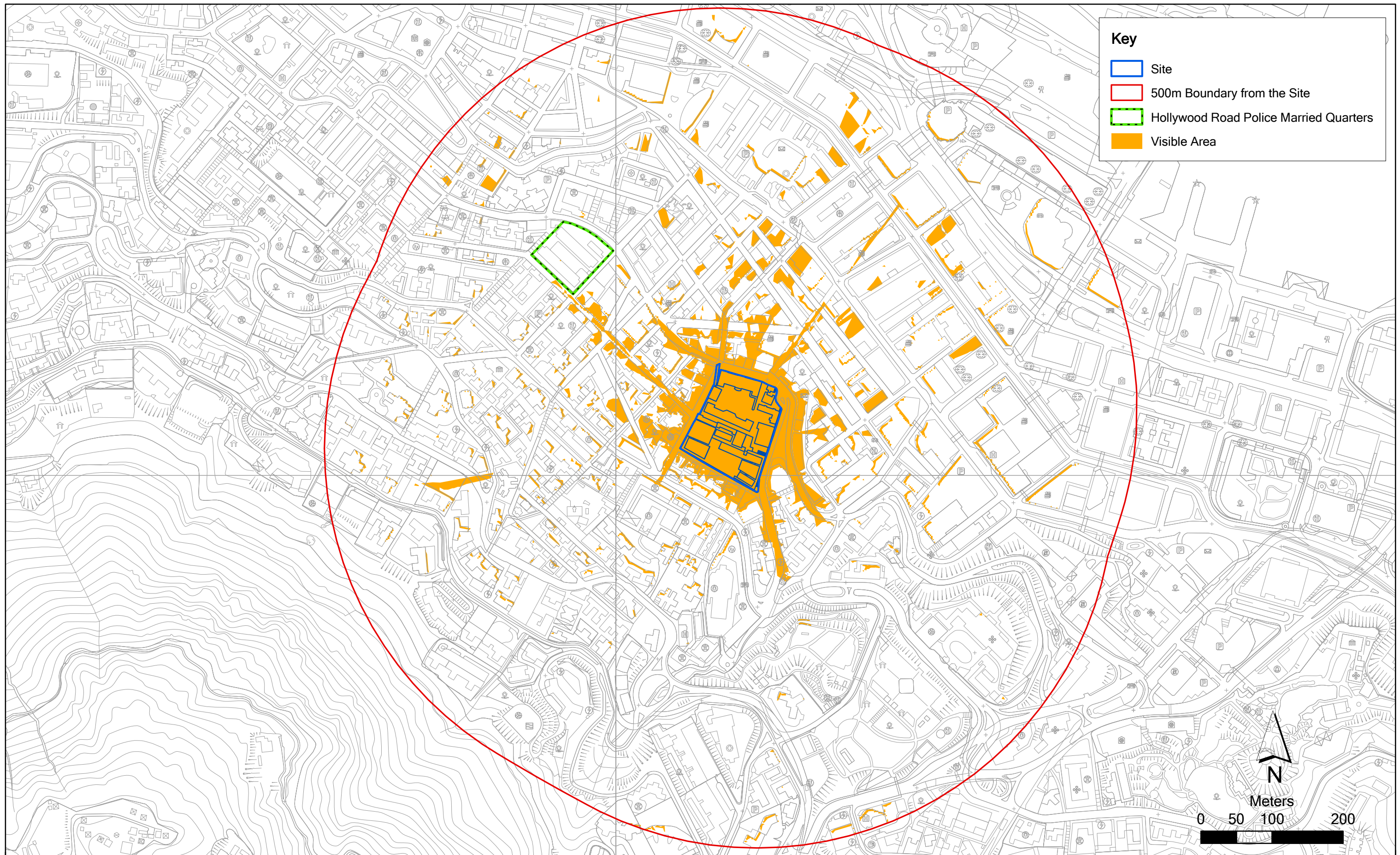
As described in Section 4.4.2 a Visual Envelope was created to estimate areas from which the Site is visible (Figure 4.6) and VSRs were then identified within this envelope (Figure 4.7).

After further desktop analysis and on-site inspection, five VSR VPs around the Site were selected from which to prepare photomontages. The VPs were chosen to represent a range of VSR types and taken from locations all around the Site. They were also selected due to their being adjacent to the Site without any screening meaning they were anticipated to be receiving the most direct visual impact among the VSRs identified and represent the worst possible visual impact of the Project. The VPs and VSRs are mapped in Figure 4.7 and detailed along with their sensitivity below, which is summarized in Table 4.4.

**VPa (VSR T2) – Central/ Mid-Levels Escalator above Hollywood Road:** This VP represents the VSR group of the users who are mostly local residents in the mid levels often using the escalator to reach public transport such as MTR, ferry or bus etc; tourists experiencing the urban life of Hong Kong; and locals and tourists going out around Soho and Lan Kwai Fong for entertainment. This VSR/ VP has a full view of the Site but also many alternative views of the urban district are available and the value and quality of the existing view is medium. Although this group is classified as a ‘Travelling’ VSR the speed of transport is not fast since they are mainly pedestrians and the high frequency with which many of the group travel on this route render them more sensitive to change. There are many people in this VSR during the operational hours of the escalator (06:00-00:00) but outside these hours numbers reduce. This VSR has medium sensitivity.

**VPb (VSR H/O1) – Medium/ High Level Commercial/Residential Building(s) above Hollywood Road:** This VP represents the VSR group of both white collars working in the offices at higher levels across Hollywood Road from the Site as well as the residents in these buildings. They command a full, panoramic, southerly view of the existing site and the stretch of hill behind and the value and quality of their view from this height can be considered high. Since their windows face the Site and they are close to the Site, they have few alternative views that do not incorporate the Site itself. The view is not the top priority of the workers as it will have a less important effect on their perception of quality of life and willingness to stay in these buildings but the residents represented here can be assumed to be more reluctant to experience change, with any change affecting their acceptability of their home environment. This VSR/VP is classified as ‘Residential/ Occupational’ and there are few VSRs that fall into this group. While it contains a mix of both more sensitive and less sensitive VSRs, overall it is considered to have medium sensitivity.

**VPc (VSR T3) – Street Level at The Centrium on Arbuthnot Road:** This VP represents the VSR group of pedestrians that travel in the corridor between Wyndham Street and Caine Road and the receiver population is considered to be few. This group comprises white collar workers from nearby offices and passers by going towards Chancery Lane and Old Bailey Street as well as passers by on Wyndham Street and Arbuthnot Road. They will be present at night as well as during the day. Most of them are



**Key**

- Site
- 500m Boundary from the Site
- Hollywood Road Police Married Quarters
- Visible Area

Figure 4.6  
 Visual Envelope for Visual Impact Assessment

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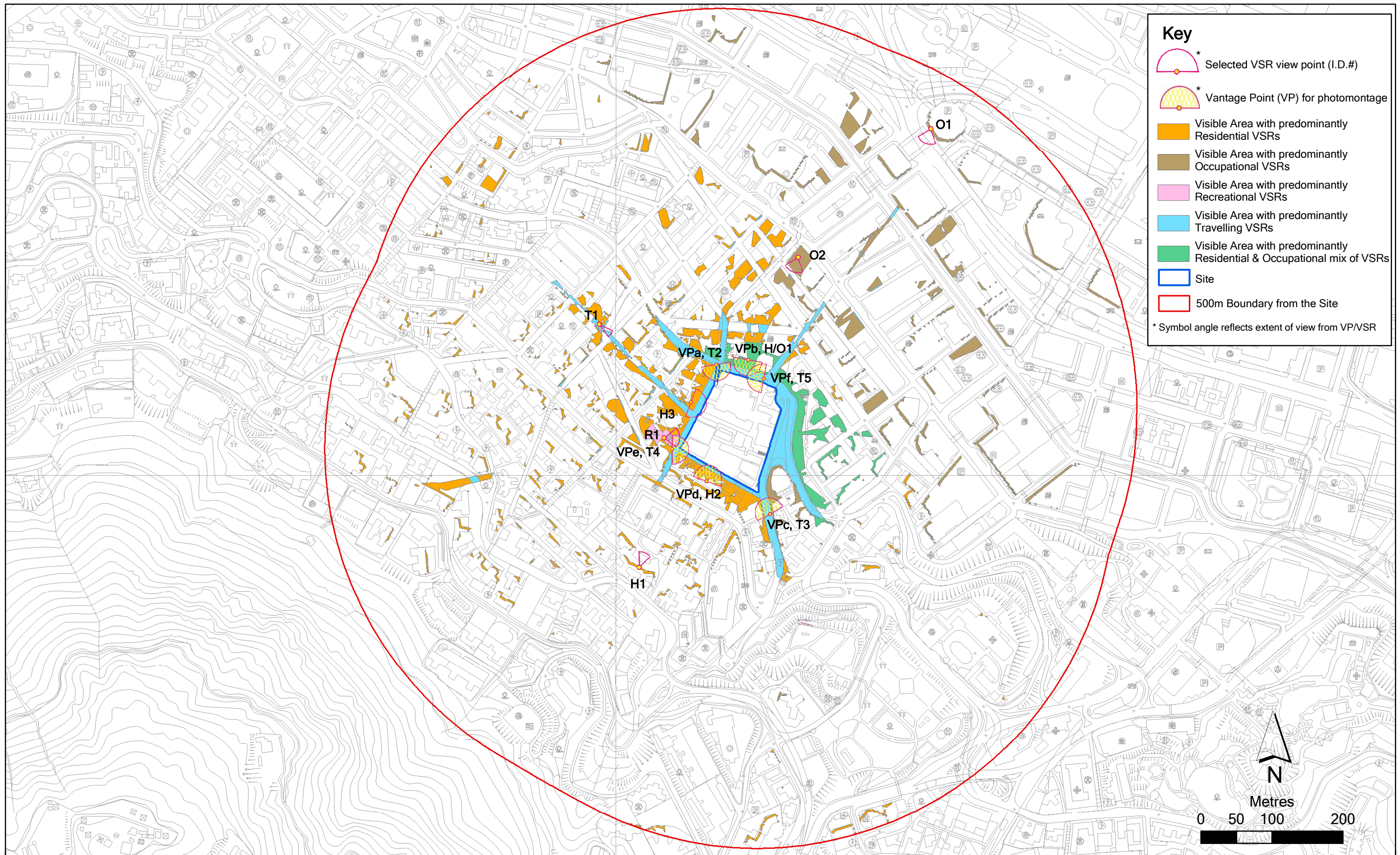


Figure 4.7

Location Plan of Visually Sensitive Receivers (VSRs)/  
Vantage Points (VPs) outside Site

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transient passers by but they are walking and travelling slowly and some will travel on this route frequently, rendering them more sensitive to change. This VSR/ VP has a full view of the Site but also many alternative views of the urban district are available and the value and quality of the existing view is medium. This VSR/VP is classified as 'Travelling' and has medium sensitivity.

**VPd (VSR H2) – Medium/High Rise Level Residential Building(s) on Chancery Lane:** This VSR/VP represents the local residents in the buildings just south of Chancery Lane and is estimated to have relatively few residents in this small group of buildings. They command a full, panoramic, northerly view of the existing CPS which is the only area with a sense of open space in close proximity and the value and quality of their existing view is considered to be high. This group is so close to the Site that alternative views similar to the existing one are not available and any changes to the existing layout or building heights could lead to subsequent impact on the group. The residents represented here can be assumed to be reluctant to experience change, with any change affecting their acceptability of their home environment. The VP has been chosen at the centre point of these buildings. This VSR/VP is classified as 'Residential' and has high sensitivity.

**VPe (VSR T4) – Street Level at Old Bailey Street/ Chancery Lane Junction:** This VP represents the VSR groups of pedestrians between Old Bailey Street and Arbuthnot Road. Chancery Lane is 6m wide abutted with the existing 4.5m high fence wall of the present Victoria Prison Compound to its north and building blocks of 25 storeys to its south. There is an absence of visual interest in the corridor which renders the value and quality of existing views as low. It is not a key pedestrian corridor and numbers of pedestrians at this point are very few. Although these VSRs have a full view of the Site, from street level much of their view will be of the tall outside wall, which will hide a lot of the interior of the Site. They have few alternative views that do not incorporate the Site.. This VSR/VP is classified as 'Travelling' and has low sensitivity.

**VPf (VSR T5) – Street Level at Hollywood Road/Pottinger Street Junction:** This VP represents the VSR group of the travellers along Hollywood road, to the north of the CPS. They are a mix of locals and tourists. This VSR/ VP has a full view of the Site but also alternative views of the urban district looking east to Wyndham Street and south, away from the Site. The value and quality of the existing view is medium. Although this group is classified as a 'Travelling' VSR, the VSRs are mainly on foot and the speed of transport is not fast and they are more observant of their surroundings than if they were in a vehicle. There are also many people in this VSR and despite being a travelling category, it has medium sensitivity.

**VSR T1 Street Level at Staunton Street/ Peel Street Junction:** This VSR represents the pedestrians who have an incidental glimpse view of the Site within the Study Area. They will be a mix of residential and white-collar workers, tourists and others in the area for shopping/entertainment and their view will be transient. The area is very built up already with existing views of the urban area being of medium value and quality and there being many alternative views available of the urban district. There are many pedestrians falling in this VSR group and since their principle reason for being in the area is not the view, they are tolerant of change. However, VSRs in this area will have only a glimpse view of the Site. This VSR is classified as 'Travelling' and has low sensitivity.

**VSR O1 Medium/High Level Commercial Building(s) (IFC Building):** This VSR represents workers in the higher levels of commercial buildings very far away from the Site but still just close enough to notice the Site within their view. Being at higher levels, the existing views are panoramic and considered to be of high value and quality but since this VSR is far away, the Site is only a small part of the existing view

and there are many alternative views available of the urban district. Overall their view is partial, often with other buildings partially blocking the line of sight to the Site and the view is not the top priority of these VSRs' perception of quality of life or their willingness to stay in these buildings. Although there are many commercial buildings in this area with many workers, only a small number of such buildings have a view of the Site such that overall the estimated receiver population is considered few. This VSR is classified as 'Occupational' and has low sensitivity.

**VSR O2 Medium/High Level Commercial Building(s) (QRC Building):** This VSR represents workers in the higher levels of commercial buildings not located adjacent to the Site and still reasonably close by. Being at medium to high levels, the existing views are panoramic and considered to be of high value and quality there are many alternative views available of the urban district. Overall their view is partial, often with other buildings partially blocking the line of sight to the Site and the view is not the top priority of these VSRs' perception of quality of life or their willingness to stay in these buildings. Although there are a number of commercial buildings in this area with many workers, only a small number of such buildings have any view of the Site such that overall the estimated receiver population is considered few. This VSR is classified as 'Occupational' and has low sensitivity.

**VSR H1 Medium/High Level Residential Buildings in Mid-levels (Grand Panorama Building):** This VSR represents residents living on the higher floors of residential buildings not located adjacent to the Site. Only a limited number of flats in these buildings can view the Site such that receive population is estimated to be few, and on average they have a partial or glimpse view of the Site, seldom facing directly towards it. Being at higher levels, the existing views are panoramic and considered to be of high value and quality but since this VSR is far away, the Site is only a small part of the existing view. Often flats will have alternative windows facing in different directions and there are many alternative views available of the urban district. Despite being residents and therefore more adverse to change, given the low number of people in this group and their distance from the Site, their sensitivity is medium rather than high.

**VSR R1 Open/Park Area off Old Bailey Street:** This VSR represents people using the outdoor area towards the top of Old Bailey Street. The area has a small children's playground area with minimal landscaping and the view is contained by the surrounding buildings with only a glimpse view of the south west area of the Site above the wall. The dominant view is of the open/park area itself and alternative views other than that incorporating the Site are available, mainly of the open/park area itself. It is tranquil in the busy surrounds but the area is small with very few users. This VSR is classified as 'Recreational' and has low sensitivity.

**VSR H3 Medium/High Level Residential Buildings on Old Bailey Street:** This VSR represents the local residents in the buildings to the west of and very nearby the Site. They command a full, panoramic, easterly view of the Site which is the only area with a sense of open space in close proximity and the value and quality of their existing view is considered to be high. This group is so close to the Site that alternative views similar to the existing one are not available and any changes to the existing layout or building heights could lead to subsequent impact on the group. The residents represented here can be assumed to be reluctant to experience change, with any change affecting their acceptability of their home environment. This VSR is classified as 'Residential' and has high sensitivity.

#### *Table 4.4 Sensitivity of Visually Sensitive Receivers*

VSR ID*	VSR Name	VP ID	Value & Quality of Existing Views (High, Medium, Low)	Availability & Amenity of Alternative Views	Estimated Number of Receiver Population (Very Few, Few, Many, Very Many)	Degree of Visibility of Source(s) of Visual Impact (Full & Panoramic, Full, Partial, Glimpse)	Receptor Sensitivity (Low, Medium, High)
T2	Central/ Mid-Levels Escalator above Hollywood Road	VPa	Medium	Alternative views available of the urban district.	Many	Full	Medium
H/O 1	Medium/High Level Commercial/Residential Building(s) above Hollywood Road	VPb	High	Few alternative views available that do not incorporate the Site.	Few	Full & Panoramic	Medium
T3	Street Level at The Centrum on Arbuthnot Road	VPc	Medium	Alternative views available of the urban district.	Few	Full	Medium
H2	Medium/High Rise Level Residential Building(s) on Chancery Lane	VPd	High	No alternative views available that do not incorporate the Site.	Few	Full & Panoramic	High
T4	Street Level at Old Bailey Street/ Chancery Lane Junction	VPe	Low	Few alternative views available that do not incorporate the Site.	Very Few	Full	Low
T5	Street Level at Hollywood Road/Pottinger Street Junction	VPf	Medium	Alternative views available of the urban district.	Many	Full	Medium
T1	Street Level at Staunton Street/ Peel Street Junction	n/a	Medium	Many alternative views available of the urban district.	Many	Glimpse	Low
O1	Medium/High Level Commercial Building(s) (IFC Building)	n/a	High	Many alternative views available of the urban district.	Few	Partial	Low
O2	Medium/High Level Commercial Building(s) (QRC Building)	n/a	High	Many alternative views available of the urban district.	Few	Partial	Low

VSR ID*	VSR Name	VP ID	Value & Quality of Existing Views (High, Medium, Low)	Availability & Amenity of Alternative Views	Estimated Number of Receiver Population (Very Few, Few, Many, Very Many)	Degree of Visibility of Source(s) of Visual Impact (Full & Panoramic, Full, Partial, Glimpse)	Receptor Sensitivity (Low, Medium, High)
H1	Medium/High Level Residential Buildings in Mid-levels (Grand Panorama Building)	n/a	High	Many alternative views available of the urban district.	Few	Partial/Glimpse	Medium
R1	Open/Park Area off Old Bailey Street	n/a	Medium	Alternative views available, mainly of the open/park area.	Very Few	Glimpse	Low
H3	Medium/High Level Residential Buildings on Old Bailey Street	n/a	High	No alternative views available that do not incorporate the Site.	Few	Full & Panoramic	High

\* T-Travelling ; H-Residential ; O-Occupational ; H/O-Mixed Residential/Occupational ; R- Recreational

#### 4.7 IMPACT ASSESSMENT

##### 4.7.1 Potential Sources of Impacts

During the construction phase, potential landscape and visual impacts may arise from:

- works for demolition of part of surrounding stone brick wall and construction of entrance to service yard;
- works for demolition of existing building structures – the Garage, Workshop & Laundry and General Office (Buildings 5, 16 and 18 in *Figure 2.2*);
- works for cleaning, re-pointing, dismantling and reinstatement of sections of surrounding stone brick wall (see 'Walls & Revetments' of *Section 3's Annex A1* for details)
- conservation, repair and refurbishment work on the external façade of the retained buildings including erection of scaffolding <sup>(1)</sup>;

(1) The aim is generally to conserve, repair and refurbish the elevations of all the retained buildings without altering the historic character of their original designs, to preserve their authenticity as much as possible, and to carry out modifications where necessary for the beneficial

- excavation work including that for construction of basement in lower courtyard (see *Figure 2.8* for details);
- new custom paving works throughout the Site (see *Figure 4.8a*);
- construction of new built structures (Old Bailey Wing, Arbuthnot Wing, new footbridge);
- construction of new pavement west of Arbuthnot Road and extension of existing pavement on Old Bailey Street around pier for new footbridge;
- site hoarding - double steel, deck hoarding with covered walkway for construction of the new buildings (Old Bailey Wing and Arbuthnot Wing) and single layer hoarding for addition and alteration work within the Site;
- temporary stockpiling of construction and demolition materials and temporary storage of construction equipment;
- temporary use of construction equipment on-site including cranes and vehicles;
- off-site construction traffic such as haulage of excavated materials;
- temporary traffic/ road diversions;
- night-time lighting; and
- dust during dry weather.

During the operation phase, potential landscape and visual impacts would be related to the following:

- landscaping works (eg new planting site, new green wall, existing tree treatment);
- repaired and refurbished external façades of retained buildings <sup>(1)</sup>;
- operation of new built structures (Old Bailey Wing, Arbuthnot Wing, new footbridge, new access points);

adaptive reuses of the buildings using historic materials to preserve their integrity, whilst identifying the new interventions by their generally plain design to distinguish them from the original historic detailing.

**Generally to all the retained buildings:**

- All existing signage painted directly to the external walls will be preserved.
- All painted render elevations will be repaired and repainted.
- All barbed wire and security screens attached to buildings will generally be removed. Some barred gates will be retained and preserved for interpretation.
- All existing services fixed to the elevations, including electrical cables and conduits and miscellaneous pipework no longer required, will be removed and the surfaces made good.
- All brickwork and stonework to the elevations will be repaired.
- All roofs will be repaired where necessary. Pitched tiled roofs will be retiled where necessary. Flat concrete roofs will be recovered.
- All exposed rainwater gutters and downpipes will be retained and refurbished, or replaced with new matching rainwater goods.
- All windows will be repaired, replaced or overhauled.

- new pavement – west of Arbuthnot Road and extension of existing on Old Bailey Street around pier for new footbridge;
- cleaned, re-pointed, refurbished and repaired sections of external stone wall and building façades; and
- night-time lighting.

**4.7.2 Landscape and Visual Mitigation Measures during Construction and Operation Phases**

The proposed mitigation measures to minimise the potential landscape and visual impacts during the construction and operation of the Project are described in *Table 4.5* shown in the landscape master plan in *Figure 4.8a* which is further partially illustrated in *Figure 4.8b*. These figures help clarify a number of these measures.

Since historically the Site has had very little green landscape, it is possible to conserve the character of the Site without integration of many additional soft landscape elements. The main spaces within the CPS that would allow the integration of new landscape features are the Lower Courtyard between the Police Headquarters and the Barrack Blocks, and the Upper Courtyard within the Victoria Prison Compound (see *Figure 2.2*). One of the main components of the design intention is to preserve the openness of both these courtyards and they are both significant spaces in terms of cultural heritage. It was therefore decided not to compromise these spaces by adding significant soft landscape features within them, but rather retain and enhance the existing. The current recommended new planting strip at the Parade Ground to compensate for the lost healthy wall tree and further enhance the Site, and the green wall (covering an area of approximately 900 m<sup>2</sup> with vegetation while still revealing some elements of the original wall behind) at the Prison Yard is considered an appropriate balance between the requirement for visual/landscape mitigation and enhancement while conserving the character of the Site.

With regards to the new landscape concept, the whole Site has been regarded as a single entity, with all new proposed structures considered in conjunction with the historical building context, constraints and characters. Planning and provision of landscape is treated as a Site wide approach and providing additional greening features just to the individual new buildings and footbridge would not be an appropriate design approach. With reference to international examples, the integration (or otherwise) of landscaping is a natural element of the overall design concept, instead of an imposed requirement. The existence of landscaping features will largely depend on a project's specific context and there are examples of where a prominent landscaping element is incompatible with the design. The Centre Pompidou in Paris for example is a very modern building inserted into the historic neighbourhood of Paris which has no visible green features. The new building together with the historic fabric surrounds a central hard-paved open plaza for various public & art-related activities. Although it was a controversial design when first proposed, time has proven it to be highly successful and it is now one of the most important cultural destinations worldwide and an important public space for locals and tourists.

For this Project, the function and design of the new buildings also limit the proposal for further greening features, such as green roofs and planters. The art gallery on the top floor of the Old Bailey Wing requires sky light diffusing into the gallery while the cooling towers and chillers on the top floor of the Arbuthnot Wing requires ventilation, such that a green roof for the new buildings is not possible. The space below the Old Bailey Wing is limited and the provision of planters may disrupt pedestrian circulation while the grand stairs below the Arbuthnot Wing may act as a semi-open space for cultural

ID	Mitigation Measure
<b>Pre-Construction Phase</b>	
M1	Detailed Design Considerations**
<b>Construction Phase</b>	
CM1	In-situ Tree Protection - Cordon Zone (CZ)
CM2	In-situ Tree Protection - Advanced & Phased Root Pruning
CM3	In-situ Tree Protection - Foliage cleansing system
CM4	In-situ Tree Protection - Monthly inspection
CM5	Light Control*
CM6	Compensatory /Enhancement Tree Planting
CM7	Vertical Greening
CM8	New Custom Paving
<b>Operation Phase</b>	
OM1	In-situ Tree Protection - Quarterly inspection
OM2	Soft Landscape Maintenance
OM3	Architectural Maintenance*
OM4	Light Control*

+ Includes refining the renovation and refurbishment details of the existing buildings and finalisation of hard landscape features such as the location and form of landscape furniture. Current considerations for hard landscape features include new benches at the base of the Green Wall and/or encircling the retained trees in the Prison Yard.

\* General measure throughout whole Project Site including footbridge.

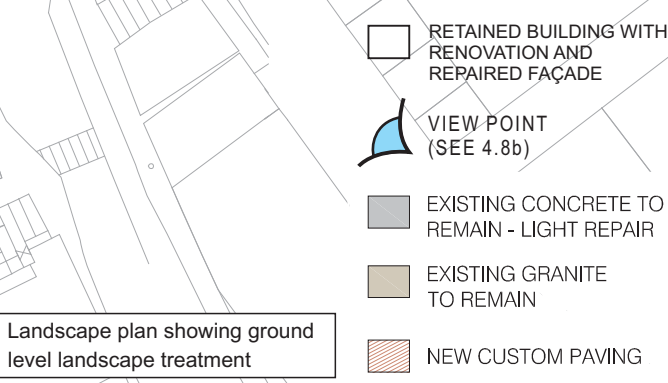
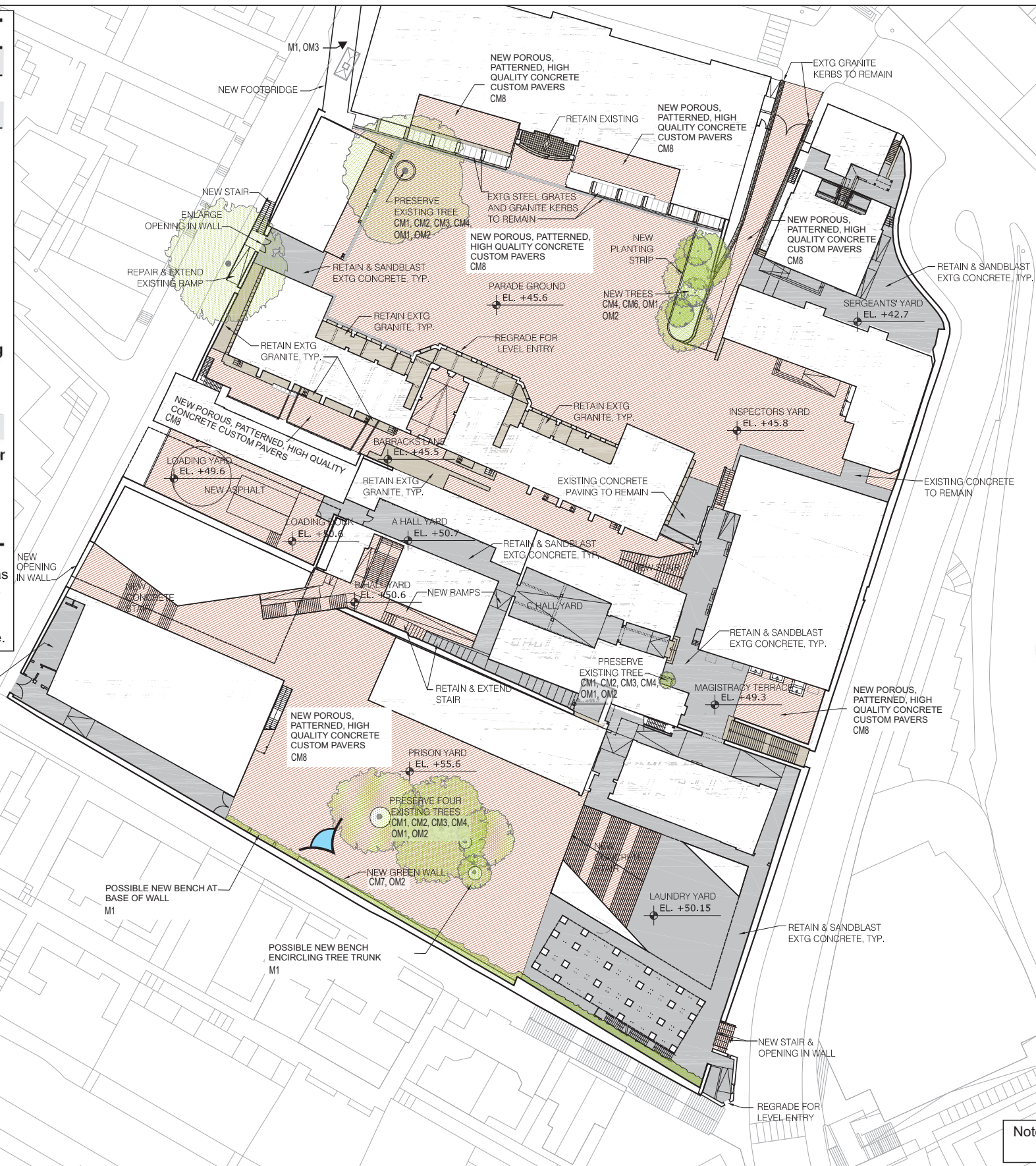
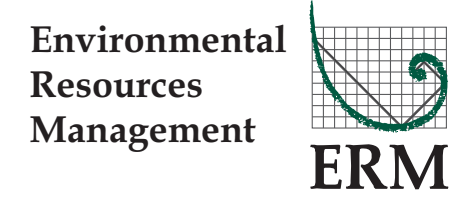


Figure 4.8a

Landscape Master Plan showing Key Mitigation Measures

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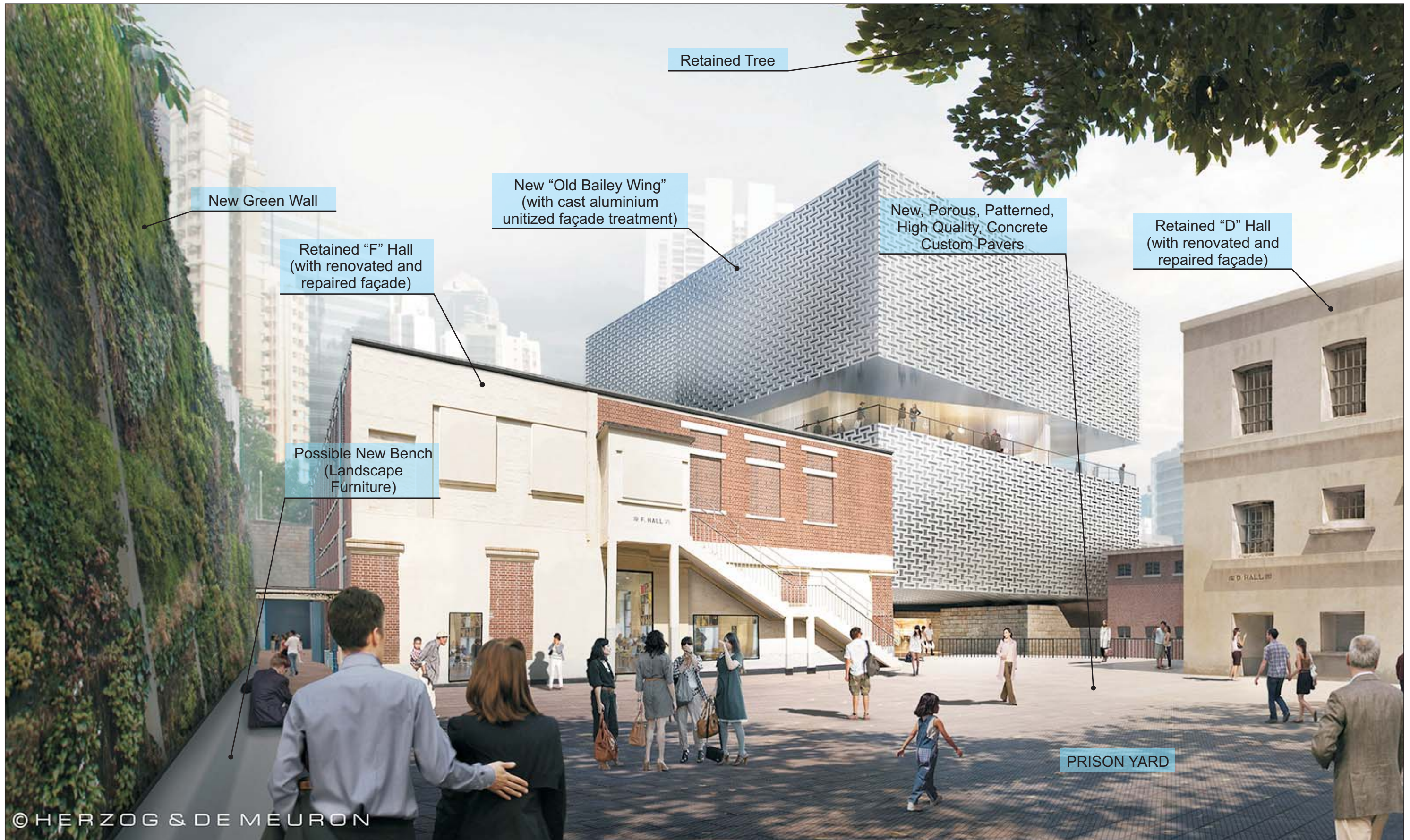
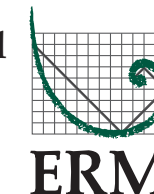


Figure 4.8b

Photomontage illustrating view from Prison Yard with proposed Landscaping and Design Features

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events with a historical backdrop of the D Hall building façade and hence the provision of planters here is also not appropriate.

As mentioned in *Section 2*, the architectural idea of the open footbridge is that it is a simple extension of the Parade Ground and integrates into the whole Site design concept. It is essential to carry through the same hard-paved open-ground character of the Parade Ground and this means the footbridge has been designed as a simple, minimal slab or platform reaching out to the existing mid-level escalator. Moreover, to minimise the massing of the footbridge (and hence the visual impact), the design only provides the minimum width necessary for public flow. Any additional landscape elements (e.g. plantings along the parapets of the footbridge, vertical greening or toe wall planters at support column) would cause extra loading on the footbridge and may mean its supporting structures be wider, its overall width be wider due to planters and in general it would be more massive and obstructive to the neighbouring historic building and Old Bailey Street and any visually sensitive receivers in the vicinity. The handrail design tries to be as porous as possible and any additional landscape elements would be more obstructive, blocking some of the spaces. Moreover, additional landscape elements would also add extra structural load, irrigation and drainage systems etc which would make the footbridge more complex and more difficult as there are not much structural supporting points available on Site.

Landscaping mitigation measures outside the CPS, for example planting along the new pavement on Arbutnot Road, have also been considered. Given the limited landscaping inside the CPS and the new design concept, and in addition the limited width of the new pavement meaning planting there would be undesirably disruptive to pedestrian flow, it has not been possible to include such measures.

**Table 4.5 Proposed Landscape Mitigation Measures**

ID	Mitigation Measure Description	Funding Agency	Implementation Agency	Management/ Maintenance Agency
<b>Pre-Construction Phase</b>				
M1	<p><b>Detailed Design Considerations</b> Aesthetic treatment of the proposed visible structures, including their form, textures, finishes and colours, are to be compatible with/complement structures in the vicinity of the Project Site while fitting with the revitalized CPS philosophy. Sensitive landscape treatments are to be considered within the confines of the conservation of the CPS character and include refining the renovation and refurbishment details of the existing buildings.</p> <p>Hard landscape features such as the location and form of landscape furniture will also be finalised at this stage<sup>(1)</sup>.</p> <p>The building footprint is to be reduced to the minimal practical size.</p>	CPS Ltd	Detailed Design Consultant	CPS Ltd/ Site Management Company
<b>Construction Phase</b>				
CM1	<p><b>In-situ Tree Protection - Cordon Zone (CZ)</b> Cordon off each tree along its drip line (below the crown) with a chain-link fencing of 2.5 m height with padlocked gate, allowing limited access to area only to authorized persons. The base of the perimeter fence will be sealed up to 30 cm height to ensure that no construction drainage water will enter. If grouting is to be conducted less than 5 m from the edge of the CZ, a waterproof membrane will be installed below the ground to a depth of 1.5 m on the outer edge of the CZ to prevent the subsurface lateral movement of contaminated construction wastewater from intruding the soil inside the CZ.</p> <p>This will protect the soil and roots from disturbance and shield the tree from undesirable construction incursions.</p>	CPS Ltd	Construction Contractor	CPS Ltd/ Site Management Company
CM2	<p><b>In-situ Tree Protection - Advanced &amp; Phased Root Pruning</b> All edges of the CZ that will be affected by excavation will undergo root pruning by a trained arborist or horticulturist, in advance of the earth work. The entire affected length of the CZ, plus 3 m additional length at both ends, shall be designated as the root pruning segment (RPS). The require trench will be opened manually in the RPS, be 1.5 m deep and 1 m wide, and closed on the same day after pruning with a good soil mix. All roots with a diameter &gt;20 mm encountered in the course of trench opening shall be cut flushed with the inner wall of the trench. If the RPS exceeds one-quarter of the CZ circumference, the root pruning should be conducted in two stages. Each phase will tackle half of the RPS length. After the first phase, the tree will be allowed to recuperate for not less than four months before the second phase root pruning is conducted. The RPS shall be protected by sheet piles along the outer edge. The rig that installs the piles and the associated operations shall not intrude into the CZ or injure the protected tree.</p> <p>This measure aims to reduce construction activity impact and shock on the tree.</p>	CPS Ltd	Trained Arborist or Horticulturist Contractor	CPS Ltd/ Site Management Company
CM3	<p><b>In-situ Tree Protection - Foliage cleansing system</b> A sprinkler cleansing system will be installed either in the crown of the tree or at a suitable location on an adjacent building to provide the means to wash the foliage of the accumulated dust when necessary, particularly in the dry season.</p> <p>This measure aims to reduce damage to trees from dust accumulating dust on the foliage that might impair respiration and photosynthesis.</p>	CPS Ltd	Landscaper Contractor	CPS Ltd/ Site Management Company
CM4	<p><b>In-situ Tree Protection - Monthly inspection</b> Monthly inspection of affected trees by an experienced and appropriately trained arborist or horticulturist using Form 1 – Tree Group Inspection Form and Form 2 – Tree Risk Assessment Form developed by Development Bureau (<a href="http://www.trees.gov.hk/en/doc/TRAGuideline_July2010version_combine.pdf">http://www.trees.gov.hk/en/doc/TRAGuideline_July2010version_combine.pdf</a>) or a form designed by a tree expert and approved by Tree Management Office. All irregularities that deviate from the recommended tree protection measures, or could impose deleterious impacts on the protected trees, must be reported to the authorized person or the tree expert within two days.</p> <p>This is an auditing measure to ensure the trees onsite are being sufficiently protected by CM1-3.</p>	CPS Ltd	Trained Arborist or Horticulturist Contractor	CPS Ltd/ Site Management Company
CM5	<p><b>Light Control</b> Control of night-time lighting shall be implemented to minimize impact on adjacent VSRs.</p>	CPS Ltd	Construction Contractor	CPS Ltd/ Site Management Company

(1) Current considerations include new benches at the base of the Green Wall and/or encircling the retained trees in the Prison Yard

ID	Mitigation Measure Description	Funding Agency	Implementation Agency	Management/ Maintenance Agency
CM6	<p><b>Compensatory /Enhancement Tree Planting</b></p> <p>A new planting site has been identified for compensatory tree planting in the Parade Ground (See <i>Figure 4.8</i>). The planting is to compensate for felling of T10. T1-T4 were killed or irreparably damaged by Typhoon Fengshen in 2008 and are therefore not subsumed under the tree felling application. The existing tree site will be enlarged to become a wide tree strip to accommodate at least six trees. The entire strip of land that accommodates T1 to T4 should be revamped to improve the soil condition for future tree growth.</p> <p>The new tree strip should be 4 m wide and covered by porous unit pavers to permit the entry of rain and irrigation water and air exchange between the soil and the atmosphere. The unit pavers should be supported by small columns to create a vault-like structure so as to avoid compaction of the underlying soil due to pedestrian trampling. The unit pavers will be movable to provide access to the soil underneath so that fertilizers and conditioners could be added on a regular basis. The air conditioner unit currently located near the proposed planting site should also be removed. This new tree planting site should also be provided with proper irrigation.</p> <p>Pursuant to the "Environment, Transport and Works Bureau Technical Circular (Works) No. 3/2006 Tree Preservation", the compensation ratio should preferably be 1:1 according to trunk girth. T10 has a DBH of 20 cm (<i>Table 4.3</i>), and it is proposed that six trees of heavy standard size be planted, each with a DBH of around 10 cm and root balls of not less than 0.75 m diameter and 0.75 m depth. Since the aggregate DBH of the new trees would be 60 cm, the rate of compensation is equivalent to three times the DBH of T10, far beyond the requirements</p> <ul style="list-style-type: none"> <li>- The six replacement trees should be planted in the new tree strip in two staggered rows, maximising distance between each tree to avoid mutual interference in the future. It is recommended that the species selected should have a small final dimension of less than 10 m height given the proximity to built structures such as the retaining wall and buildings.</li> </ul>	CPS Ltd	Landscaper Contractor	CPS Ltd/ Site Management Company
CM7	<p><b>Vertical Greening</b></p> <p>Within the limitations of the conservation of the CPS character, greening of vertical structures should be provided where possible.</p> <p>As such it is recommended that the inner southern wall of the Site be planted as a green wall. The plantings should be inserted in between each of the large protruding piers and an offset be made from both the top and bottom edge so that old and new are equally visible. An independent frame should be strategically positioned in order to ensure minimal disturbance to the original wall, and provide the main structural support and planting surface for the green wall. The frame on to which the new green will be planted should contain its own irrigation system so that moisture for the plants will remain mainly on the planting surface and not the existing wall behind. The planting chosen should be appropriate to the Hong Kong climate, requiring relatively little maintenance to sustain the quality of both plants and wall.</p>	CPS Ltd	Landscape Contractor	CPS Ltd/ Site Management Company within CPS
CM8	<p><b>New Custom Paving</b></p> <p>New, Porous, Patterned, High Quality, Concrete Custom Pavers should replace most of the existing paving in the open spaces.</p>	CPS Ltd	CPS Ltd/ Site Management Company	CPS Ltd/ Site Management Company
<b>Operation Phase</b>				
OM1	<p><b>In-situ Tree Protection - Quarterly inspection</b></p> <p>Quarterly Inspection of affected and newly planted trees by an experienced and appropriately trained arborist or horticulturist using Form 1 – Tree Group Inspection Form and Form 2 – Tree Risk Assessment Form developed by Development Bureau (<a href="http://www.trees.gov.hk/en/doc/TRAGuideline_July2010version_combine.pdf">http://www.trees.gov.hk/en/doc/TRAGuideline_July2010version_combine.pdf</a>) or a form designed by a tree expert and approved by Tree Management Office for a period of 12 months after construction.</p>	CPS Ltd	Trained Arborist or Horticulturist Contractor	CPS Ltd/ Site Management Company
OM2	<p><b>Soft Landscape Maintenance</b></p> <p>After completion of the Project, the preserved, newly planted trees and other vegetation onsite will be maintained on a long term basis by a professional horticultural contractor.</p>	CPS Ltd	Landscaper Contractor	CPS Ltd/ Site Management Company
OM3	<p><b>Architectural Maintenance</b></p> <p>The retained buildings as well as the newly built structures and new paving should be maintained such as to preserve their visual amenity at a standard similar to that on Day 1 of Operation. Such hard landscape maintenance will be covered by the Conservation Management Plan and Operational Phase Manual, as detailed in <i>Sections 3.7.1 and 3.7.4</i>.</p>	CPS Ltd	CPS Ltd/ Site Management Company	CPS Ltd/ Site Management Company
OM4	<p><b>Light Control</b></p> <p>Control of night-time lighting shall be implemented to minimise impact on adjacent VSRs. Lighting at the two new buildings and the food and beverage/ retail users within the retained buildings will be turned to night-mode (ie dimmer) after 11pm. Only limited lighting will be on for safety/emergency purposes elsewhere in the Site. It should be noted that no external building façade lighting is proposed in the lighting scheme for the Project.</p>	CPS Ltd	Construction Contractor	CPS Ltd/ Site Management Company

### 4.7.3 Landscape Impact Assessment

The Project impacts just three of the nine LRs and two of the seven LCAs identified in the Study Area. These impacts are described below, considering the potential sources of impact listed in Section 4.7.1. The magnitude of change before mitigation is determined to be negligible, small, intermediate or large and adverse unless stated otherwise. Using the sensitivity ratings from Section 4.6.2 and 4.6.3 and the matrix explained in Table 4.1, the impact significance is also stated and is assumed to be adverse unless stated otherwise. This magnitude of change ratings are summarised in Table 4.6, while Table 4.7 summarises significance of impacts both before and upon mitigation.

#### Landscape Impact Before Mitigation

The six landscape resources LR2 (Commercial/ Residential/ Institutional Building Area), LR5 (Public Park/ Recreational Area), LR6 (Hong Kong Zoological & botanical Garden), LR7 (Vegetated Slope), LR8 (Natural Woodland on Hillside) and LR9 (Temple Area) are not impacted by the Project and neither are the five landscape character areas LCA2 (Park Landscape), LCA3 (Medium/High-rise Commercial Urban Landscape), LCA5 (Central Civic Administration Landscape), LCA6 (Natural Hillside Landscape) and LCA7 (Major Transport Corridor).

**LR1 Transport Route:** Overall a very small actual area (approximately 0.06 ha) of this LR, which is also a relatively very small area (~0.29%) of this LR in the Study Area, is impacted by the Project. The affected LR relates to the entrance drive that goes into the CPS as well as tiny areas of Arbuthnot Road and Hollywood road. During construction, while the driveway will hardly be impacted the rest of this LR will be impacted by the construction of the new, narrow pavement to the west of Arbuthnot Road and the slight enlargement of existing pavement at the northern end of Old Bailey Street, where it meets Hollywood road, to accommodate the pier for the new footbridge linking the Site to the mid-levels escalator. The main footbridge structure will be constructed off-site and installed ready-made, meaning duration of disruption will be minimal and impact on the surrounding resource reduced. Construction work may also be carried out outside peak hours ie at night to reduce disruption to traffic flow, but some of the work will likely involve road diversion works. Off-site construction traffic such as haulage of excavated materials may possibly cause some temporary impact on this LR and require further short-term road diversions. During construction the magnitude of change is small and since this LR has low sensitivity the significance of impact before mitigation is slight.

During operation, the impact on the CPS driveway will be negligible. A very short length of road at the northern end of Old Bailey Street where it meets Hollywood road (see Figure 4.9) and a length of Arbuthnot Road bordering the CPS, will be very slightly narrower. While these are permanent changes, they are very small areas and the change is to a resource that is compatible with the existing landscape resource. Overall during operation the magnitude of change is considered negligible and therefore the significance of impact is insignificant.

**LR3 Buildings within Declared Monument:** The whole of this LR, an area of approximately 0.71 ha, in the Study Area is impacted by the Project. During construction, impacts include demolition of three of the nineteen buildings (Garage, Workshop & Laundry and General Office) for the construction of two modern buildings (Old Bailey Wing and Arbuthnot Wing) which will have an alternative aspect to the Edwardian/ Victorian style buildings. Part of the stone brick boundary wall to the west of the site, a section near Bauhinia House and the cement wall at the north east corner of the Site will be demolished to make way for new Site entrances or new supporting wall structures and all these will be compatible with the

surrounding landscape. The retained buildings will undergo conservation, repair and refurbishment work on the external façade as described in Section 4.7.1 including all windows being repaired, replaced or overhauled. While work is ongoing during construction, the magnitude of change is large and since this LR has medium sensitivity the significance of impact before mitigation is significant.

During operation, most of buildings (16/19) will have been retained and overhauled and will change from being moribund and decaying to used, thus improving this landscape's amenity value. The new structures within this LR take up under a third of the building space within the Site and while of a different aspect to the existing buildings still confer a similar utility. The new entrances and wall will be compatible with the surrounding landscape once construction works have been completed, but as described in 'Tree Impact Assessment' one wall tree (T10) will have been lost. Overall during operation once new features have been built and works finished the impacts on this LR will have diminished compared to construction phase. The magnitude of change is considered intermediate and since this LR has medium sensitivity the significance of impact before mitigation is moderate.

**LR4 Open Space within Declared Monument:** The whole of this LR in the Study Area is impacted by the Project. During construction, impacts include excavation of the majority of the Parade Ground and a minor area of the Prison Yard (refer to Figure 3.17). All the excavated area will be reinstated and most of the paving in this LR will also be replaced. The LR will also possibly be affected by stockpiling of construction and demolition materials and storage and operation of construction equipment. Trees will also be impacted as detailed in 'Tree Impact Assessment', with four being removed (three of them dead and one damaged and in poor health). While work is ongoing during construction the magnitude of change is large. Since this LR has high sensitivity the significance of impact before mitigation is significant.

During operation, all stockpiled materials will have been removed and the excavated area closed over. The majority of this LR will have been re-instated with new, porous patterned, high quality concrete custom paving while a small part of it will have undergone light repairs (refer to the existing concrete paving in Figure 4.8a). In addition to the removal of some dead or damaged trees these measures will provide a small beneficial impact on the landscape and there are no adverse impacts during operation. During operation this LR is not considered to be very similar to before construction began and the magnitude of change is considered to be negligible overall. This LR has high sensitivity and the significance of impact before mitigation is insignificant.

**LCA1 Historical Landscape:** The CPS makes up the majority of this LCA within the Study Area and 69% of this LCA is impacted by the Project. During construction, impacts include demolition of three of the nineteen buildings (Garage, Workshop & Laundry and General Office) in the CPS, the construction of two modern buildings (Old Bailey Wing and Arbuthnot Wing) with alternative aspect to the Edwardian/ Victorian style buildings. The Parade Ground and Prison Yard will be impacted by major and minor excavation works respectively and the stockpiling and storage of materials and operation of equipment may also impact this LCA. Trees within the CPS in this LCA will be impacted as detailed in 'Tree Impact Assessment', with four dead or damaged trees and one healthy wall tree being removed but all other trees being retained. The construction of new site entrances will impact sections of the CPS boundary wall, including the removal of one healthy wall tree (T10) (See in 'Tree Impact Assessment'). The retained buildings will undergo conservation, repair and refurbishment work on the external façade as described in Section 4.7.1 including all windows being repaired, replaced or overhauled. During construction the magnitude of change is large and since this LCA has high sensitivity the impact before mitigation is significant.



Exiting View towards Project Site from VPa



Exiting View towards Project Site from VPf



Project Site at Operation\* from VPa



Project Site at Operation\* from VPf

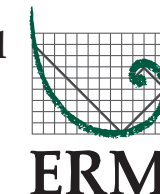
Figure 4.9

Photomontage from VPa and VPf (Central/ Mid-Levels Escalator above Hollywood Road)  
(Street Level at Hollywood Road/Pottinger Street Junction)

FILE: 0095646e1  
DATE: 28/12/2010

\*Design features incorporated and tootendge subject to ACABAS review.  
With hard landscape maintenance, the view at Operation Day 1 and Year 10 are expected to show little significant difference and therefore the view at operation is shown in one image.

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During operation, most of buildings (16/19) and all the open space will have been retained and overhauled/repaved and will change from being derelict to used and confer improved landscape value. The new buildings will change this LCA adding a different and more modern, aspect to the LCA. The new entrances will be compatible with the surrounding landscape. As described in 'Tree Impact Assessment' following, one wall tree (T10) will be permanently lost but the remaining healthy trees retained and dead or unhealthy trees cleared. Overall during operation the magnitude of change is considered intermediate. This LCA has high sensitivity and the significance of impact during operation is considered to be less than that during construction, and before mitigation is moderate.

**LCA4 Residential/ Commercial/ Urban Landscape:** This LCA is over double the size of any other LCA in the Study Area and overall a very small actual area (approximately 0.01 ha) of this LR, which is also a relatively very small area (0.02%) of it is impacted by the Project. During construction, this LCA will be impacted by the slight enlargement of pavement at the northern end of Old Bailey Street where it meets Hollywood road (to accommodate the pier for the mid-levels escalator footbridge, in addition to the construction works for a narrow pavement to the west of Arbuthnot Road. The magnitude of change is small and since this LCA has low sensitivity, the significance of impact before mitigation is slight.

During operation, the character of the area will not have been changed due to the new pavements. The magnitude of change is negligible and the impact is therefore insignificant.

#### *Tree Impact Assessment*

The existing trees have not had proper tree care for many years. Except T10 which is recommended for felling, and T1, T2, T3 and T4 which were damaged or destroyed by typhoon in 2008 and whose remains should be removed, the remaining six trees could benefit from a systematic programme of tree care to tackle a host of accumulated arboricultural problems. The details of proposed tree care actions are explained below.

#### **T1 – *Bombax ceiba***

T1 is a broken tree, struggling to survive by developing some unnatural water sprouts and in poor health. Although it displays some apparent signs of recovery, they indicate the last-resort physiological and morphological responses of a tree that has been pushed to the extreme. Due to the massive structural losses and associated injuries, there is no hope that the tree regaining its health and restoring its natural neat and layered pagoda tree form, which in conjunction with its large reddish bloom, constitute the raison d'être for planting *Bombax ceiba*. With the loss of the leader trunk that would normally dominate the tree structure from base to tip, and dim prospect of forming a replacement leader, the tree's landscape and amenity value has been permanently depleted. In addition, there is a high risk of invasion by wood-decay fungi at the existing trunk breakage which would lead to a hazardous tree situation in due course.

Judging from the height and trunk diameter of the tree before it was snapped, and the site conditions, T1 is considered to be around 25 years old, hence it is a relatively recent addition to the Site with limited historical value. The historical association with the cultural heritage is at best tenuous and may not be construed as significant. By local standards, many *Bombax ceiba* are notably older, stronger and have better structure and health than T1. The present emaciated and truncated state is incongruous with the condition of the adjacent heritage buildings which are to be renovated and repaired where necessary.

Considering the above assessment and taking into account arboriculture and staff and visitor safety, it is suggested T1 be removed.

#### **T2 - *Ficus virens***

Before its collapse, T2 was beset by some wood decay in its trunk, as indicated by photographs from an October 2007 tree report. It is now a dead and should be removed. Despite no compensatory planting being required, it is suggested that the entire strip of land that previously accommodated T1 to T4 should be revamped to provide a planting site with improved soil conditions for future tree growth and six trees be planted here, as detailed in CM6 of *Table 4.5*.

#### **T3 – *Nageia nagi***

T3 is now considered to be dead as a result of toppling by Typhoon Fengshen which brought massive root breakage and injuries and should be removed. Despite no compensatory planting being required, it is suggested that the entire strip of land that previously accommodated T1 to T4 should be revamped to provide a planting site with improved soil conditions for future tree growth and six trees be planted here, as detailed in CM6 of *Table 4.5*.

#### **T4 – *Celtis sinensis***

T4 is now considered to be dead and the stump of T4 should be removed with the major structural roots below the trunk base being extracted by a stump grinder. Despite no compensatory planting being required, it is suggested that the entire strip of land that previously accommodated T1 to T4 should be revamped to provide a planting site with improved soil conditions for future tree growth and six trees be planted here, as detailed in CM6 of *Table 4.5*.

#### **T5 – *Mangifera indica***

T5 is currently in good health but past branch pruning works appear to be piecemeal and low quality. T5 would now benefit from a thorough crown cleaning exercise to target the removal of dead, decayed, diseased or cankerous, cracked or fractured, crossed and crooked or kinked branched as well as branches with particularly weak joints. This should follow a thorough tree inspection for the presence of such branches as well as for wood decay, cankerous and debarking problems and any weak branches that may be hazardous. Treatment should strictly follow the guidelines recommended by the International Society of Arboriculture and be conducted by a competent and qualified arborist. The planter and soil conditions for the tree should also be improved to ensure sustained healthy growth.

#### **T6 – *Aleurites moluccana***

T6 is currently in fair health but similarly to T5, has not received professional tree care for a long time and has accumulated many problematic structural flaws and consequences of mistreatments, some of which could render the tree potentially unstable. It needs a thorough crown cleaning treatment as detailed for T5, and equally planter and soil conditions for the tree should also be improved to ensure sustained healthy growth

#### **T7 – *Aleurites moluccana***

T7 is considered to be in fair health but has accumulated many structural defects due to improper and severe branch pruning in the past. It has not had a professional crown cleaning treatment for a very long time and needs a thorough crown cleaning treatment as detailed for T5. T7 should be checked closely to see if the insect pest infestation is active, and if so, extermination treatment such as spraying with an

approved insecticide should be applied. Similarly to T5 and T6, planter and soil conditions for the tree should also be improved to ensure sustained healthy growth.

#### **T8 – *Plumeria rubra***

T8 is in fair health but has been subjected to unnecessary, frequent and improper branch removals in the past. The competition with its neighbouring tree, T7, is the main cause of the distorted tree form and will not be rectified by natural or artificial means. No action is recommended to correct the tree posture.

The large number of old wounds, weak joints and unnaturally angled branches caused by improper treatment in the past cannot be remedied properly without causing an unacceptable reduction of T8's biomass and living tissues. The recommendation is therefore to forgo the major surgeries and tolerate the structural defects so it can continue to live. A light pruning exercise is recommended to remove the most critical branches that are decayed, diseased or competing, following the crown treatment approach explained for T5. The amount of wood and foliage to be pruned away should be kept to the minimum to preserve the overall tree form and vitality of the tree.

Similarly to T5, T6 and T7, planter and soil conditions for the tree should also be improved to help its sustained healthy growth.

#### **T9 – *Araucaria cunninghamii***

T9 is in poor health, and it is unlikely to regain its vigour whilst trapped in the soil bondage, with a concrete cover around the planter. This cover should be removed and planter and soil conditions for the tree improved to help its revitalization. In addition, every bit of the rusty barb wires winding around and partly embedded in the trunk should be carefully extracted and removed with the wounds cleaned with a brush to get rid of residing residues.

#### **T10 – *Ficus microcarpa***

T10 is considered to be about 20 years old and in good health. The key factors that permit meritorious wall tree growth are a wall that is tall and long, old, composed of large stones, made of irregular stones (rubble), has a large amount of joints between masonry blocks, and is sheltered by adjacent notably taller buildings. These inherent wall attributes cannot be found on the subject wall and it is concluded that future growth of T10 would be at a sluggish rate.

The adaptive use of the heritage site requires satisfying some fundamental building, safety and functional requirements. Due to elevation difference of the sloping site, at present the only vehicular access is at Hollywood Road and an additional access road, which also serves as the emergency vehicle access, has to be installed. In view of the need to preserve the heritage buildings, the latitude for a suitable location to install a new entrance is extremely limited. The small buildings in front of T10 are found to be of little heritage value, and hence could be demolished to give way to the new entrance. The site analysis has excluded the possibility of installing a new entrance along the other two edges of the site, namely Arbuthnot Road and Chancery Lane and therefore the section of wall containing T10 has been selected as the most suitable location for this new access road.

The feasibility of installing the new access road whilst preserving T10 has been considered. The proposed gap for the access road is the minimum required for emergency vehicle access and the entire width of the gap from the ground upwards has to remain clear of obstacles. The main branches of T10 begin to grow

outwards towards the proposed gap just above the brick wall at about 3 m from the level of Old Bailey Street and its overhanging branches would limit the head room of the proposed road, thus disqualifying it as an emergency access. In situ preservation of T10 would also have to involve protection of both walls and the companion soil in a holistic package. Any damage to the two walls and their companion soil would injure or cut the lateral and feeding roots reducing the water and nutrient supply to the wall tree and seriously compromising its stability. Since creating the access road would damage the roots on the brick wall and in the ground soil T10 would be weakened and destabilized. It is therefore concluded that the co-existence of the new road and T10 is not possible.

Since T10 cannot be retained, the option of transplanting it has also been considered. To move T10, two requirements would need to be fulfilled: (1) taking two wall segments of sufficient dimension to keep most of the lateral roots; and (2) taking two root balls respectively for the retained soil and the ground soil, each of which must contain a sufficient volume of companion soil together with their constituent feeder roots. During the transport stage, the four entities plus the above-ground part of the tree ("the shoot") would need to be moved en masse as one unit without any relative movement to each other in the course of lifting and conveyance, to avoid their breakage or disintegration. These stringent requirements are technically very difficult to accomplish and are unlikely to be satisfied. In addition, any attempt to move the four entities would demand heavy lifting machines which require a wide road access, a flat and strong platform, and a large amount of manoeuvring space. These indispensable conditions are unlikely to be satisfied given the cramped condition of the tree site and the adjacent steeply-sloping and narrow Old Bailey Street. In view of technical and site difficulties, it is understood that no wall tree has ever been transplanted successfully in Hong Kong or other cities. The expensive and complicated operation in this instance is unlikely to succeed and given T10 does not have any outstanding dimensions or qualities it is considered unreasonable to attempt such an elaborate, expensive and unproven transplanting operation. It can therefore be concluded that transplanting the wall tree is not a viable option.

The size, tree form, performance, and landscape and amenity value of T10, in comparison with the large and robust wall trees in other parts of the city, are relatively low. Due to site and technical constraints, in situ preservation and transplanting cannot be recommended. Overall, considering alternative locations of the new access road would require the demolition of high quality and culturally valuable heritage structures, the felling of T10, a relatively average wall tree, is deemed an acceptable option.

#### **T11 – *Dracaena marginata***

T11 is in poor health. The tree could be tidied up by the removal of a small amount of the broken or brown leaves and branches. The debris on the soil surface should be removed. The surface compacted soil could be carefully removed down to about 5 cm. The soil could be improved by loosening to facilitate aeration, infiltration and drainage. Great care should be exercised in these soil operations to avoid damaging the roots. A 5 cm layer of topsoil composed of 1:1 volume ratio of completely decomposed granite and mature organic compost could be added to form a surface mulch.

#### *Landscape Impact Upon Mitigation*

The potential significances of residual landscape impacts during construction and operation phases, after mitigation, are outlined below considering mitigation measures described in detail in *Table 4.5*. The significance of impacts at both construction and operation phases, without and upon mitigation, are summarised in *Table 4.7*. All impacts are considered adverse unless stated otherwise. For all those

LRs/LCAs not impacted by the Project (as listed previously), the residual impact at both construction and operation is insignificant

**LR1 Transport Route:** The impact on this LR without mitigation is slight during construction and insignificant during operation. Construction is assumed to be carried out following standard good practise, and by implementing detailed design considerations, the construction impact may be reduced by minimizing the project footprint on this LR and making the new pavements even more compatible with the surrounding area. However there will still be a slight residual impact during construction.

**LR3 – Buildings within Declared Monument.** The impact on this LR without mitigation is significant during construction and moderate during operation (see *Landscape Impact Before Mitigation*). Implementing detailed design considerations (M1), compensatory tree planting for the loss of T10 (also see 'Tree Impact Assessment') and vertical greening such as a green wall to the south of the Site, the residual impact during construction will be reduced to moderate. There will be some beneficial as well as adverse impacts during operation and as well as the mitigation measures mentioned, if architectural maintenance is carried out, the residual impact is considered to reduce to slight both at day 1 and year 10.

**LR4 – Open Space within Declared Monument.** The impact on this LR without mitigation is significant during construction and insignificant during operation (see *Landscape Impact Before Mitigation*). By implementing detailed design considerations, in-situ tree protection, enhancement tree planting (no requirement to compensate for the four dead or damaged trees lost. Also see 'Tree Impact Assessment') and vertical greening such as a green wall to the south of the Site, the residual impact during construction will be reduced to moderate.

If further in-situ tree protection and soft-landscape maintenance is implemented, along with architectural maintenance of the new paving, in addition to the mitigation measures at construction, the residual impact during operation will become slightly beneficial by year 10 when the in-situ trees have benefitted from the further protection and maintenance and the green wall plants will have matured.

**LCA1 – Historical Landscape:** The impact on this LCA without mitigation is significant during construction and moderate during operation. During construction, implementing detailed design considerations, in-situ tree protection, tree planting in the new planting site to compensate for the loss of T10 and generally enhance the landscape after removal of the trees that were dead or damaged by a Typhoon in 2008, vertical greening such as planting of a green wall to the south of the Site, the residual impact during construction will be reduced to moderate. There will be some beneficial as well as adverse impacts during operation and as well as the mitigation measures mentioned, if architectural maintenance is carried out, the residual impact during operation is slight both at day 1 and year 10.

**LCA4 Residential/ Commercial/ Urban Landscape:** The impact on this LCA without mitigation is slight during construction and insignificant during operation. Construction is assumed to be carried out following standard good practise, and the implementation of detailed design considerations (M1) is suggested to minimize the project footprint on this LCA. As described for LR1 however, there will still be a slight residual impact at construction.



Table 4.6 Magnitude of Impact on LRs and LCAs affected by the Project, Before Mitigation

ID	Description	Total Area in Study Area (ha)	Area falling within at Project Site (ha)	Percentage within Project Site with respect to Study Area (%)*	Description of Impacts (Construction/ Operation)	Duration of Impact - Construction (no mitigation)	Duration of Impact - Operation (no mitigation)	Compatibility of Project	Magnitude of Change - Construction (no mitigation)	Magnitude of Change - Operation (no mitigation)
LR1	Transport Route	20.45	0.06	0.29 (very small)	As described in Section 4.7.3 of text.	Temporary & Reversible	Permanent and irreversible	Compatible; impacted by construction/renovation of same LR type.	Small	Negligible
LR2	Commercial/ Residential/ Institutional Building Area	68.92	0.00	0	n/a	n/a	n/a	n/a	Negligible	Negligible
LR3	Buildings within Declared Monument	0.71	0.71	100 (large)	As described in Section 4.7.3 of text.	Temporary & Reversible	Permanent and irreversible	Partly compatible; improvement to old buildings, demolition of three buildings to make way for construction of two modern buildings of new aspect.	Large	Intermediate
LR4	Open Space within Declared Monument	0.70	0.70	100 (large)	As described in Section 4.7.3 of text.	Temporary & Reversible	Permanent and irreversible	Compatible; all open space retained.	Large	Negligible
LR5	Public Park/ Recreational Area	1.25	0.00	0	n/a	n/a	n/a	n/a	Negligible	Negligible
LR6	Hong Kong Zoological & Botanical Garden	6.10	0.00	0	n/a	n/a	n/a	n/a	Negligible	Negligible
LR7	Vegetated Slope	3.66	0.00	0	n/a	n/a	n/a	n/a	Negligible	Negligible
LR8	Natural Woodland on Hillside	2.97	0.00	0	n/a	n/a	n/a	n/a	Negligible	Negligible
LR9	Temple Area	0.07	0.00	0	n/a	n/a	n/a	n/a	Negligible	Negligible
LCA1	Historical Landscape	2.11	1.46	69 (large)	As described in Section 4.7.3 of text.	Temporary & Reversible	Permanent and irreversible	Partly compatible; retention of all open space and improvement to retained buildings, demolition of three buildings to make way for construction of two modern buildings of new aspect.	Large	Intermediate
LCA2	Park Landscape	6.88	0.00	0	n/a	Negligible	Negligible	n/a	Negligible	Negligible
LCA3	Medium/High-rise Commercial Urban Landscape	27.28	0.00	0	n/a	Negligible	Negligible	n/a	Negligible	Negligible
LCA4	Residential/ Commercial Urban Landscape	54.76	0.01	0.02 (very small)	As described in Section 4.7.3 of text.	Temporary & Reversible	Permanent and irreversible	Compatible; impacted by construction/renovation of pavement/wall, a common resource within this LCA.	Small	Negligible
LCA5	Central Civic Administration Landscape	7.32	0.00	0	n/a	n/a	n/a	n/a	Negligible	Negligible
LCA6	Natural Hillside Landscape	2.98	0.00	0	n/a	n/a	n/a	n/a	Negligible	Negligible
LCA7	Major Transport Corridor	3.50	0.00	0	n/a	n/a	n/a	n/a	Negligible	Negligible

\* This is indicative of the scale of the Project relative to that particular LR/LCA. Less than 5% was considered very small, 5% to <15% small, 15% to <40% moderate and 40% and above large.

Table 4.7 Significance of Landscape Impacts in Construction and Operation Phases, before and after Mitigation

LR ID	Landscape Resource/ Landscape Character	Sensitivity (Low, Medium, High)	Magnitude of Change BEFORE Mitigation (Negligible, Small, Intermediate, Large)		Impact Significance BEFORE Mitigation (Insignificant, Slight, Moderate, Significant)		Recommended Mitigation Measures	Residual Impact (Insignificant, Slight, Moderate, Significant)		
			Construction	Operation	Construction	Operation		Construction	Operation - Day 1	Operation - Year 10
LR1	Transport Route	Low	Small	Negligible	Slight	Insignificant	M1	Slight	Insignificant	Insignificant
LR2	Commercial/ Residential/ Institutional Building Area	Low	Negligible	Negligible	Insignificant	Insignificant	n/a	Insignificant	Insignificant	Insignificant
LR3	Buildings within Declared Monument	Medium	Large	Intermediate	Significant	Moderate	M1, CM7	Moderate	Slight	Slight
LR4	Open Space within Declared Monument	High	Large	Negligible	Significant	Insignificant	M1, CM1-4, CM6, CM7, CM8, OM1-2	Moderate	Insignificant	Slightly beneficial
LR5	Public Park/ Recreational Area	Medium	Negligible	Negligible	Insignificant	Insignificant	n/a	Insignificant	Insignificant	Insignificant
LR6	Hong Kong Zoological & Botanical Garden	High	Negligible	Negligible	Insignificant	Insignificant	n/a	Insignificant	Insignificant	Insignificant
LR7	Vegetated Slope	Medium	Negligible	Negligible	Insignificant	Insignificant	n/a	Insignificant	Insignificant	Insignificant
LR8	Natural Woodland on Hillside	High	Negligible	Negligible	Insignificant	Insignificant	n/a	Insignificant	Insignificant	Insignificant
LR9	Temple Area	High	Negligible	Negligible	Insignificant	Insignificant	n/a	Insignificant	Insignificant	Insignificant
LCA1	Historical Landscape	High	Large	Intermediate	Significant	Moderate	M1, CM1-4, CM6, CM7, CM8, OM1-3	Moderate	Slight	Slight
LCA2	Park Landscape	High	Negligible	Negligible	Insignificant	Insignificant	n/a	Insignificant	Insignificant	Insignificant
LCA3	Medium/High-rise Commercial Urban Landscape	Medium	Negligible	Negligible	Insignificant	Insignificant	n/a	Insignificant	Insignificant	Insignificant
LCA4	Residential/ Commercial Urban Landscape	Low	Small	Negligible	Slight	Insignificant	M1	Slight	Insignificant	Insignificant
LCA5	Central Civic Administration Landscape	High	Negligible	Negligible	Insignificant	Insignificant	n/a	Insignificant	Insignificant	Insignificant
LCA6	Natural Hillside Landscape	High	Negligible	Negligible	Insignificant	Insignificant	n/a	Insignificant	Insignificant	Insignificant
LCA7	Major Transport Corridor	Low	Negligible	Negligible	Insignificant	Insignificant	n/a	Insignificant	Insignificant	Insignificant

#### 4.7.4 Visual Impact Assessment

The selection of Scheme B for the Project and proposed design of the two new buildings and the new footbridge have been discussed in *Section 4.5* and is further elaborated on in *Section 2*. It should be noted that the massing and style of the new buildings was dictated by the zoning envelope and height restriction set for potential new buildings under the OZP and the internal space (floor area and ceiling height) needed for the proposed uses. The design takes the approach to set back from the maximum building envelope so as to minimise disturbance to the adjacent historic buildings and leave them intact. Hence in terms of the massing and style, the new buildings will be compatible in terms of a visual (and cultural heritage) perspective.

The visual impacts due to the current Project on each VSR group identified are described below, referring to potential sources of impact listed in *Section 4.7.1*. The magnitude of change before mitigation is determined to be negligible, small, intermediate or large and adverse unless stated otherwise. Using the sensitivity ratings from *Section 4.6.5* and the matrix explained in *Table 4.1*, the impact significance is also stated. This magnitude of change ratings are summarised in *Table 4.8* while *Table 4.9* summarises significance of impacts both before and upon mitigation.

##### *Visual Impact Before Mitigation*

**VPa (VSR T2) – Central/ Mid-Levels Escalator above Hollywood Road:** During the construction, this group will be affected by the installation of the new, permanent footbridge connecting to the escalator corridor. The main structure will be constructed off-site and installed ready-made, meaning duration of disruption will be minimal. Work may also be carried out outside peak hours ie at night when numbers of VSRs in this group are reduced. This group may also be able to see other works along the Site boundary wall running east of Old Bailey Street, including those associated with the construction of new entrances towards the south and the cleaning and re-pointing of the wall. They may also be affected should scaffolding need to be erected to carry out any refurbishment work on the existing building external façades. The existing Site boundary wall will shield these VSRs from the majority of the construction work being carried out within the Site and neither of the new buildings will be visible to them, hence they will not be affected by these construction works. Therefore during construction, the magnitude of change before mitigation is large. Since this group has medium sensitivity, the visual impact is significant.

During operation, the existing buildings will have improved visual amenity through their refurbished façades which will be a positive change for this VSR. This group of VSRs will not be able to see the new buildings (Old Bailey wing and Arbuthnot wing), but is next to the new footbridge. The current design of the footbridge is open, as described in *Section 4.5*, and allows for this group of VSRs to still be able to partially see up Old Bailey Street and keep their visual connection to Caine Road from this viewpoint. In addition the new footbridge is fairly compatible with the surrounding view and the quality of the view for these VSRs will not change much; where they had previously been able to see a street, they will be able to see a footbridge. They will also still be able to easily view the existing CPS buildings in their current view.

Part of *Figure 4.9* illustrates the existing view from this VP as well as showing a photomontage of the view during operation, (although the photomontage has incorporated design considerations and is not considered totally unmitigated).

During operation, the overall magnitude of change before mitigation is large. This group has medium sensitivity, and given the design and compatibility of the footbridge, the visual impact is considered less than during construction and is moderate.

**VPb (VSR H/O1) – Medium/ High Level Commercial/Residential Building(s) above Hollywood Road:** During the construction, this group are very close to the Site and will mainly be impacted by the construction works around the Parade Ground, including excavation work for construction of a basement as well as fitting new custom paving, on-site equipment works and possibly temporary stockpiling of materials. No new buildings will be constructed in this area, but the parade ground will be partially excavated and the existing buildings will be refurbished and should scaffolding need to be erected this will cause visual impact on this VSR. Some of the VSRs may be partially able to see the construction of the new footbridge, connecting to the escalator corridor. The main structure will be constructed off-site and installed ready-made, meaning duration of disruption will be minimal. Work may also be carried out outside peak hours ie at night when workers in this VSR group are not around. The construction works to the south of the Site, where the new buildings will be erected, are partly blocked by the Barracks building and will only be visible for work to higher elevations. During construction, the magnitude of change before mitigation is large. Since this group has medium sensitivity, the visual impact is significant.

During operation, the existing buildings will have improved visual amenity through their renovated façades and the Parade Ground will have new porous paving, all of which will be a positive change for this VSR. The tops of the new buildings (Old Bailey wing and Arbuthnot wing) will be visible in the mid-distance and permanently change the view, but they only block a minimal part of the existing view and are compatible with the general high rise blocks surrounding them within the view outside the Site. They are also compatible with the view within the Site given the set back from the existing buildings, as described previously. The new footbridge may be partially visible to some of the VSRs in this group, but will only minimally block part of their existing view.

*Figure 4.10* illustrates the existing view from this VP as well as illustrating the proposed view during operation at day 1 with no mitigation measures in place.

During operation, the overall magnitude of change before mitigation is intermediate. Since this group has medium sensitivity, the visual impact is moderate.

**VPc (VSR T3) – Street Level at The Centrium on Arbuthnot Road:** During the construction, this group will be affected by the demolition of the Workshop & Laundry structures to make way for the construction of the 'Arbuthnot Wing' new building and the site hoarding associated with this work as well as the minor pavement work to the west of Arbuthnot Road. This group may also be able to see other works along the east and part of the north and south Site boundary walls, including those associated with the construction of a new entrance at Bauhinia House and the cleaning and re-pointing of the wall. They may also be affected should scaffolding need to be erected to carry out any refurbishment work on the existing building external façades eg E Hall and Magistracy. The Site boundary wall will shield these VSRs from much of the



Existing view towards Project Site



View towards Project Site with Mitigation Measures on Day 1 of Operation\*



View towards Project Site without Mitigation Measures on Day 1 of Operation



View towards Project Site with Mitigation Measures at Year 10 of Operation\*

Figure 4.10

Photomontage from VPb  
(Medium/ High Level Commercial/Residential Building(s) above Hollywood Road)

FILE: 0095646b  
DATE: 10/01/2011

\*Design features incorporated and additional mitigation labelled.  
With hard landscape maintenance, the view at Day 1 and Year 10 are expected to show little significant difference.

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construction work being carried out within the Site which will therefore not be affected. During construction, the magnitude of change before mitigation is large. Since this group has medium sensitivity, the visual impact is significant.

During operation, the Arbuthnot Wing will be a prominent new feature to this VSR's view to the south of the Site, and the new entrance at Bauhinia House and new, narrow pavement running to the west of Arbuthnot Road will also be a change in their view. As described previously regarding the new buildings, the Arbuthnot Wing is compatible with the general high rise blocks surrounding the Site as well as being compatible with the Site itself, given the set back from the existing buildings. The retained buildings will have renovated façades and the Site external walls will also have been refurbished, improving their visual amenity.

*Figure 4.11* illustrates the existing view from this VP as well as illustrating the proposed view during operation at day 1 with no mitigation measures in place. The VP has been chosen to represent the worst case scenario for this VSR group.

During operation, the overall magnitude of change before mitigation is large. Since this group has medium sensitivity, and although the visual impact is considered less than during construction and some of the change will be beneficial it is still considered significant without mitigation.

**VPd (VSR H2) – Medium/High Rise Level Residential Building(s) on Chancery Lane:** During the construction, this group are very close to the south of the Site and will mainly be impacted by the construction works around the Prison Yard, including the demolition of General Office and the Workshop & Laundry buildings and the construction of the new Old Bailey Wing and Arbuthnot Wing and the associated hoarding. In addition the minor excavation work and fitting of new custom paving will be visible as well as some on-site equipment and possibly temporary stockpiling of materials. They may also be affected should scaffolding need to be erected to carry out any refurbishment work on the existing building external façades. During construction, the magnitude of change before mitigation is large. Since this group has high sensitivity, the visual impact is significant.

During operation, the new buildings (Old Bailey Wing and Arbuthnot Wing) will be clearly visible and be the main change in view for this VSR. The extent to which the new buildings block the view will depend on where along Chancery Lane and at what level the VSR is residing. Some on the lower levels at the west and east of the lane will have their views blocked by the new buildings while others' views will be only partially blocked. As described previously, the new buildings will be compatible with the general high rise blocks surrounding the Site in the background of this VSR view, as well as being compatible with the view within the Site itself, given the set back from the existing buildings. The retained buildings will have improved visual amenity through their renovated façades and which will be a positive change for this VSR.

*Figure 4.12* illustrates the existing view from this VP as well as illustrating the proposed view during operation at day 1 with no mitigation measures in place.

During operation, the overall magnitude of change before mitigation is large. Since this group has high sensitivity, the visual impact is significant.

**VPe (VSR T4) – Street Level at Old Bailey Street/ Chancery Lane Junction:** During the construction, this group are right next to the Site and being at street level the existing Site boundary wall will shield these VSRs from the majority of the construction work being carried out within the Site. They will be partly impacted by the demolition of the General Office and the Workshop & Laundry buildings and the construction of the new Old Bailey Wing and Arbuthnot Wing and the associated hoarding. However they will only be able to see works associated with one of the new buildings from any one location, rather than both together. They will also be impacted by works on the Site boundary wall, including cleaning and re-pointing and works associated with the construction of new entrances towards the centre and south. During construction, the magnitude of change before mitigation is large. Since this group has low sensitivity, the visual impact is moderate.

During operation, either the new Old Bailey Wing or the new Arbuthnot Wing will be clearly visible to VSRs along Chancery Lane but they will not both be visible at the same time. These structures will dominate the change in view for this VSR group. As described previously, the new buildings will be compatible with the general high rise blocks surrounding the Site for this VSR view, as well as being compatible with the buildings within the Site itself, given the set back from the existing buildings. The Site boundary wall will have improved visual amenity due to its cleaning and re-pointing, which will be a positive change for this VSR, which is right next to it. The retained buildings will have improved visual amenity through their renovated façades and which will also be a small positive change for this VSR.

*Figure 4.13* illustrates the existing view from this VP as well as illustrating the proposed view during operation at day 1 with no mitigation measures in place.

During operation, the overall magnitude of change before mitigation is large. Since this group has low sensitivity, the visual impact is moderate.

**VPf (VSR T5) – Street Level at Hollywood Road/Pottinger Street Junction:** During the construction, this group are right next to the Site and being at street level the existing Site boundary wall will shield these VSRs from the majority of the construction work being carried out within the Site although the main entrance will afford them a limited view into the Parade Ground area, so some of the construction and excavation works here will be visible to them. Neither of the new buildings will be visible to them, hence they will not be affected by these construction works. This group will also be impacted by the installation of the new, permanent footbridge connecting to the mid-levels escalator corridor. The main structure will be constructed off-site and installed ready-made, meaning duration of disruption will be minimal. This group will also be able to see other external works along the Site boundary wall, including those associated with the renovation of the Site wall and construction of new pavement to the south of Arbuthnot Road and general cleaning and re-pointing of the wall. They may be affected should scaffolding need to be erected to carry out any refurbishment work on the existing external façade of the Police HQ, which dominates their view, or any of the retained buildings visible to them through the main entrance. Therefore during construction, the magnitude of change before mitigation is large. Since this group has medium sensitivity, the visual impact is significant.

During operation, the Police HQ will have improved visual amenity through its refurbished façade which will be a positive change for this VSR. This group of VSRs will not be able to see the new buildings (Old Bailey wing and Arbuthnot wing). The new footbridge will be visible to them but will not dominate since



Existing view towards Project Site



View towards Project Site with Mitigation Measures on Day 1 of Operation\*



View towards Project Site without Mitigation Measures on Day 1 of Operation



View towards Project Site with Mitigation Measures at Year 10 of Operation\*

Figure 4.11

Photomontage from VPc  
(Street Level at The Centrium on Arbutnot Road)

\*Design features incorporated.

With hard landscape maintenance, the view at Day 1 and Year 10 are expected to show little significant difference.

FILE: 0095646c  
DATE: 28/12/2010

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Existing view towards Project Site



View towards Project Site with Mitigation Measures on Day 1 of Operation\*



View towards Project Site without Mitigation Measures on Day 1 of Operation



View towards Project Site with Mitigation Measures at Year 10 of Operation\*

Figure 4.12

Photomontage from VPd  
(Medium/High Rise Level Residential Building(s) on Chancery Lane)

FILE: 0095646d  
DATE: 28/12/2010

\*Design features incorporated and additional mitigation labelled.  
With hard landscape maintenance, the view at Day 1 and Year 10 are expected to show little significant difference.

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Existing view towards Project Site



View towards Project Site with Mitigation Measures on Day 1 of Operation\*



View towards Project Site without Mitigation Measures on Day 1 of Operation



View towards Project Site with Mitigation Measures at Year 10 of Operation\*

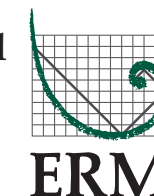
Figure 4.13

Photomontage from VPe  
(Street Level at Old Bailey Street/ Chancery Lane Junction)

FILE: 0095646e  
DATE: 28/12/2010

\*Design features incorporated and additional mitigation labelled.  
With hard landscape maintenance, the view at Day 1 and Year 10 are expected to show little significant difference.

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they have alternative views that do not incorporate the footbridge. In addition, the current design of the footbridge, as described in *Section 4.5*, is open, porous and fairly compatible with the surrounding view and the quality of the view for these VSRs will not change much due to the footbridge; it is a small part of their view and minimally blocks their current view of buildings behind.

Part of *Figure 4.9* illustrates the existing view from this VP as well as showing a photomontage of the view during operation, (although the photomontage has incorporated design considerations and is not considered totally unmitigated).

During operation, the overall magnitude of change before mitigation is intermediate including substantial changes that would be considered beneficial (façade treatment of existing buildings). This group has medium sensitivity, and while the matrix described in the methodology (*Section 4.4*) gives rise to a moderate adverse visual impact rating, this assumes all the visual changes are negative. Since some changes, such as that to the existing Police HQ façade which dominates this VSR groups' view, are actually considered positive, and also taking into consideration the travelling nature of these VSRs and the minimal blocking of their view, the visual impact is considered to be slight adverse overall.

**VSR T1 Street Level at Staunton Street/ Peel Street Junction:** During construction, this group only have a glimpse view of the Site and are far away such that most of the works being carried out within the Site will be blocked from their view by existing buildings and the Site boundary wall. They will be slightly impacted by the construction of the Old Bailey Wing and associated hoarding once it reaches a level above the Site boundary wall, and the improvement works to the wall may also be visible to them to a limited extent. The new emergency vehicle access gate also falls within their line of site and its construction will be visible to them. However the Site is relatively far from these VSRs and will be in their mid to back ground view such that during construction, the magnitude of change before mitigation is small. Since this group has low sensitivity, the visual impact is slight.

During operation, the top of the new Old Bailey Wing building and the new emergency vehicle access will be visible in the mid to back ground for this VSR but there will be no other change to their view and they have many alternative views. As described previously with regard to the new buildings, the Old Bailey Wing is compatible with the general high rise blocks surrounding the Site, as well as being compatible with the buildings within the Site itself, given the set back from the existing buildings. During operation, the overall magnitude of change before mitigation is small. Since this group has low sensitivity, the visual impact is slight.

**VSR O1 Medium/High Level Commercial Building(s) (IFC Building):** During construction, this group are very far away such that although they will be able to see the construction works within the Site in the background of their view, details of much of the works will not be apparent. This VSR will mainly be impacted by the demolition of the Garage, Workshop & Laundry and General Office buildings, construction of the Old Bailey Wing and Arbutnot Wing and their associated hoarding, as well as any scaffolding erected for the retained building improvement works. Other construction works will not be distinctly visible. During construction, the magnitude of change before mitigation is small. Since this group has low sensitivity, the visual impact is slight.

During operation, the new buildings will be visible in the mid to back ground for this VSR but the open space of the Parade Ground will still be visible. As described previously, the new buildings will be compatible with the general high rise blocks surrounding the Site as well as being compatible with the Site itself, given the set back from the existing buildings. The improvement works to the retained buildings will be apparent but this will not be obvious from this distance. This VSR has many alternative views and during operation, the overall magnitude of change before mitigation is small. Since this group has low sensitivity, the visual impact is slight.

**VSR O2 Medium/High Level Commercial Building(s) (QRC Building):** During construction, this group are far away so they will only be able to see the construction works within the Site in the mid to background of their view. This VSR will mainly be impacted by the demolition of the Garage, Workshop & Laundry and General Office buildings, construction of the Old Bailey Wing and Arbutnot Wing and their associated hoarding, as well as any scaffolding erected for the retained building improvement works. Other construction works such as the presence of construction equipment, excavation work and temporary may also have an impact. During construction, the magnitude of change before mitigation is small given the distance from the site. Since this group has low sensitivity, the visual impact is slight.

During operation, the new buildings will be visible in the mid to back ground for this VSR and be the main change to their view but they will still be able to see the open space of the Parade ground and they have many alternative views. As described previously, the new buildings will be compatible with the general high rise blocks surrounding the Site as well as being compatible with the Site itself, given the set back from the existing buildings. The improvement works to the retained buildings will be apparent but not obvious from this distance. The magnitude of change before mitigation is therefore small. Since this group has low sensitivity, the visual impact is slight.

**VSR H1 Medium/High Level Residential Buildings in Mid-levels (Grand Panorama Building):** During construction, this group are far away so they will only be able to see the construction works within the Site in the mid to background of their view. This VSR will mainly be impacted by the works in the south of the site due to the topography of the Site. As such, the demolition of the Workshop & Laundry and General Office buildings, construction of the Old Bailey Wing and Arbutnot Wing and their associated hoarding, as well as any scaffolding erected for the retained building improvement works will cause the most visual impact. As the new buildings are erected, they will block the view to the north of the site for some of the VSRs in this group. Other construction works such as the presence of construction equipment, excavation work and temporary may also have an impact. During construction, the magnitude of change before mitigation is intermediate as some VSRs will be deprived of their view of the open space of the Parade Ground. Since this group has medium sensitivity, the visual impact is moderate.

During operation, the new buildings will be visible in the mid to back ground for this VSR and be the main change to their view and some may no longer be able to see the open space of the Parade ground. As described previously, the new buildings will be compatible with the general high rise blocks surrounding the Site as well as being compatible with the Site itself, given the set back from the existing buildings. The improvement works to the retained buildings will be apparent but not obvious from this distance. The magnitude of change before mitigation is therefore intermediate. Since this group has medium sensitivity, the visual impact is moderate.

**VSR R1 Open/Park Area off Old Bailey Street:** During construction, despite being close to the Site, this group only have a glimpse view of it and then only the structures above the Open/Park Area and Site boundary walls not obscured by vegetation are visible. They cannot even see the existing Site Wall and the majority of the works being carried out within the Site will be blocked from their view. They will be slightly impacted by the construction of the Old Bailey Wing and associated hoarding once it reaches a high enough level to be visible. The magnitude of change before mitigation is small. Since this group has low sensitivity, the visual impact is slight.

During operation, the top of the new Old Bailey Wing building will be partially visible for this VSR but there will be no other change to their view. As described previously with regard to the new buildings, the Old Bailey Wing is compatible with the general high rise blocks surrounding the Site and visible to this VSR, but they have no view of other buildings within the Site itself. The magnitude of change before mitigation is small. Since this group has low sensitivity, the visual impact is slight.

**VSR H3 Medium/High Level Residential Buildings on Old Bailey Street:**

During the construction, this group are very close to the west of the Site and will mainly be impacted by the demolition of General Office buildings and the construction of the new Old Bailey Wing and the associated hoarding. Works along the Site west boundary wall, including the construction of the new emergency vehicle access and cleaning and improvement works will also be visible. The construction of the new footbridge will also be visible to some of the VSRs in this group towards the north, including VSRs in the Proposed Grade 3 historic building at 20 Hollywood Road. Works to the east of the Site including building the Garage demolition and the Arbuthnot Wing construction may be partially visible to residents at higher levels. In addition the minor excavation work and fitting of new custom paving in the Parade Ground may be visible, as well as some on-site equipment. They may also be affected should scaffolding need to be erected to carry out any refurbishment work on the existing building external façades. During construction, the magnitude of change before mitigation is large. Since this group has high sensitivity, the visual impact is significant.

During operation, the new Old Bailey Wing will be visible and be the main change in view for this VSR group, particularly towards the south, with the new footbridge affecting those further north. There are no residencies whose views would be fully blocked as the visible area directly west of the new building is the Open/Park Area. The Arbuthnot Wing may be visible to some of the VSRs in this group at higher levels, but will be in the mid-ground of their view if so. For the VSRs in the Proposed Grade 3 historic building at 20 Hollywood Road, the new footbridge will be visible, but given its current open design (as describe in *Section 4.5*), this will minimally block the view of a small number of VSRs in this group. The retained buildings will be a more prominent part of their view and have improved visual amenity through their renovated façade. In addition to this, the Site boundary wall will have been improved and all these features will be beneficial change for this VSR. During operation, the overall magnitude of change before mitigation is large but some of these changes can be considered beneficial (improvement to retained buildings). Since this group has high sensitivity, and considering the large degree of change due to the new Old Bailey Wing, which is considered adverse, the visual impact is significant.

Table 4.8 Magnitude of Impact on VSRs affected by the Project

VSR ID*	VSR Name	VP ID	Compatibility & Duration of Impact		Reversibility of Impact		Closest Distance between VSR & Source(s) of Impact (m)	Scale as perceived by VSRs	Potential Blockage of View (None, Minimal, Partial, Full)	Magnitude of Change BEFORE Mitigation (Negligible, Small, Intermediate, Large)	
			Construction	Operation	Construction	Operation				Construction	Operation
T2	Central/ Mid-Levels Escalator above Hollywood Road	VPa	Fairly compatible and temporary*	Fairly compatible and permanent	Reversible*	Permanent	0	Large	Partial	Large	Large
H/O 1	Medium/High Level Commercial/Residential Building(s) above Hollywood Road	VPb	Mixed compatibility and temporary*	Mixed compatibility and permanent	Reversible*	Permanent	10	Large	Minimal	Large	Intermediate
T3	Street Level at The Centrium on Arbuthnot Road	VPc	Mixed compatibility and temporary*	Mixed compatibility and permanent	Reversible*	Permanent	0	Large	Partial	Large	Large
H2	Medium/High Rise Level Residential Building(s) on Chancery Lane	VPd	Mixed compatibility and temporary*	Mixed compatibility and permanent	Reversible*	Permanent	7	Large	Partial/ Full	Large	Large
T4	Street Level at Old Bailey Street/ Chancery Lane Junction	VPe	Mixed compatibility and temporary	Mixed compatibility and permanent	Reversible	Permanent	0	Large	Partial	Large	Large
T5	Street Level at Hollywood Road/Pottinger Street Junction	VPf	Fairly compatible and temporary	Fairly compatible and permanent	Reversible	Permanent	0	Large	Minimal	Large	Large
T1	Street Level at Staunton Street/ Peel Street Junction	n/a	Mixed compatibility and temporary	Mixed compatibility and permanent	Reversible	Permanent	175	Medium	Minimal	Small	Small
O1	Medium/High Level Commercial Building(s) (IFC Building)	n/a	Mixed compatibility and temporary*	Mixed compatibility and permanent	Reversible*	Permanent	425	Small	None	Small	Small
O2	Medium/High Level Commercial Building(s) (QRC Building)	n/a	Mixed compatibility and temporary*	Mixed compatibility and permanent	Reversible*	Permanent	184	Medium	None	Small	Small
H1	Medium/High Level Residential Buildings in Mid-levels (Grand Panorama Building)	n/a	Mixed compatibility and temporary*	Mixed compatibility and permanent	Reversible*	Permanent	174	Medium	None	Intermediate	Intermediate
R1	Open/Park Area off Old Bailey Street	n/a	Mixed compatibility and temporary	Mixed compatibility and permanent	Reversible	Permanent	16	Medium	Minimal	Intermediate	Intermediate
H3	Medium/High Level Residential Buildings on Old Bailey Street	n/a	Mixed compatibility and temporary	Mixed compatibility and permanent	Reversible	Permanent	11	Large	Partial	Large	Large

\*The demolition of the Garage, Workshop & Laundry and/or General Office (Buildings 5, 16 and 18) may be partly visible to these VSRs and will be permanent and irreversible during construction phase.

### Visual Impact Upon Mitigation

The selection of Scheme B for the Project and proposed design of the two new buildings and the new footbridge have been discussed in *Section 4.5* and *Section 2* and the proposed mitigation measures to mitigate for the impacts of the Project are detailed in *Section 4.7.2*. The proposed cast aluminium façade treatment for the new buildings has been carefully selected as a non-reflective material to help minimise potential glare interference and also with reference to the existing masonry block elements on site in terms of scale and proportion, thus establishing a certain contextual relationship with the existing buildings and ensuring they are even more compatible. The potential significances of residual visual impacts during construction and operation phases, after mitigation, are detailed below and summarised in *Table 4.9*.

**VPa (VSR T2) – Central/ Mid-Levels Escalator above Hollywood Road:** The impact on this VSR/ VP without mitigation is significant during construction but moderate at day 1 of operation. Construction is assumed to be carried out following standard good practise, and the construction impact will not be significantly reduced by additional mitigation measures so the residual construction impact will remain significant.

Detailed design features will partially mitigate the operation impact as illustrated in *Figure 4.9*. The current footbridge design is open with railings designed to be as porous as possible, as described in *Section 4.5*, and has been selected to be in keeping with the overall Project, allow the least blockage of view and maximum visual continuity to VSRs given the requirements of having an access point here. Mitigation measures for the footbridge have been considered as described in *Section 4.7.2* and detailed design features will further enhance these features where possible. In addition to the open design and the beneficial impacts to the Site boundary wall and retained building façades, the design features incorporated into the footbridge will mitigate the visual impact slightly but not sufficiently to rate the visual impact as 'slight'. Therefore the residual operation impact on day 1 and at year 10 will remain moderate.

**VPb (VSR H/O1) – Medium/ High Level Commercial/Residential Building(s) above Hollywood Road:** The impact on this VSR/ VP without mitigation is significant during construction but moderate at day 1 of operation. Construction is assumed to be carried out following standard good practise, and the construction impact will not be significantly reduced by additional mitigation measures so the residual construction impact will remain significant.

In addition to design features, the provision of the newly planted trees in the planting site in the Parade ground, in-situ tree protection (including the clearly visible T5 in the Parade Ground), and other soft landscape measures including the partially visible green wall at the south of the Site, will reduce the visual impact at operation. The façade treatment of the new building has also been selected as described previously and will help mitigate visual impacts from glare and by enhancing compatibility. *Figure 4.10* illustrates the existing view from this VP as well as illustrating the proposed view during operation at day 1 and year 10 with mitigation measures in place in addition to the design features. The residual impact on day 1 is considered to be reduced slight due to all the measures. By year 10, the trees in the planting site, green wall and tree T5 will have matured but while this will further reduce the visual impact, it is not large enough to change the impact classification, and the residual impact at year 10 is considered to remain slight.

**VPc (VSR T3) – Street Level at The Centrium on Arbuthnot Road:** The impact on this VSR/ VP without mitigation is significant during construction and operation. Construction is assumed to be carried out following standard good practise, and the construction impact will not be significantly reduced by additional mitigation measures so the residual construction impact will remain significant.

Detailed design features will partially mitigate the operation impact as illustrated in *Figure 4.11*. The façade treatment of the new building in particular has been selected as described previously and will help mitigate visual impacts from glare and by enhancing compatibility. Since VSRs from this group will also be present in this area at night, *Figure 4.14* also illustrates the new night time view from a VP in this VSR area. Given the beneficial changes at operation already described before mitigation, the mitigation of the impact from the building façade will mean the residual operation impact at day 1 and year 10 is moderate.

**VPd (VSR H2) – Medium/High Rise Level Residential Building(s) on Chancery Lane:** The impact on this VSR/ VP without mitigation is significant during construction and operation. Construction is assumed to be carried out following standard good practise, and the construction impact will not be significantly reduced by additional mitigation measures so the residual construction impact will remain significant.

Detailed design features will partially mitigate the operation impact as illustrated in *Figure 4.12*. The façade treatment of the new building in particular has been selected as described previously and will help mitigate visual impacts from glare and by enhancing compatibility. The in-situ protection of the trees continued on from the construction phase into operation, will also ensure the small green element of these VSRs view of the Site is retained and even slightly enhanced as the trees in the Prison Yard continue increase in height with maturity. Given the beneficial changes at operation already described before mitigation, these mitigation measures, particularly of the impact from the building façades, will mean the residual operation impact at day 1 and year 10 is moderate.

**VPe (VSR T4) – Street Level at Old Bailey Street/ Chancery Lane Junction:** The impact on this VSR/ VP without mitigation is moderate during construction and operation. Construction is assumed to be carried out following standard good practise, and the construction impact will not be significantly reduced by additional mitigation measures so the residual construction impact will remain moderate.

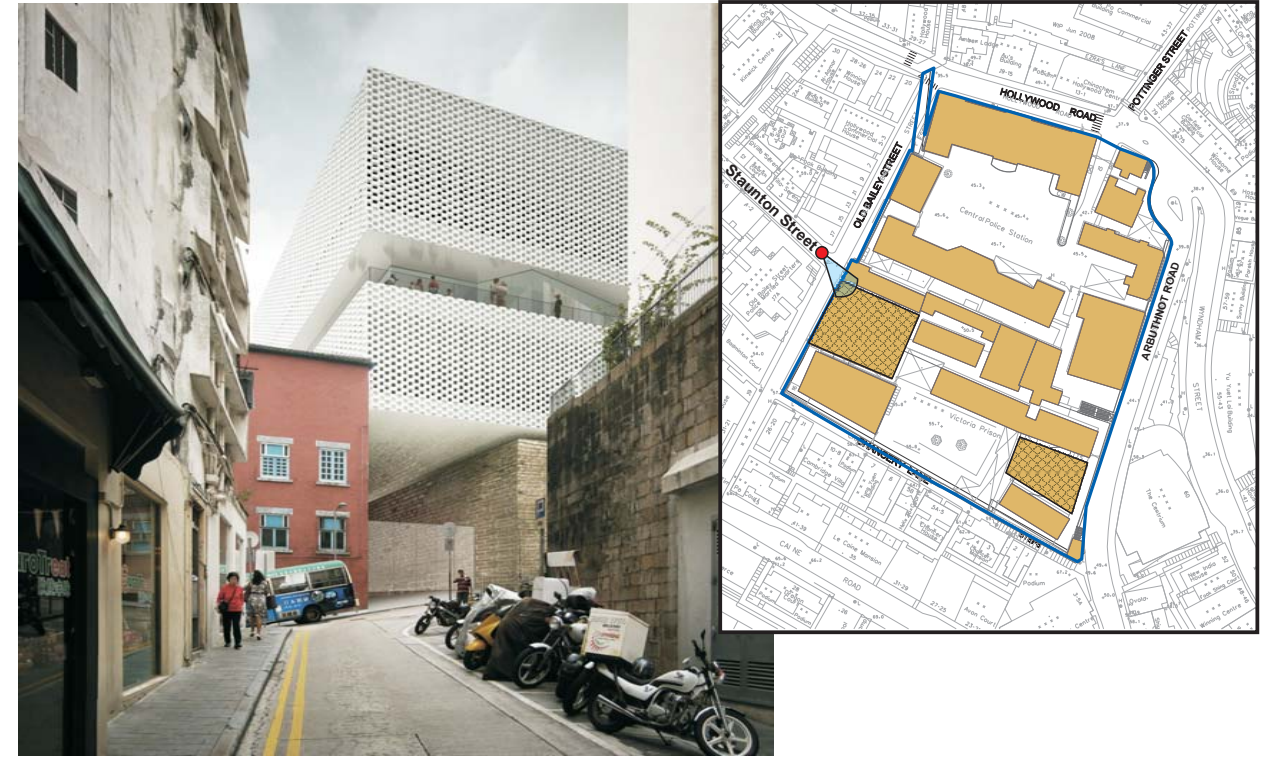
Detailed design features will partially mitigate the operation impact as illustrated in *Figure 4.13*. The façade treatment of the new building in particular has been selected as described previously and will help mitigate visual impacts from glare and by enhancing compatibility. In addition to the beneficial changes to the Site boundary wall and retained building façades described before mitigation, this mitigation of the impact from the building façades will mean the residual operation impact at day 1 and year 10 is slight.

**VPf (VSR T5) – Street Level at Hollywood Road/Pottinger Street Junction:** The impact on this VSR/ VP without mitigation is significant during construction and slight during operation. Construction is assumed to be carried out following standard good practise, and the construction impact will not be significantly reduced by additional mitigation measures so the residual construction impact will remain significant.

Design features of the new footbridge will minimise its visual impact before mitigation as illustrated in *Figure 4.9*. Detailed design considerations will ensure the footbridge design retains the current concept of



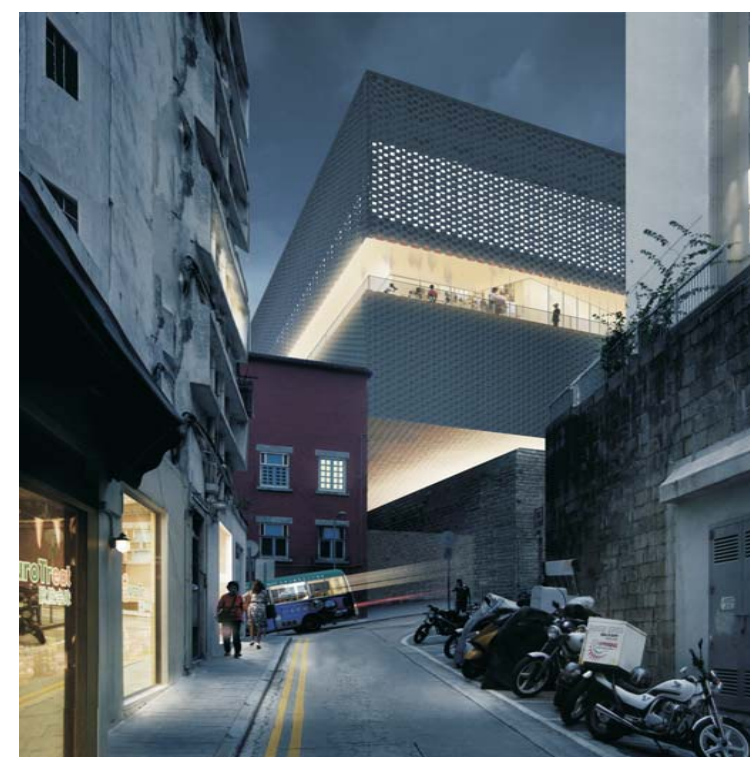
Street Level at the Centrum on Arbutnot Road (VPc) - Day Time



Street Level at the top (east) of Staunton Street - Day Time



Street Level at the Centrum on Arbutnot Road (VPc) - Night Time



Street Level at the top (east) of Staunton Street - Night Time

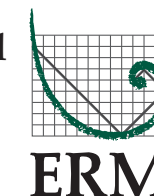
Figure 4.14

Day and Night Time Views towards Project Site at Operation\*

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\*Design features incorporated.  
With hard landscape maintenance, the view at Day 1 and Year 10 are expected to show little significant difference.

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being as open and as porous as possible, as described in *Section 4.5*, and is in keeping with the overall Project, causing the least blockage of view and maximum visual continuity to VSRs given the requirements of having an access point here. In addition, this VSR will have a limited view of the new planting site in the Parade Ground, which will minimally enhance their view of the Site in addition to the beneficial impacts of the building façade treatment. The residual operation impact at day 1 is considered to be slight. At year 10 the new trees in the planting area will be larger, but this is a small part of this VSR groups view and the residual impact will remain slight.

**VSR T1 Street Level at Staunton Street/ Peel Street Junction:** The impact on this VSR/ VP with no mitigation is slight during construction and operation. Construction is assumed to be carried out following standard good practise, and the construction impact will not be significantly reduced by additional mitigation measures so the residual construction impact will remain slight.

Detailed design features will partially mitigate the operation impact. The façade treatment of the new building in particular has been selected as described previously and will help mitigate visual impacts from glare and by enhancing compatibility. Despite this, the residual operation impact cannot be considered insignificant as the structures will still be visible, and therefore remains slight at day 1 and year 10.

**VSR O1 Medium/High Level Commercial Building(s) (IFC Building):** The impact on this VSR/ VP with no mitigation is slight during construction and operation. Construction is assumed to be carried out following standard good practise, and the construction impact will not be significantly reduced by additional mitigation measures so the residual construction impact will remain slight.

Detailed design features will partially mitigate the operation impact. The façade treatment of the new building in particular has been selected as described previously and will help mitigate visual impacts from glare and by enhancing compatibility. The in-situ tree protection, compensatory planting and soft landscape maintenance mitigation measures will also slightly increase the Site's visual amenity value to this VSR along with the retained building façade improvement works. Given the large distance (> 400 m) of these VSRs from the Site, the new buildings, which will be the main cause of visual impact at this stage, are relatively small in the wider scale of the urban view of these VSRs. With the façade mitigation measures and ongoing maintenance of the Site, and considering the sensitivity of these VSRs is low, the residual operation impact is therefore considered insignificant at day 1 and year 10.

**VSR O2 Medium/High Level Commercial Building(s) (QRC Building):** The impact on this VSR/ VP with no mitigation is slight during construction and operation. Construction is assumed to be carried out following standard good practise, and the construction impact will not be significantly reduced by additional mitigation measures so the residual construction impact will remain slight.

Detailed design features will partially mitigate the operation impact. The façade treatment of the new building in particular has been selected as described previously and will help mitigate visual impacts from glare and by enhancing compatibility. The in-situ tree protection, compensatory planting, vertical greening and soft landscape maintenance mitigation measures will also slightly increase the Site's visual amenity value, along with the retained building façade improvement works. Despite this, the residual operation impact cannot be considered insignificant as the VSRs are close enough for the structures to still be apparent, and therefore remains slight at day 1 and year 10.

**VSR H1 Medium/High Level Residential Buildings in Mid-levels (Grand Panorama Building):** The impact on this VSR/ VP with no mitigation is moderate during construction and operation. Construction is assumed to be carried out following standard good practise, and the construction impact will not be significantly reduced by additional mitigation measures so the residual construction impact will remain moderate.

Detailed design features will partially mitigate the operation impact. The façade treatment of the new building in particular has been selected as described previously and will help mitigate visual impacts from glare and by enhancing compatibility. The retained building façade improvement works will also slightly increase the Site's visual amenity value to this VSR. The in-situ tree protection, compensatory planting and soft landscape mitigation measures will only be visible to some VSRs in this group, but will improve the visual amenity value of the Site for them. Therefore, the residual operation impact will be reduced to slight at day 1 and year 10.

**VSR R1 Open/Park Area off Old Bailey Street:** The impact on this VSR/ VP with no mitigation is slight during construction and operation. Construction is assumed to be carried out following standard good practise, and the construction impact will not be significantly reduced by additional mitigation measures so the residual construction impact will remain slight.

Detailed design features will partially mitigate the operation impact. The façade treatment of the new building in particular has been selected as described previously and will help mitigate visual impacts from glare and by enhancing compatibility. Since the existing view will hardly change at all with only a very small part of the top of the Old Bailey Wing visible (as described in 'impact before mitigation'), and due to the façade causing minimal glare and therefore being less noticeable, the residual operation impact can be considered to be reduced to insignificant at day 1 and year 10.

**VSR H3 Medium/High Level Residential Buildings on Old Bailey Street:**

The impact on this VSR/ VP without mitigation is significant during construction and operation. Construction is assumed to be carried out following standard good practise, and the construction impact will not be significantly reduced by additional mitigation measures so the residual construction impact will remain significant.

Detailed design features will partially mitigate the operation impact. The façade treatment of the new buildings in particular has been selected as described previously and will help mitigate visual impacts from glare and by enhancing compatibility in particular for those VSRs towards the south of the VSR group, for whom the new Old Bailey Wing will be a more prominent part of their view. For those VSRs with a clearer view into the Site, ie at higher levels, the provision of the newly planted trees in the planting site in the Parade ground, in-situ tree protection and other soft landscape measures, may help to reduce the visual impact at operation. For the VSRs able to see the new footbridge, in particular those in the Proposed Grade 3 historic building at 20 Hollywood Road, the new footbridge will be visible, but detailed design considerations will ensure its design (as described in *Section 4.5*) will block the view as little as possible and only a small number of VSRs will be partially affected.

In addition to the beneficial impacts to building façades and boundary wall already described before mitigation, and considering the main adverse impact is from the new building, these mitigation measures will mean the residual operation impact at day 1 and year 10 is reduced to moderate.

**Table 4.9 Significance of Visual Impacts in Construction and Operation Phases, before and upon Mitigation**

VSR ID*	VSR Name	VP ID	Receptor Sensitivity (Low, Medium, High)	Magnitude of Impact BEFORE Mitigation (Negligible, Small, Intermediate, Large)		Impact Significance BEFORE Mitigation (Insignificant, Slight, Moderate, Significant)		Recommended Mitigation Measures	Residual Impact Significance UPON Mitigation (Insignificant, Slight, Moderate, Significant)		
				Construction	Operation	Construction	Operation		Construction	Operation Day 1	Operation Year 10
T2	Central/ Mid-Levels Escalator above Hollywood Road	VPa	Medium	Large	Large	Significant	Moderate	M1, CM5, OM3, OM4	Significant	Moderate	Moderate
H/O 1	Medium/High Level Commercial/Residential Building(s) above Hollywood Road	VPb	Medium	Large	Intermediate	Significant	Moderate	M1, CM1-7, OM1-4	Significant	Slight	Slight
T3	Street Level at The Centrium on Arbutnot Road	VPc	Medium	Large	Large	Significant	Significant	M1, CM5, OM1-5	Significant	Moderate	Moderate
H2	Medium/High Rise Level Residential Building(s) on Chancery Lane	VPd	High	Large	Large	Significant	Significant	M1, CM1-5, OM1-M4	Significant	Moderate	Moderate
T4	Street Level at Old Bailey Street/ Chancery Lane Junction	VPe	Low	Large	Large	Moderate	Moderate	M1, CM5, OM3, OM4	Moderate	Slight	Slight
T5	Street Level at Hollywood Road/Pottinger Street Junction	VPf	Medium	Large	Intermediate	Significant	Slight†	M1, CM1-7, OM1-4	Significant	Slight	Slight
T1	Street Level at Staunton Street/ Peel Street Junction	n/a	Low	Small	Small	Slight	Slight	M1, CM5, OM3, OM4	Slight	Slight	Slight
O1	Medium/High Level Commercial Building(s) (IFC Building)	n/a	Low	Small	Small	Slight	Slight	M1, CM1-7, OM1-4	Slight	Slight	Slight
O2	Medium/High Level Commercial Building(s) (QRC Building)	n/a	Low	Small	Small	Slight	Slight	M1, CM1-7, OM1-4	Slight	Insignificant	Insignificant
H1	Medium/High Level Residential Buildings in Mid-levels (Grand Panorama Building)	n/a	Medium	Intermediate	Intermediate	Moderate	Moderate	M1, CM1-7, OM1-4	Moderate	Slight	Slight
R1	Open/Park Area off Old Bailey Street	n/a	Low	Intermediate	Intermediate	Slight	Slight	M1, CM5, OM3, OM4	Slight	Insignificant	Insignificant
H3	Medium/High Level Residential Buildings on Old Bailey Street	n/a	High	Large	Large	Significant	Significant	M1, CM5, OM3, OM4	Significant	Moderate	Moderate

\* T-Travelling ; H-Residential ; O-Occupational ; H/O-Mixed Residential/Occupational ; R- Recreational

† Since much of the change in the 'intermediate' magnitude of change for this VSR is considered beneficial, the overall adverse impact significance is lower than the matrix in the methodology implies, since the methodology assumes all the change is adverse.



### Glare Impact

In terms of potential glare interference, the extent of impact depends on the mass of the building, the choice of façade material to be chosen and the lighting arrangement at the building. The scheme for the Project has been selected considering glare impacts, as detailed in *Section 2*. The design intention for the new buildings is to use non-reflective material for the façade which will help to minimise potential glare interference.

Different façade treatments have been considered for the new building, taking into account their potential to pose glare impact. A fully glazed façade was rejected partially due to the potential to pose glare impact and a polished aluminium metal panel façade was also rejected over the potential for glare impact. A cast aluminium unitized façade system has been considered suitable for the new building, having done studies of existing site material textures and scales, such as porous masonry, traditional brick and granite wall constructions (see *Figure 2.5*). The versatility of aluminium in terms of texture, malleability, light weight, lifecycle and general aesthetic makes it the preferred material for the distinctive integration of new construction within the historical heritage compound. As opposed to a material like stainless steel where the finish is usually highly reflective, the materiality of the cast aluminium units will have a distinctive roughness and texture. Together with their materiality, the unit blocks also serve to break down the façade surface adding to the reduction of reflectivity and glare, especially important during the daytime.

At night, light emitted from the building will be partially screened by the façade units, creating a balance between being able to express the life of the buildings within while also being able to reduce light pollution. The most open area within the new buildings at night is the public restaurant which is located on the north end of Old Bailey Wing and away from the row of residential buildings directly to the south. All lights within the CPS will be turned to night time mode (dimmed) after 11pm.

With respect to external façade lighting, the historic buildings would not traditionally have been lit artificially since electric lighting was a new technology in the early 20th century and its application would have been devoted first to those areas previously lit by other means, that is, interiors. Even by the time of the site's decommissioning, the extent of external lighting was limited to wayfinding and the illumination of spaces, not the illumination of buildings. Such light that fell upon the exteriors of buildings was incidental. Any new external lighting scheme would therefore seek to replicate this condition and be deliberately understated and currently there are no plans to illuminate the buildings within the Site with external lighting.

*Figure 4.14* illustrates comparative day and night time views towards the new Old Bailey Wing and Arbuthnot Wing.

Given the choice of façade treatment and Site lighting considerations, the glare impact from the Project is considered to be acceptable.

## 4.8 CUMULATIVE IMPACTS

Cumulative impacts refer to any concurrent projects within the Study Area in conjunction with the Project giving rise to a cumulative impact on the existing LRs/LCAs or VSR.

The former Police Married Quarters on Hollywood Road to the west of the Project Site will be revitalized and brought into operation in early 2014. Currently the LVIA for that project is not available so it is not possible to accurately predict the cumulative impacts with the current Project and all details below are speculative.

In terms of cumulative landscape impacts, the former Police Married Quarters site falls upon LR2 (Commercial/ Residential/ Institutional Building Area) which is not affected by this Project. It is also unlikely to have a cumulative impact on Residential/ Commercial Urban Landscape (LCA4) since this Project has only a slight impact on this LCA during construction, but insignificant impact during operation. In terms of cumulative visual impact, neither site is visible to each other (see *Figure 4.6*), so cumulative visual impacts are unlikely. Therefore it is unlikely that there will be any cumulative impacts due to these projects running concurrently.

## 4.9 EM&A

### 4.9.1 Construction Phase

Monthly inspections of affected trees by an experienced and appropriately trained arborist or horticulturist using Form 1 – Tree Group Inspection Form and Form 2 – Tree Risk Assessment Form developed by Development Bureau ([http://www.trees.gov.hk/en/doc/TRAGuideline\\_July2010version\\_combine.pdf](http://www.trees.gov.hk/en/doc/TRAGuideline_July2010version_combine.pdf)) or a form designed by a tree expert and approved by Tree Management Office. All irregularities that deviate from the recommended tree protection measures, or could impose deleterious impacts on the protected trees, must be reported to the authorized person or the tree expert within two days.

### 4.9.2 Operation Phase

A detailed specifications and methods statement could be drafted and included in the soft landscape maintenance contract to circumscribe the scope and to ascertain the quality of the work. Following this, quarterly inspections of affected and newly planted trees should be undertaken by an experienced and appropriately trained arborist or horticulturist for a period of 12 months. Hard landscape maintenance will be covered by the Conservation Management Plan and Operational Phase Manual, as detailed in *Sections 3.7.1* and *3.7.4*.

## 4.10 CONCLUSIONS

The general design philosophy and choice of the design scheme are explained in *Section 4.5* and this LVIA has been prepared for Design Scheme B in accordance with the requirements of the EIA Study Brief, *Annexes 10* and *18* of the EIAO-TM and the EIAO Guidance Note No. 8/2002 "Preparation of Landscape and Visual Impact Assessment under the Environmental Impact Assessment Ordinance."

A baseline study was conducted and nine LRs, seven LCAs, and 12 VSRs representing four VSR categories were identified and their sensitivity/quality assessed. The impact on these LRs/LCAs and VSRs was assessed and measures suggested to mitigate the impacts. Further explanation of the limitations in applying certain mitigation measures are set out in *Section 4.7.2*.

#### 4.10.1 Landscape

This landscape impact assessment shows that six of the LRs and five of the LCAs in the Study Area would not be impacted by the Project, revealing it is a relatively contained project. The unaffected LRs/LCAs are LR2 (Commercial/ Residential/ Institutional Building Area), LR5 (Public Park/ Recreational Area), LR6 (Hong Kong Zoological & botanical Garden), LR7 (Vegetated Slope), LR8 (Natural Woodland on Hillside), LCA2 (Park Landscape), LCA3 (Medium/High-rise Commercial Urban Landscape), LCA5 (Central Civic Administration Landscape), LCA6 (Natural Hillside Landscape) and LCA7 (Major Transport Corridor).

The impacted LRs/LCAs are LR1 (Transport Route), LR3 (Buildings within Declared Monument), LR4 (Open Space within Declared Monument), LCA1 (Historical Landscape) and LCA4 (Residential/ Commercial Urban Landscape). Before mitigation, the impacts of the Project's construction phase on these LRs/LCAs are:

- significant for LR3 (Buildings within Declared Monument), LR4 (Open Space within Declared Monument) and LCA1 (Historical Landscape); and
- slight for LR1 (Transport Route) and LCA4 (Residential/ Commercial Urban Landscape).

The impacts of the Project's operation phase before mitigation on these LRs/LCAs are:

- not considered significant for any LR/LCA;
- moderate for LR3 (Buildings within Declared Monument) and LCA1 (Historical Landscape); and
- insignificant for LR1 (Transport Route), LR4 (Open Space within Declared Monument) and LCA4 (Residential/ Commercial Urban Landscape).

Upon implementation of measures proposed in the Project to mitigate the construction impact, residual impacts:

- for LR3 (Buildings within Declared Monument), LR4 (Open Space within Declared Monument) and LCA1 (Historical Landscape) will all drop to moderate; and
- will remain slight for (Transport Route) and LCA4 (Residential/ Commercial Urban Landscape).

In addition to construction phase mitigation measures, upon implementation of further measures to mitigate operation impact, residual impacts:

- for LR3 (Buildings within Declared Monument) and LCA1 (Historical Landscape) are reduced to slight at day 1 and year 10 of operation.
- will have been enhanced for LR4 (Open Space within Declared Monument) such that while it remains insignificant at Day 1 of operation, by year 10 of operation, it is slightly beneficial; and
- will remain insignificant for LR1 (Transport Route) and LCA4 (Residential/ Commercial Urban Landscape).

#### 4.10.2 Visual

During the construction phase, before mitigation:

- T2-VPa (Central/Mid-levels Escalator above Hollywood Road), H/O 1-VPb (Medium/High Level Commercial/Residential Building(s) above Hollywood Road), T3-VPc (Street Level at the Centrium on Arbutnot Road), H2-VPd (Medium/High rise Level residential Building(s) on Chancery Lane), T5-VPf (Street Level at Hollywood Road/Pottinger Street Junction) and H3 (Medium/High Level Residential Buildings on Old Bailey Street) will receive significant visual impacts;
- T4-VPe (Street Level at Old Bailey Street/Chancery Land Junction), H1 (Medium/High Level Residential Commercial Building(s) in Mid-levels [Grand Panorama]) will receive moderate visual impacts; and
- T1 (Street Level at Staunton Street), O1 (Medium/High Level Commercial Building(s) [IFC Building]), O2 (Medium/High Level Commercial Building(s) [QRC Building]) and R1 (Open/Park Area off Old Bailey Street) will receive slight visual impacts.

Construction is assumed to be carried out following standard good practise, and the construction impact will not be significantly reduced by additional mitigation measures such that upon mitigation, all the impacts are considered to remain the same.

During operation phase, before mitigation:

- T3-VPc(Street Level at the Centrium on Arbutnot Road), H2-VPd (Medium/High rise Level residential Building(s) on Chancery Lane)and H3 (Medium/High Level Residential Buildings on Old Bailey Street) will receive significant visual impacts;
- T2-VPa (Central/Mid-levels Escalator above Hollywood Road), H/O 1-VPb (Medium/High Level Commercial/Residential Building(s) above Hollywood Road), T4-VPb (Street Level at Old Bailey Street/Chancery Land Junction) and H1 (Medium/High Level Residential Commercial Building(s) in Mid-levels [Grand Panorama]) will receive moderate visual impacts; and
- T1 (Street Level at Staunton Street), T5-VPf (Street Level at Hollywood Road/Pottinger Street Junction), O1 (Medium/High Level Commercial Building(s) [IFC Building]), O2 (Medium/High Level Commercial Building(s) [QRC Building]) and R1 (Open/Park Area off Old Bailey Street) will receive slight visual impacts.

Upon implementation of mitigation measures, at operation day 1 the visual impacts on:

- T3-VPb, H2-VPd and H3 will reduce to moderate while that for T2-VPa will remain moderate.
- H/O1-VPb, T4-VPe and H1 will reduce to slight while impacts on T5-VPf, T1 and O2 will remain slight.
- O1 and R1 will reduce to insignificant.

At operation year 10 with mitigation, the residual impacts remain the same for all the VSRs.

#### **4.10.3 Overall Conclusion**

The Project and particularly the building of the new structures (Old Bailey Wing, Arbuthnot Wing, new footbridge) will produce some adverse landscape and visual impacts but these can be eliminated, reduced or offset to a large extent by clever design and mitigation measures. The massing and style of the new buildings is dictated by the zoning envelope and height restriction set for potential new buildings under the OZP, the internal space (floor area and ceiling height) required to achieve the proposed uses and the well-established concept in conservation that new interventions, whether internal alterations in an historical building or whole new buildings on an historical site, should be “of their time” ie modern. The design of new buildings takes the approach to set back from the maximum building envelope so as to minimise disturbance to the adjacent historic buildings and leave them intact. The proposed cast aluminium façade treatment has also been carefully selected as a non-reflective material to help minimise potential glare interference and also with reference to the existing masonry block elements on site in terms of scale and proportion, thus establishing a certain contextual relationship with the existing buildings. Hence, in terms of the massing of the buildings and style, they are compatible in terms of both a visual (and cultural heritage) perspective. The modestly dimensioned new buildings will also enrich the CPS immeasurably by providing added flexibility, function and cultural use to the site while preserving the existing heritage buildings and making them accessible to the public.

There will be some beneficial landscape and visual impacts from the renovation and refurbishment of the existing buildings and open spaces within the Site and along the Site boundary wall, the addition of a new green wall and planting site and protection and enhancement of the existing soft landscape. All adverse landscape impacts are reduced to slight-insignificant by year 10, with the impact on the open space with the declared monument (LR4) being slightly beneficial. All adverse visual impacts are reduced to moderate to insignificant by day 1 of operation (and remain the same at year 10).

Therefore according to *Annex 10* of the *EIAO-TM*, the potential Landscape and Visual Impacts due to the construction and operation of the Project are considered acceptable with mitigation.

## 5 NOISE IMPACT ASSESSMENT

### 5.1 INTRODUCTION

This Section assesses the potential noise impacts to the identified Noise Sensitive Receivers (NSRs) associated with the construction and operation of the Project in accordance with the requirements stated in Sections 3.4.3 and 3.4.7 of the *EIA Study Brief*. Mitigation measures are recommended where potential noise impacts are identified.

### 5.2 BASELINE CONDITIONS

The Project Site is located in an urban area in Central. The Site is located in an urban area in Central and covered by the Sai Ying Pun & Sheung Wan Outline Zoning Plan No. S/H3/24. It has been zoned as "OU" annotated "Historical Site Preserved for Cultural, Recreational and Commercial Uses". The surrounding area of the Site has been zoned as Residential (Group A) (R(A)), Commercial (C) and Open Space (O).

Background noise levels are typical of a general urban environment. The major existing noise sources were identified as traffic noise from local roads Hollywood Road, Wyndham Street and Old Bailey Street.

To investigate the prevailing noise levels of the Study Area (300m from the Project Site boundary, as shown in *Figure 5.1*), noise measurements were taken on 7 to 8 October 2009. The noise measurements were conducted using a SVAN 949 Sound Level Meter (Type 1) and a Solo 01 Premium Sound Level Meter (Type 1), which had been calibrated using a SVAN Sound Level Calibrator Type 4231 and a SVAN SV 30A Sound Level Calibrator respectively, with a calibration signal of 94.0 dB(A) at 1kHz. Two microphones were set at 1m from the building façade of the Barrack Block of the CPS and Chancery House. The measurements were conducted in accordance with the calibration and measurement procedures stated in the *Technical Memorandum on Noise From Places Other than Domestic Premises, Public Places or Construction Sites (IND-TM)*. The measurement locations are shown in *Figure 5.2* and the measured prevailing background noise levels are summarised in *Table 5.1*.

**Table 5.1 Measured Prevailing Background Noise Levels**

Measurement Location	Time Periods	Measured Noise Levels, dB(A)
Barrack Block of the CPS	Day-time: 07:00 to 11:00 hrs	59 - 63
	19:00 to 23:00 hrs	59 - 61
	Night-time: 23:00 to 07:00 hrs	54 - 59
Chancery House	Day-time: 07:00 to 11:00 hrs	54 - 58
	19:00 to 23:00 hrs	55 - 57
	Night-time: 23:00 to 07:00 hrs	49 - 55

### 5.3 LEGISLATIVE FRAMEWORK

#### 5.3.1 Construction Noise

The principal legislation relating to the control of construction noise is the *Environmental Impact Assessment Ordinance (EIAO)* (Cap. 499). The *Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM)*, issued under the *EIAO*, provides guidelines and noise criteria for evaluating the potential noise impact.

The *Noise Control Ordinance (Cap. 400) (NCO)* also provides means to assess the construction noise impact. Various Technical Memoranda (TMs), which stipulate control approaches and criteria, have been issued under the *NCO*. The following TMs are applicable to the control of noise impact from construction activities:

- *Technical Memorandum on Noise from Construction Work other than Percussive Piling (GW-TM)*; and
- *Technical Memorandum on Noise from Construction Work in Designated Areas (DA-TM)*.

#### General Construction Works

Under the *EIAO*, potential noise impact arising from general construction works during normal working hours (ie 07:00 to 19:00 hrs on any day not being a Sunday or public holiday) at 1m from the external façade of the uses, which rely on opened windows for ventilation, is to be assessed in accordance with the noise criteria specified in the *EIAO-TM*. The *EIAO-TM* noise standards are presented in *Table 5.2*.

**Table 5.2 EIAO-TM Day-time Construction Noise Standards ( $L_{eq, 30 min}$  dB(A))**

Use	Noise Standard (dB(A))
Domestic Premises	75
Educational Institutions (normal periods)	70
Educational Institutions (during examination periods)	65

#### Notes:

- The above standards apply to uses which rely on opened windows for ventilation.
- The above standards shall be viewed as the maximum permissible noise levels assessed at 1m from the external façade.

When assessing a Construction Noise Permit (CNP) application for the use of Powered Mechanical Equipment (PME) during the restricted hours, the Noise Control Authority will compare the Acceptable Noise Levels (ANLs), as promulgated in *GW-TM*, and the Corrected Noise Levels (CNLs) (ie after accounting for factors such as barrier effects and reflections) associated with the proposed PME operations. The ANLs are obtained with corrections for the duration of the CNP and multiple permit situations, if applicable, to the Basic Noise Levels (BNLs). The BNLs are related to the noise sensitivity of the area in question and different Area Sensitivity Ratings (ASR) have been established to reflect the background characteristics of different areas. The appropriate ASR for the NSR is determined with reference to *Table 5.3*.

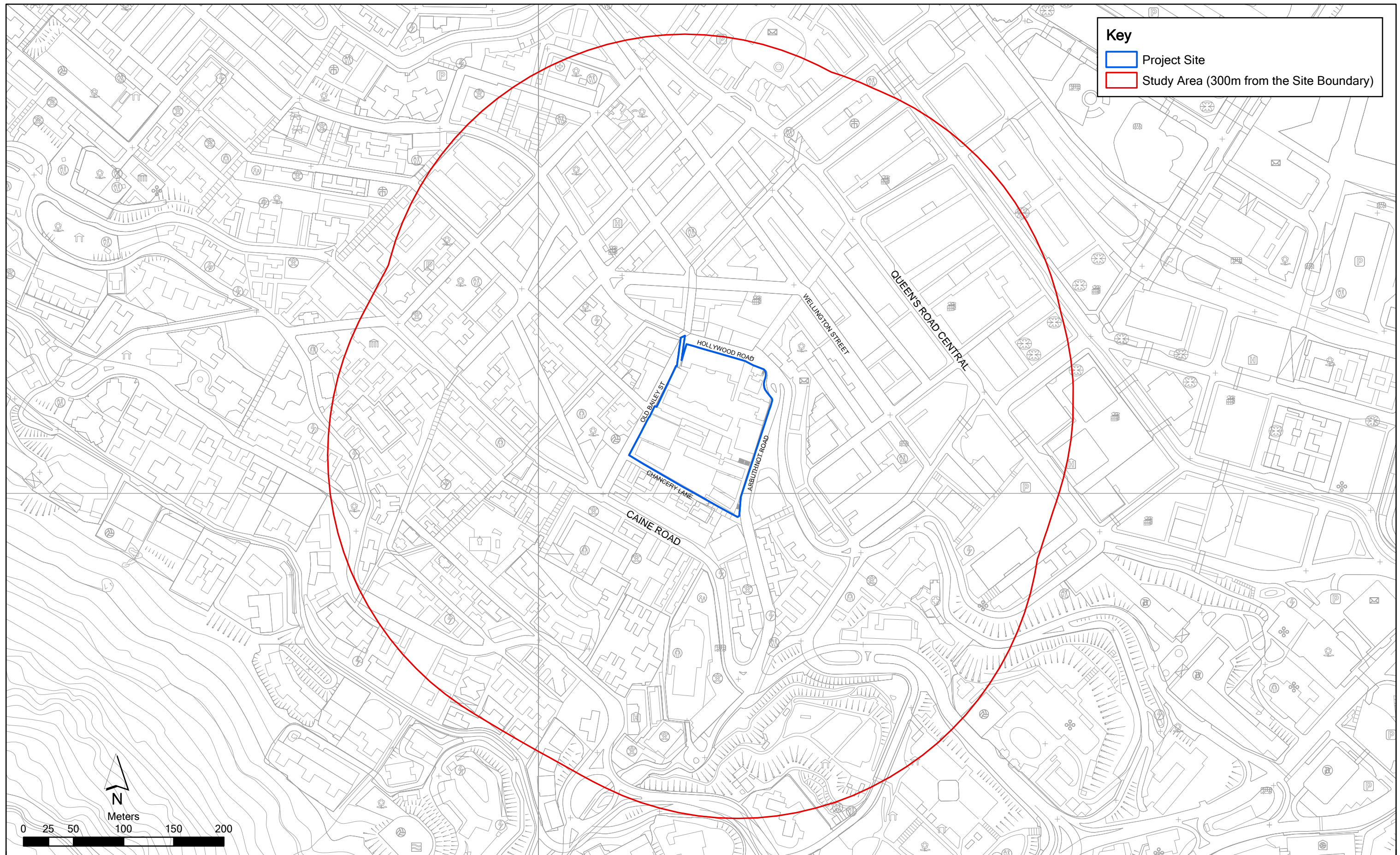
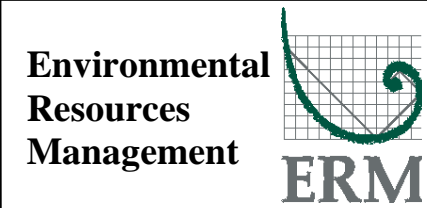


Figure 5.1

Study Area for Noise Impact Assessment

File: 0095646\_Study Area\_Noise.mxd  
Date: 19/11/2010



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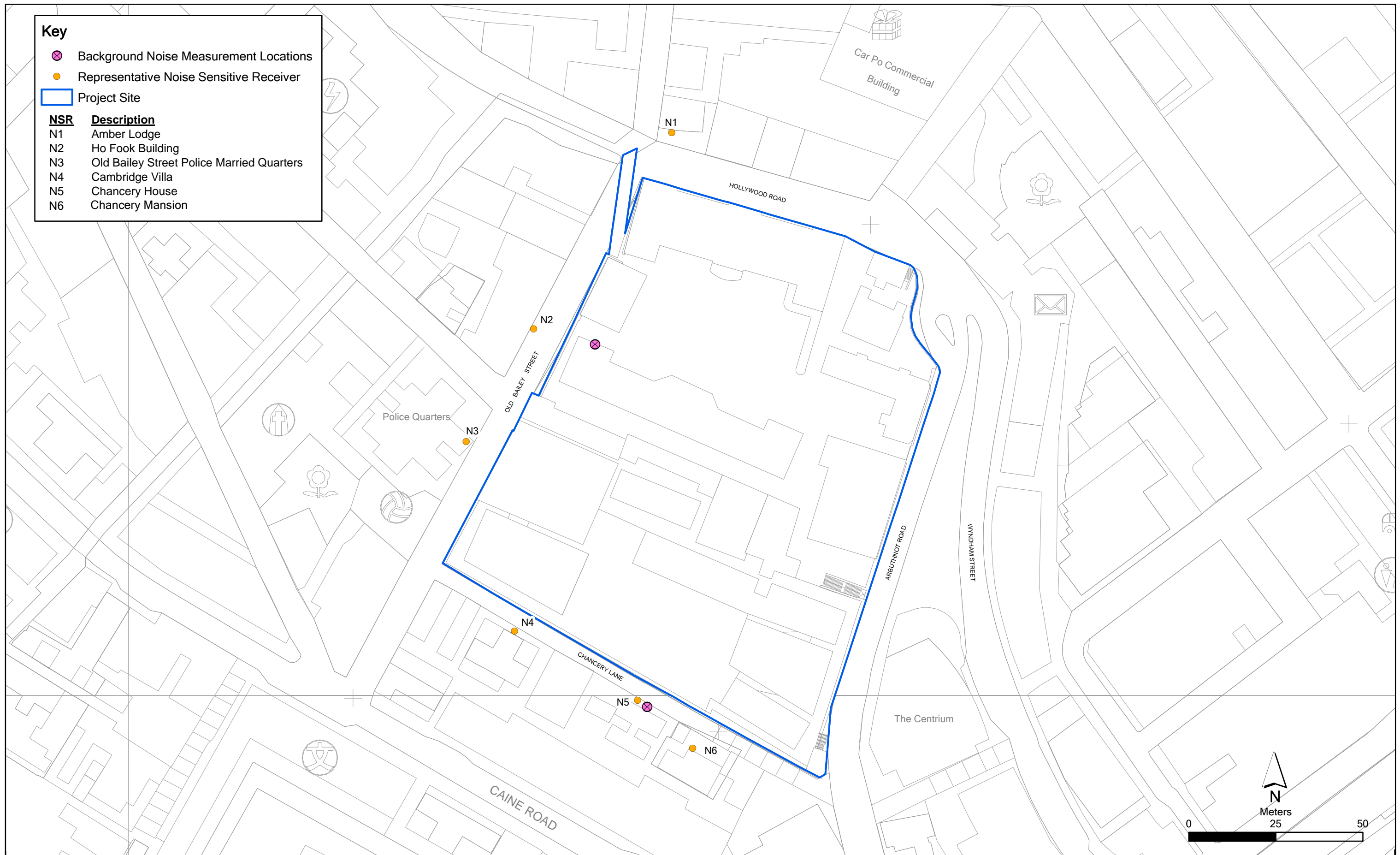


Figure 5.2

Location of Representative Noise Sensitive Receivers and Background Noise Measurement Locations

File: 0095646\_NSR\_Background Noise.mxd  
Date: 19/11/2010

Environmental  
Resources  
Management



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**Table 5.3 Area Sensitivity Ratings**

Types of Area Containing NSR	Degree to which NSR is affected by Influencing Factor (IF)		
	Not Affected	Indirectly Affected	Directly Affected
Rural area, including Country Parks or village type developments	A	B	B
Low density residential area consisting of low-rise or isolated high-rise developments	A	B	C
Urban area	B	C	C
Area other than those above	B	B	C

**Notes:**

The following definitions apply:

- (a) "Country Park" means an area that is designated as a country park pursuant to section 14 of the *Country Parks Ordinance*;
- (b) "directly affected" means that the NSR is at such a location that noise generated by the IF is readily noticeable at the NSR and is a dominant feature of the noise climate of the NSR;
- (c) "indirectly affected" means that the NSR is at such a location that noise generated by the IF, whilst noticeable at the NSR, is not a dominant feature of the noise climate of the NSR;
- (d) "not affected" means that the NSR is at such a location that noise generated by the IF is not noticeable at the NSR; and
- (e) "urban area" means an area of high density, diverse development including a mixture of such elements as industrial activities, major trade or commercial activities and residential premises.

The relevant BNLs are shown in *Table 5.4*.

**Table 5.4 Basic Noise Levels for General Construction Works (BNL,  $L_{eq, 5 min}$  dB(A))**

Time period	Area Sensitivity Rating (dB(A))		
	A	B	C
All days during the evening (ie 19:00-23:00 hrs) and general holidays (including Sundays) during the day and evening (ie 07:00-23:00 hrs)	60	65	70
All days during the night-time (ie 23:00-07:00 hrs)	45	50	55

The Noise Control Authority will consider a well-justified CNP application, for construction works within restricted hours as guided by the relevant TMs issued under the *NCO*. The Noise Control Authority will take into account adjoining land uses and any previous complaints against construction activities at the site before making a decision. Nothing in this *EIA Report* shall bind the Noise Control Authority in making its decision. The Noise Control Authority may include any conditions in a CNP that it considers appropriate. Failure to comply with any such conditions may lead to cancellation of the CNP and prosecution action under the *NCO*.

**5.3.2 Operational Noise**

*Fixed Noise Sources*

The *EIAO-TM* and *IND-TM* specifies the applicable ANLs for the fixed plant noise impacts from a development.

The ANLs are dependent on the ASR and the time of the day and are presented in *Table 5.5*.

**Table 5.5 ANLs depending on the ASR**

Time Period	$L_{eq, 30min}$ (dB(A))		
	ASR "A"	ASR "B"	ASR "C"
Daytime 07:00-19:00 hrs	60	65	70
Evening 19:00-23:00 hrs	60	65	70
Night-time 23:00-07:00 hrs	50	55	60

Fixed plant noise is controlled under *Section 13* of the *NCO* and the predictions will be undertaken in accordance with the *IND-TM*. The criteria noise limits for planning purposes are set out in the *EIAO-TM* as follows:

- the total fixed source noise level at the facade of the nearest NSR is at least 5 dB(A) lower than the appropriate ANL (as shown in *Table 5.5*) as specified in the *IND-TM*; or
- the prevailing background noise level (for quiet areas with level 5 dB(A) below the ANL).

The noise criteria stipulated in the *IND-TM* are dependent on the ASR of the NSRs. As the NSRs in the vicinity of the Site are located in an urban area and are not affected by any Influencing Factor, the ASR "B" has been assumed for these NSRs. Background noise measurement was conducted to investigate the prevailing noise level in the Study Area (see *Table 5.1*). The operational noise criteria are determined and presented in *Table 5.6*.

**Table 5.6 Operational Noise Criteria**

Representative NSR	Measurement Point	Time Periods	Minimum Measured Background Noise Levels, dB(A), [1]	ANL-5, dB(A), [2]	Operational Noise Criteria in this EIA, Minimum of [1] or [2], dB(A)
N1-N3	Barrack Block of the CPS	Day-time/Evening time	59	60	59
		Night-time	54	50	50
N4-N6	Chancery House	Day-time/Evening time	54	60	54
		Night-time	49	50	49

In any event, the noise criteria employed in this *EIA Report* is for indicative assessment only. It should be noted that fixed noise sources are controlled under *Section 13* of the *NCO*. At the time of investigation, the Noise Control Authority shall determine noise impact from concerned fixed noise sources on the basis of prevailing legislation and practices being in force, and taking account of contemporary conditions / situations of adjoining land uses.

#### 5.4 NOISE SENSITIVE RECEIVERS

In accordance with the requirements stated in *Section 3.4.3.1* of the *EIA Study Brief*, the Study Area for the noise impact assessment covered an area of 300m from the Site. Only the first layer of NSRs located along the Site boundary was included in the assessment as the NSRs behind were located further away from the road and were screened. The area considered in the assessment is shown in *Figure 5.1*.

The selected existing representative NSRs that may potentially be affected by the construction of the Project include Amber Lodge, Ho Fook Building, Old Bailey Street Police Married Quarters, Cambridge Villa, Chancery House and Chancery Mansion. No planned NSRs were identified within the Study Area.

As the existing structures within the CPS and the new buildings will be installed with centralised air-conditioning system, they are considered as noise non-sensitive uses.

The locations of the identified representative NSRs are presented in *Figure 5.2*.

Descriptions of the representative NSRs are provided in *Table 5.7*.

**Table 5.7 Representative Noise Sensitive Receivers (NSRs)**

NSR	Name	Type of Usage	No. of Storeys
N1	Amber Lodge	Residential	18
N2	Ho Fook Building	Residential	5
N3	Old Bailey Street Police Married Quarters	Residential	24
N4	Cambridge Villa	Residential	11
N5	Chancery House	Residential	6
N6	Chancery Mansion	Residential	15

#### 5.5 POTENTIAL SOURCES OF IMPACT

##### 5.5.1 Construction Phase

Potential impacts to the NSRs during the construction phase of the Project will mainly arise from the use of PME. The major construction activities will include:

- Small-scale demolition of sub-standard ancillary structures and walls;

- Foundation works for the new buildings, construction of the basements at the lower courtyard, and construction of tunnels under A Hall and B Hall and M&E trenches;
- Construction of new buildings, including the Old Bailey Wing and the Arbuthnot Wing adjacent to the upper courtyard; and
- Modification/refurbishment works of the existing building.

The normal working hours of the construction works will be between 07:00 and 19:00 hrs from Monday to Saturday (except general holidays). Should evening and night works between 19:00 and 07:00 hrs or on public holidays (including Sundays) be required, the Contractor will submit a CNP application which will be assessed by the Noise Control Authority.

##### 5.5.2 Operation Phase

###### *Fixed Plant Noise*

As described in *Section 2.5.3*, the E&M facilities will be centralised under the lower courtyard, at the Arbuthnot Wing and the Ablution Block.

Potential sources of noise impacts are identified as the mechanical equipment associated with the operation of the revitalised CPS. All mechanical equipments will be housed within plant rooms except the fan discharge of cooling towers at the rooftop of the Arbuthnot Wing. A total of 3 cooling towers will be provided and they will be operated during the day-time and evening time periods (ie, within 07:00 to 23:00 hrs); while only 2 cooling towers will be operated during the night-time period (ie, 23:00 to 07:00 hrs of the next day).

Since detailed design of the equipment to be installed within the plant rooms is not yet available, the maximum allowable sound power levels (SWLs) emitted from the plant rooms have been calculated using the fixed plant noise criteria to be compliant with the noise criteria set out in *Section 5.3.2*. The maximum allowable SWLs of the equipments employed in the fixed plant noise assessment, as presented in *Annex B3*, has been vetted and confirmed by the engineer as being practicable.

###### *Noise Emissions from Public Address (PA) System*

During the operation phase of the Project, outdoor events with the use of PA system may be held at the lower courtyard and upper courtyard during some special occasions during daytime and evening period (until 23:00 hrs).

The PA system at the Site will be temporary and demountable based on the nature of the outdoor events, and there is no confirmed design at this stage. However, the power and number of speakers at the lower courtyard are expected to be small. For the purpose of assessment, it is assumed that 6 speakers will be provided, the maximum allowable SWLs from the PA system has been calculated. In view of the fact that the design of the PA system will be different from case to case, each independent event organizers will be specified that at the time of each event shall not exceed the total sound power level. Also, the contract



document will specify the requirement of noise monitoring in place during the event to ensure compliance with the noise criterion at the NSRs.

#### *Noise Emissions from Indoor Musical Performance*

Musical performance at some of the multipurpose spaces may be held occasionally. During the detailed design stage, an acoustic consultant will be appointed to provide recommendations on the acoustic design such that the corresponding design criteria of specific space type would be met. As the musical performance will be held within fully enclosed area and appropriate acoustic treatment, such as absorptive wall finishing, upgraded window insulation, etc. will be provided as necessary, adverse noise impact from the indoor musical performance is not anticipated. *Annex B3* shows the locations of fixed plant items. The maximum allowable SWLs of the mechanical equipments and the PA system presented in *Annex B3* should be included in the tender specification to ensure that the assumptions for the operational noise impact assessment will be implemented. The suppliers of equipment should guarantee the specified SWLs, with the characteristics of tonality, impulsiveness and intermittency accounted for, by providing certificate of measurement and verify the SWL during testing and commissioning in accordance with international standard procedures. If necessary, the suppliers should apply attenuation measures (eg use of silencers) to achieve the guaranteed noise levels during the detailed design stage.

## 5.6 ASSESSMENT METHODOLOGY

### 5.6.1 Construction Phase

The construction noise impact assessment was undertaken in accordance with the procedures outlined in the *GW-TM*, which is issued under the *NCO* and the *EIAO-TM*. The assessment methodology is summarised as follows:

- Identify the representative NSRs that may be affected by the construction of the Project;
- Determine the plant teams for corresponding construction activities, based on the agreed plant inventory;
- Assign SWLs to the PME proposed based on the *GW-TM*, *British Standard BS 5228* <sup>(1)</sup> and list of SWLs of other commonly used PME <sup>(2)</sup>;
- Calculate the correction factors based on the distance between the NSRs and the notional noise source position of the work areas;
- Apply corrections in the calculations, such as potential screening effects and acoustic reflection, if any; and

(1) British Standard "Noise and Vibration Control on Construction and Open Sites - Part I", BS 5228: Part I

(2) "Sound power levels of other commonly used PME" prepared by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWLe.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf))

- Predict the construction noise levels at NSRs in the absence of any mitigation measures.

The construction noise assessment was undertaken based on the proposed construction works programme and plant inventory, and appropriate utilisation rates of the PME items (see *Annexes B1* and *B2*). The CPS Ltd and its engineering consultants has reviewed the programme and plant inventory, and have confirmed that they are reasonable and practicable for completing the Project within the scheduled timeframe. The proposed methods for the construction of the Project are common in Hong Kong and the PMEs proposed are available in the Hong Kong market.

The Project Site is shown in *Figure 5.2*. The total SWL associated with each construction activity was established. The potential noise impacts at NSRs were evaluated by comparing the predicted noise levels with the *EIAO-TM* day-time construction noise limits ( $L_{eq, 30min}$  dB(A)), as outlined in *Section 5.3.1*.

### 5.6.2 Operation Phase

#### *Fixed Noise Sources*

The methodology for the fixed plant noise impact assessment follows the procedures outlined in the *IND-TM*. The methodology is summarised as follows:

- Identify types of equipment and the number of equipment (if available);
- Calculate the maximum SWL for each type of equipment;
- Identify representative NSRs that may be affected by the fixed plant;
- Calculate the correction factor, using a conservative approach, based on the horizontal distance between the NSRs and the fixed plant sources;
- Calculate the maximum allowable SWLs of the plant room louvers by adopting standard acoustics principles; and
- Present the results in terms of  $L_{eq, 30min}$  dB(A), as specified in the *IND-TM*.

All equipment will be operated during the day-time and evening time periods (ie within 07:00 to 23:00 hrs), while some of the equipments, as presented in *Annex B3*, will be operated during the night-time period (ie within 23:00 to 07:00 hrs).

The assessment has also taken into account the facade correction of +3 dB(A). The predicted noise levels at the NSRs are compared with the criterion set out in *Section 5.3*.

## 5.7 CONSTRUCTION PHASE IMPACT

The predicted construction noise levels during day-time period for the construction of the Project are presented in *Table 5.8*. Summaries of the predicted noise levels and details of the noise calculations are presented in *Annex B2*.

**Table 5.8 Predicted Construction Noise Levels during Day-time Period (Without Mitigation)**

NSR	Description	Predicted Construction Noise Levels <sup>(a)</sup> , L <sub>eq, 30 min</sub> dB(A)
N1	Amber Lodge	<b>79 - 86</b>
N2	Ho Fook Building	<b>80 - 87</b>
N3	Old Bailey Street Police Married Quarters	<b>81 - 86</b>
N4	Cambridge Villa	<b>84 - 87</b>
N5	Chancery House	<b>86 - 89</b>
N6	Chancery Mansion	<b>86 - 89</b>

**Notes:**  
 (a) All predicted noise levels were corrected with 3dB(A) for façade reflection.  
 (b) **Bold** value indicates exceedance of noise criteria of 75 dB(A) for residential premises.

**5.8 OPERATION PHASE IMPACT**

Based on the calculated maximum allowable SWLs for the plant rooms and the exhaust fans, the predicted fixed plant noise levels at the representative NSRs are summarised in *Tables 5.9 and 5.10* for day-time and evening time period, and night-time period, respectively. Details of calculation are presented in *Annex B3*. The predicted noise levels at the representative NSRs would comply with the noise criteria as discussed in *Section 5.3.2*.

**Table 5.9 Predicted Operational Noise Levels during Day-time / Evening Time Period**

NSR	Description	Predicted Operational Noise Levels, L <sub>eq, 30 min</sub> dB(A)	Operational Noise Criterion, dB(A)
N1	Amber Lodge	53	59
N2	Ho Fook Building	52	59
N3	Old Bailey Street Police Married Quarters	56	59
N4	Cambridge Villa	53	54
N5	Chancery House	54	54
N6	Chancery Mansion	54	54

**Table 5.10 Predicted Operational Noise Levels during Night-time Period**

NSR	Description	Predicted Operational Noise Levels, L <sub>eq, 30 min</sub> dB(A)	Operational Noise Criterion, dB(A)
N1	Amber Lodge	42	50
N2	Ho Fook Building	48	50
N3	Old Bailey Street Police Married Quarters	48	50
N4	Cambridge Villa	43	49
N5	Chancery House	48	49
N6	Chancery Mansion	49	49

It should be noted that the operational noise assessment presented above is based on a worst-case scenario in which the equipment are assumed to be operated simultaneously, which is unlikely to occur in real situation.

The fixed plant noise emission should be controlled to comply with the designated day-time and evening-time noise criteria measured at 1m from the openings of the nearby NSRs in accordance with the *IND-TM* (details are given in *Section 5.3*). A detailed noise impact assessment should be undertaken during the detailed design of the fixed plant items. The above requirements and the maximum specified SWLs for the plant rooms, exhaust fans and PA system presented in *Annex B3* will be included in the contract specification to be issued to suppliers or contractors for the equipment. The Project Proponent has committed that the maximum allowable SWL emitted from the PA system and the requirements on noise monitoring for the events at the courtyards will be specified in the contract documents for each event. The event organizers will be required to design the events such that the noise emissions from the speakers will comply with the relevant statutory noise limits. With the requirements on maximum allowable SWL emitted from the PA system and noise monitoring specified in the contract documents, the future event organizers will be made aware of this operational constraint in organizing outdoor activities.

The calculated maximum allowable SWLs for the fixed plant noise sources that have been adopted in the assessment are summarised in *Table 5.11*.

**Table 5.11 Maximum Allowable Sound Power Level of Fixed Plant Noise Sources**

Item	Location	Maximum Allowable SWL per unit, dB(A)	Quantity <sup>(a)</sup>	Total SWL, dB(A) <sup>(a)</sup>
Chilled Water Pumps	West louvre of chilled water pump room on the roof of Arbuthnot Wing	72	3/2	77/75
Condenser Water Pumps	West louvre of condenser water pump room on the roof of Arbuthnot Wing	72	3/2	77/75
Cooling Tower	Cooling towers on the roof of Arbuthnot Wing	80	3/2	85/83
Chiller	East louvre of chiller room on the roof of Arbuthnot Wing	75	3/2	80/78
Genset <sup>(b)</sup>	G/F plant room of Old Bailey Wing	84	1/-	84/-
Transformer	West louvre of transformer room of Ablution Block	75	2/2	78/78
Transformer	South louvre of transformer room of Ablution Block	75	4/4	81/81
Fan	West louvre of Police Headquarters at lower courtyard	85	1/1	85/85
Fan	East louvre of Police Headquarters at lower courtyard	85	1/1	85/85
PA system <sup>(b)(c)</sup>	Lower courtyard	91	4/-	97/-
PA system <sup>(b)(c)</sup>	Upper courtyard	86	2/-	89/-

**Notes:**

- (a) 3/2 indicates the quantity of the plant items for day-time and evening time period, and night-time period, respectively.
- (b) Genset and PA system will only be operated during the day-time and evening time period.
- (c) The design of the PA system may be different for individual event and details are not available at this stage. The Project Proponent has committed that the design of the PA system for each event shall comply with all mandatory noise control requirements. With regard to this, assumptions were made on the nos. of speaker clusters for the purpose of the assessment. The maximum allowable SWL for each speaker at the lower courtyard would be 91dB(A); whereas that at the upper courtyard is 86dB(A).

**5.9 MITIGATION MEASURES**

**5.9.1 Construction Phase**

In view of the predicted noise exceedances during the construction of the Project, the following mitigation measures have been considered:

- Good construction site practice;
- Use of quiet PME;
- Adoption of movable noise barriers;
- Use of noise insulation sheet; and
- Scheduling of PME/construction activities.

*Good Construction Site Practices*

Good construction site practices and noise management can considerably reduce the potential noise impact of the construction activities on nearby NSRs. The noise benefits of these practices can vary according to specific site conditions and operations. Since the effect of the good construction site practices could not be quantified, the mitigated noise levels calculated in the subsequent sections have not taken account of this effect. The following site practices should be followed during the construction of the Project:

- Only well-maintained plant will be operated on-site and plant will be serviced regularly during the construction phase;
- Silencers or mufflers on construction equipment will be utilised and will be properly maintained during the construction phase;
- Mobile plant, if any, will be sited as far away from NSRs as possible;
- Machines and plant (such as trucks) that may be in intermittent use will be shut down between work periods or will be throttled down to a minimum;
- Plant known to emit noise strongly in one direction will, wherever possible, be orientated so that the noise is directed away from the nearby NSRs; and
- Material stockpiles and other structures will be effectively utilised, wherever practicable, in screening noise from on-site construction activities.

*Use of Quiet PME*

The use of quiet PME is considered to be a practicable means to mitigate the construction noise impact. Quiet plant is defined as a PME having actual SWL lower than the value specified in the *GW-TM*. Quiet PME that have been adopted in the assessment are summarised in *Table 5.12*.

**Table 5.12 Sound Power Level of Quiet PME**

PME Item	BS 5228 <sup>(a)</sup> / EPD QPME Reference <sup>(b)</sup>	Sound Power Level, dB(A)
Excavator	BS D3/97	105
Concrete pump	BS D6/36	106
Vibratory poker	BS D6/40	98
Mobile crane	BS D7/114	101
Breaker	BS D8/12	106
Dump truck	BS D9/39	103
Lorry	EPD QPME	105
Drill rig	EPD QPME	110
Grout mixer	EPD QPME	90
Grout pump	EPD QPME	105

PME Item	BS 5228 <sup>(a)</sup> / EPD QPME Reference <sup>(b)</sup>	Sound Power Level, dB(A)
<b>Notes:</b>		
(a) British Standard BS 5228:2009, Part 1 - Noise and Vibration Control on Construction and Open Sites		
(b) "Sound power levels of other commonly used PME" prepared by the Noise Control Authority ( <a href="http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf">http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf</a> )		

#### Adoption of Movable Noise Barriers

The use of noise barriers will be an effective means to mitigate the noise impact arising from the construction works, particularly for low-rise NSRs. Movable noise barriers of 3m in height with skid footing should be used and located within a few metres of stationary plant and mobile plant such that the line of sight to the NSR is blocked by the barriers. The length of the barrier should be at least five times greater than its height. It is anticipated that the major noise source of all PMEs, including movable and large PMEs, will be located at a level lower than the top of the proposed movable barriers, and therefore these barriers could produce at least a 5 dB(A) noise reduction for mobile plant such as excavator as well as large scale plant such as a crane. With reference to *A Practical Guide for the Reduction of Noise from Construction Works*, the noise barrier material should have a superficial surface density of at least 7 kg m<sup>-2</sup> and have no openings or gaps.

#### Use of Noise Insulating Sheet

Noise insulating sheet would be adopted for PME such as drill rig. The noise insulating sheet should be deployed such that there would be no opening or gaps on the joints. With reference to the approved EIA Report for West Island Line (WIL) (Register No.: AEIAR-126/2008 approved on 23 Dec 2008) and MTRC Contract C4420 Tsim Sha Tsui Modification Noise Assessment Report for Variation of Environmental Permit (July 2003) and the technical data from the manufacturer of the noise insulating sheet, a reduction of over 10 dB(A) could be achieved with the use of the noise insulating sheet. For a conservative assessment, a noise reduction of 10 dB(A) for the PME with noise insulating sheet deployed was assumed in this assessment.

#### Scheduling of PME/Construction Activities

To further alleviate the construction noise impacts, some construction activities will be operated in sequence rather than simultaneously within the respective works areas, ie only Group A, Group B, Group C or Group D of PMEs should be operated at any time (see Annex B4).

The above mitigation measures have been vetted and confirmed by the CPS Ltd and its Engineering Consultants as being practicable in completing the works within the scheduled timeframe. It is considered practical to specify the quiet PME and noise mitigation measures described in Section 5.9.1 in the contract document to mitigate the construction noise impact.

With the implementation of the good construction site practices, use of quiet PME and movable noise barriers and scheduling of PME/construction activities (as shown in Annex B4), the mitigated noise levels due to the construction of the Project and concurrent projects were calculated at the representative NSRs with results summarised in Tables 5.13. Summaries of predicted mitigated noise levels and detailed calculations are presented in Annex B4.

Table 5.13 Predicted Construction Noise Levels during Day-time Period (With Mitigation)

NSR	Description	Predicted Construction Noise Levels <sup>(a)</sup> , L <sub>eq, 30 min</sub> dB(A)
N1	Amber Lodge	67 - 71
N2	Ho Fook Building	67 - 72
N3	Old Bailey Street Police Married Quarters	69 - 72
N4	Cambridge Villa	71 - 73
N5	Chancery House	73 - 75
N6	Chancery Mansion	73 - 75

**Note:**

(a) All predicted noise levels were corrected with 3dB(A) for façade reflection.

The results indicate that with the adoption of the recommended mitigation measures, no exceedance of the EIAO-TM noise criteria during the construction phase is anticipated at NSRs. No further mitigation will therefore be required.

#### 5.9.2 Operation Phase

Although no adverse noise impact is expected due to the operation of fixed plant items, it is still recommended that the following measures be implemented as far as practicable to minimise the potential impact:

- Choose quieter equipment;
- Include noise levels specification when ordering new plant items;
- Locate fixed plant items or noise emission points away from the NSRs as far as practicable;
- Locate noisy machines in completely enclosed plant rooms or buildings with suitable and practicable noise remedies; and
- Develop and implement a regularly scheduled plant maintenance programme so that plant items are properly operated and serviced. The programme should be implemented by properly trained personnel.

#### Noise Emissions from Events at the Courtyards and the Use of Public Address (PA) System

- good management practices shall be in place, including noise monitoring, setting up a complaint hotline, and distributing advance notice to nearby NSRs. It is recommended that good management practices be implemented during both rehearsals and shows;
- in any event that an outdoor event is expected, the event organizer is required to undertake noise monitoring at least at one of the affected NSR. One set of L<sub>eq(30min)</sub> noise measurements before and during the event should be taken;

- as a fallback option, should non-compliance of the relevant noise criteria at the NSRs be identified for the event, immediate mitigation measures (such as turning down/off of music volume) should be implemented; and
- The requirements of not exceeding the total sound power level (as given in *Section 5.8*) and noise monitoring for each independent event are specified in the contract document.

#### 5.10 CUMULATIVE IMPACT

One potential concurrent construction work is identified within the Study Area. The former Police Married Quarters on Hollywood Road at about 250m to the west of the Project Site will be revitalised and brought into operation in early 2014. Details of the revitalised work are not available yet but the works are anticipated to be relatively small scale. Given that the former Police Married Quarters site is located about 250m away from the Project Site and separated by dense buildings, no cumulative noise impact is expected during the construction and operation phases.

#### 5.11 RESIDUAL IMPACT

With the implementation of the recommended noise mitigation measures, the predicted noise levels due to the construction of the Project would comply with the *EIAO-TM* day-time noise criterion. No residual impact is anticipated.

The assessment results indicated that residual fixed plant noise impacts due to the operation of the Project would not be expected.

#### 5.12 ENVIRONMENTAL MONITORING AND AUDIT

Noise monitoring is recommended during the construction phase to ensure compliance with the noise criterion at the NSRs. Weekly noise monitoring will be undertaken at the representative NSRs N2 Ho Fook Building and N5 Chancery House. Monthly site audits will be conducted to ensure that the recommended mitigation measures are properly implemented during the construction stage.

With the implementation of the recommended mitigation measures, no adverse impact is expected due to the operation of the fixed plant items. Monitoring will be required for outdoor events only and will be specified in the contract document for the event organisers for implementation..

#### 5.13 CONCLUSIONS

Owing to the close proximity of some of the NSRs to the works area of the Project Site, mitigation measures are required to be implemented to mitigate the construction noise impacts. Practicable mitigation measures, including good construction site practices, use of quiet PME, movable noise barriers and scheduling of PME/construction activities, are recommended. With the implementation of the recommended mitigation measures, the mitigated construction noise levels at the representative NSRs will

comply with the construction noise criterion of 75 dB(A) throughout the construction period. Noise monitoring during the construction stage is recommended to ensure compliance with the relevant noise criteria.

The predicted operational noise levels at the representative NSRs are expected to comply with the day-time and evening-time criteria based on the assessment using a set of specified maximum SWLs for the fixed plant to be installed for the Project. Attenuation measures, if required, will be provided to the fixed plant for achieving the guaranteed noise levels during the detailed design stage. Noise monitoring during the operational phase of the revitalised CPS should follow the contractual requirements as necessary.

## 6 AIR QUALITY IMPACT

### 6.1 INTRODUCTION

This Section presents the assessment of potential air quality impact arising from the construction and operation of the Project. Dust generated from the construction activities and gaseous emissions from construction plant are potential concerns during the construction phase. Representative Air Sensitive Receivers (ASRs) have been identified and control measures have been recommended to minimise the potential impacts.

### 6.2 LEGISLATION REQUIREMENT AND EVALUATION CRITERIA

#### 6.2.1 Air Pollution Control Ordinance (APCO) and Air Quality Objectives (AQOs)

The principal legislation for the management of air quality in Hong Kong is the *Air Pollution Control Ordinance (APCO)* (Cap 311). Under the *APCO*, a set of *Air Quality Objectives (AQOs)* was established (see *Table 6.1*). As stipulated in *Annex 4 of the Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM)*, the AQOs and other relevant standards established under the *APCO* should be met.

**Table 6.1 Hong Kong Air Quality Objective ( $\mu\text{g m}^{-3}$ )<sup>(a)</sup>**

Air Pollutant	Averaging Time				
	1 Hour <sup>(b)</sup>	8 Hour <sup>(c)</sup>	24 Hour <sup>(c)</sup>	3 Months <sup>(d)</sup>	1 Year <sup>(d)</sup>
Total Suspended Particulates (TSP)	-	-	260	-	80
Respirable Suspended Particulates (RSP) <sup>(e)</sup>	-	-	180	-	55
Sulphur Dioxide (SO <sub>2</sub> )	800	-	350	-	80
Nitrogen Dioxide (NO <sub>2</sub> )	300	-	150	-	80
Carbon Monoxide (CO)	30,000	10,000	-	-	-
Photochemical Oxidants (as ozone (O <sub>3</sub> )) <sup>(f)</sup>	240	-	-	-	-
Lead (Pb)	-	-	-	1.5	-

**Notes:**

- (a) Measured at 298K (25°C) and 101.325 kPa (one atmosphere)
- (b) Not to be exceeded more than three times per year
- (c) Not to be exceeded more than once per year
- (d) Arithmetic means
- (e) Suspended airborne particulates with a nominal aerodynamic diameter of 10 micrometres or smaller
- (f) Photochemical oxidants are determined by measurement of ozone only

#### 6.2.2 Other Relevant Requirements under the Environmental Impact Assessment Ordinance

A maximum hourly TSP level of 500  $\mu\text{g m}^{-3}$  at Air Sensitive Receivers (ASR) is also stipulated in the *EIAO-TM* to assess potential construction dust impacts. The measures stipulated in the *Air Pollution Control (Construction Dust) Regulation* should also be followed to ensure that any dust impacts are reduced.

### 6.3 BASELINE CONDITION AND BACKGROUND AIR QUALITY

The Project Site is located in a densely populated area in Central dominated by residential and commercial buildings. It is bounded by Hollywood Road to the north, Arbuthnot Road to the east, Chancery Lane to the south and Old Bailey Street to the west. The local air quality is influenced mainly by vehicle emissions from the nearby roads. Within the Study Area (ie 500m from the Project Site boundary), no existing industrial development was identified but three stacks operated by restaurants are found to be in operation.

The nearest EPD's Air Quality Monitoring Station (AQMS) is located at the Central/Western District. The last 5 years annual average concentrations (2005-2009) of air pollutants measured at this AQMS have been adopted as the background air quality (see *Table 6.2*).

**Table 6.2 Background Air Quality<sup>(a)</sup>**

Air Pollutant	Background Concentration ( $\mu\text{g m}^{-3}$ )
Total Suspended Particulates (TSP) <sup>(a)</sup>	77
Respirable Suspended Particulates (RSP)	52
Nitrogen Dioxide (NO <sub>2</sub> )	54
Sulphur Dioxide (SO <sub>2</sub> )	22

**Notes:**

- (a) 5 years annual average concentrations (2005-2009) of air pollutants measured at EPD's AQMS in the Central/Western District (<http://www.epd-asg.gov.hk/english/report/aqr.php>)

### 6.4 IDENTIFICATION OF AIR SENSITIVE RECEIVERS

In accordance with the *EIA Study Brief Section 3.4.4.1* of the Project, the Study Area for the air quality impact assessment is defined by a distance of 500m from the boundary of the Project Site. ASRs including domestic premises, offices, commercial uses, hotels, schools and places of public worship were identified in accordance to *Annex 12 of EIAO-TM*. Future or committed ASRs according to the latest Outline Zoning Plans (OZP), Outline Development Plan (ODP) and relevant land use plans published by Lands Department were also reviewed. The first layer of ASRs around the Project Site is selected as representative ASRs for the impact assessment. They are summarised in *Table 6.3* and shown in *Figure 6.1*.

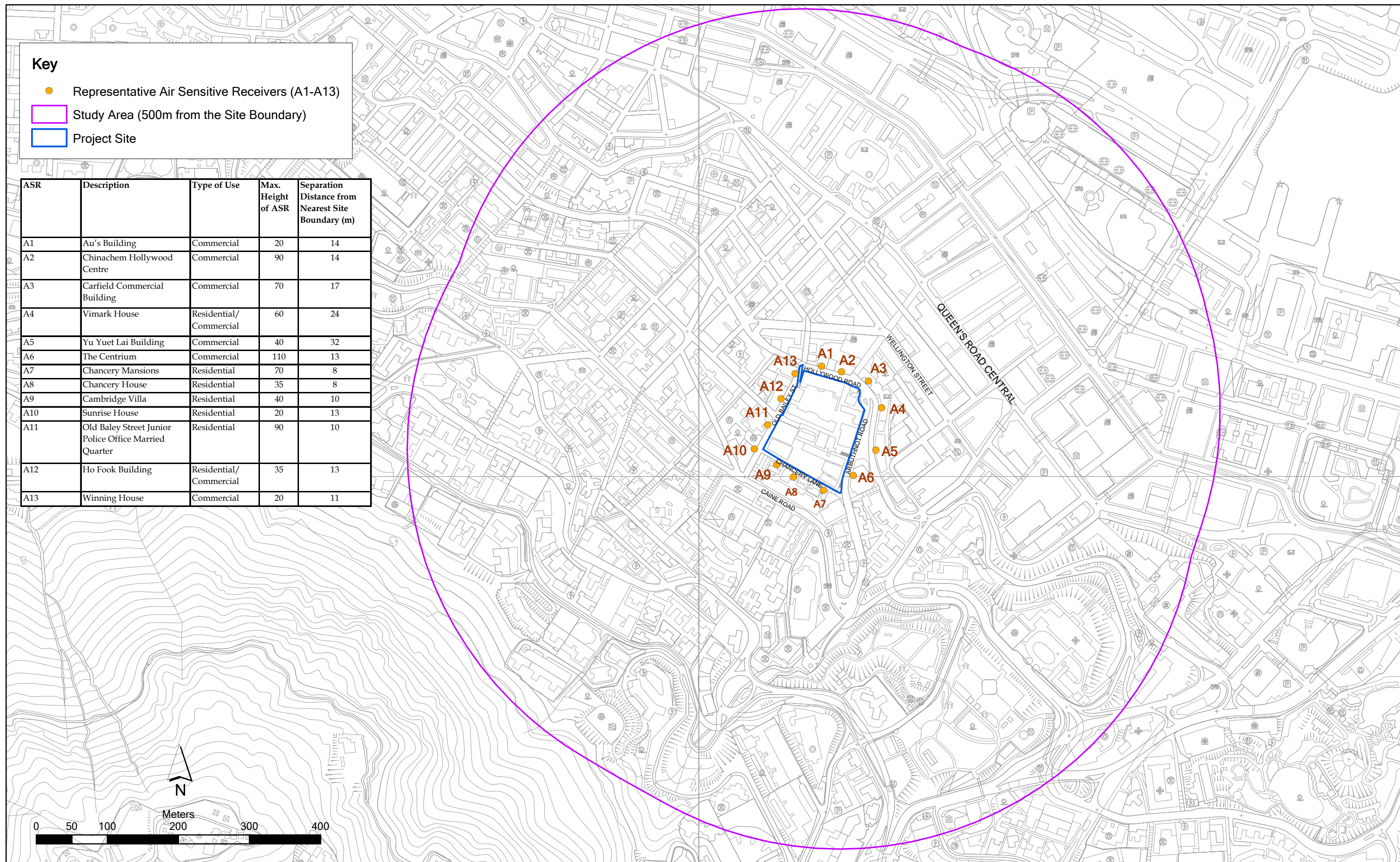


Figure 6.1  
Study Area and Representative Air Sensitive Receivers for Air Quality Impact Assessment

**Table 6.3 Identified Representative Air Sensitive Receivers**

ASR	Description	Type of Use	Maximum Height (m above ground)	Separation Distance from the Nearest Site Boundary (m)
A1	Au's Building	Commercial	20	14
A2	Chinachem Hollywood Centre	Commercial	90	14
A3	Carfield Commercial Building	Commercial	70	17
A4	Vimark House	Residential / Commercial	60	24
A5	Yu Yuet Lai Building	Commercial	40	32
A6	The Centrium	Commercial	110	13
A7	Chancery Mansions	Residential	70	8
A8	Chancery House	Residential	35	8
A9	Cambridge Villa	Residential	40	10
A10	Sunrise House	Residential	20	13
A11	Old Bailey Street Junior Police Office Married Quarter	Residential	90	10
A12	Ho Fook Building	Residential/ Commercial	35	13
A13	Winning House	Commercial	20	11

## 6.5 EVALUATION OF IMPACTS DURING CONSTRUCTION PHASE

The construction and modification works with the operation of diesel-driven construction plant have the potential cause dust nuisance and adverse air quality impact to the identified ASRs if not properly managed. The key construction activities for the Project are as follows:

- Foundation works for the new buildings, construction of the basements at the lower courtyard, and construction of tunnels under A Hall and B Hall and M&E trenches;
- Construction of new buildings, including the Old Bailey Wing and the Arbuthnot Wing adjacent to the upper courtyard and footbridge;
- Modification/refurbishment works of existing buildings; and
- Small-scale demolition of sub-standard ancillary structures and walls.

Soil excavation, materials handling, truck movements within the Project Site and wind erosion of temporary open stockpiles of dusty materials are identified to be the major dust generating activities.

The construction works will last for about 30 months tentatively from January 2012 to June 2014 (see construction programme in *Figure 2.8*). Details of each type of construction works are discussed in the following sections.

### 6.5.1 Site Formation Works

Excavated materials will be generated from the excavation works for construction of the building foundations, basements, underground tunnels and M&E trenches. The excavation works will be carried out for about 17 months from January 2012 to May 2013.

A total of 12,900 m<sup>3</sup> of soil will be excavated, including 4,000 m<sup>3</sup> from the construction of basement for the plant rooms in the Lower Courtyard, 600 m<sup>3</sup> from the construction of the underground tunnels, 7,500 m<sup>3</sup> from the construction of the basements and foundations of new buildings (ie Old Bailey Wing and Arbuthnot Wing) and 800 m<sup>3</sup> from other miscellaneous works. Only a small amount of the excavated materials will be re-used for backfilling. As stockpiling of excavated materials within the Project Site is not practical given the limited space available, the excavated soil will be disposed to the government public filling reception facilities by trucks. With reference to *Section 8.3.1*, about 6 truck trips will be generated per day for the disposal of surplus excavated soil off-site during the period for excavation works.

In view of the small quantity of excavated material to be generated and disposed off-site over the 17 months construction period and with the implementation of dust control measures recommended in *Section 6.7*, the potential dust emission from the Project Site will be limited. No adverse dust impacts on the identified representative ASRs are anticipated.

### 6.5.2 Construction of New Buildings and Refurbishment Works of Existing Buildings

The construction of the new buildings in the upper courtyard is anticipated to start upon completion of site clearance works. The bottom to top approach will be adopted for the concreting works of the basement, including works such as propping erection, formwork shuttering, rebar fixing, concreting and striking formwork. The superstructure with steelwork will then be erected with temporary support. The building construction works will be carried out for about 15 months from April 2013 to June 2014.

The existing buildings in the CPS will be modified and refurbished. Floors will be strengthened to accommodate the anticipated larger floor loading. Fitting of modern services and improvements of the fire compartment and fire escape provisions will also be necessary. The building refurbishment works will be divided into four phases as described in *Section 2.6.2* and illustrated in *Figure 2.8*, and be carried out for about 30 months from January 2012 to June 2014.

The concreting works are the major works for construction of new buildings and renovation of existing buildings. No fugitive dust emission is expected from this activity. No adverse dust impact is therefore anticipated during construction of new buildings and refurbishment works of existing building. However, dust control measures recommended in *Section 6.7* will be implemented during the works to further minimise dust generation.

### 6.5.3 Demolition of Building Structures

Demolition of existing sub-standard structures and walls will be carried out for about a month in January 2012. 28 trucks per month are required for disposing demolition materials, averaging to less than 1 truck



trip per day. Given the short duration and small scale of the demolition works and with the implementation of dust control measures recommended in *Section 6.7*, no adverse dust impact is anticipated.

#### **6.5.4 Gaseous Emissions from Diesel-powered Construction Equipment**

The potential air quality impacts associated with the gaseous emissions from diesel-powered construction equipment are expected to be relatively small as only a small numbers of such plant are expected to be operated within the limited works area at any one time, as indicated in the construction plant list in *Appendix 5B*. In addition, all construction plant on public works sites is required to use ultra-low-sulphur diesel (ULSD) (defined as diesel fuel containing not more than 0.005% sulphur by weight) as stipulated in *Environment, Transport and Works Bureau Technical Circular (ETWB-TC(W)) No 19/2005 on Environmental Management on Construction Sites*, no air quality impacts are expected.

### **6.6 EVALUATION OF IMPACTS DURING OPERATION PHASE**

#### **6.6.1 Emissions from the Project**

Gaseous emissions from kitchens are identified as potential sources of air pollutants. Electric stoves will be installed in the kitchens within the Project, and therefore no gaseous or liquid fuels will be used for cooking operations. Electrostatic precipitators (ESPs) will also be installed at the exhausts of the kitchens to capture potential particulate emissions and the location of the exhaust will be sited vertically upward and away from the nearby air sensitive uses as far as practicable. As such, potential air quality impacts associated with gaseous emissions from kitchen operations to the surroundings are not anticipated.

#### **6.6.2 Stack Emissions in Surrounding Areas**

Three stacks were identified during a site visit conducted in September 2010 and the locations of identified stacks are illustrated in *Figure 6.2*. These identified stacks belong to restaurants and they were observed to be in use. The nearest stack is located at about 70m from the Site boundary and all the stacks were identified to be at least 30m above ground with high-rise buildings located in between. Through the interview with the stack owners, one of the restaurants indicated that Towngas was used for the cooking stoves. However, the owners of the other two stacks refused to provide stack emissions information. Nonetheless, it is anticipated that both premises are using ultra low sulphur diesel (ULSD), gaseous fuel or alternative fuel types in which emissions must comply with the requirements in the *Air Pollution Control (Fuel Restriction) Regulation* and its amendment of 2008.

Nitrogen dioxide (NO<sub>2</sub>) and sulfur dioxide (SO<sub>2</sub>) are the key air pollutants from the stack emissions. The five-year average of NO<sub>2</sub> (54µgm<sup>-3</sup>) and SO<sub>2</sub> (22µgm<sup>-3</sup>) data from 2005 to 2009 recorded at the Central/Western AQMS (refer to *Table 6.2*) demonstrated that the ambient concentrations of the respective pollutants are low. As a result, no adverse air quality impacts are anticipated for the Project.

#### **6.6.3 Traffic Emissions from Project**

The design of the Project encourages visitors to get to the Site via footbridge and pedestrian crossings. Traffic flow induced by operations of the Project (eg tourist buses and private cars) is therefore expected to be very small as compared to the existing traffic flow on nearby roads, especially Hollywood Road. No adverse traffic emission impact during the operation phase of the Project is therefore expected.

### **6.7 CUMULATIVE IMPACTS**

One potential concurrent construction work is identified within the Study Area. The former Police Married Quarters on Hollywood Road at about 250m to the west of the Project Site will be revitalised and brought into operation in early 2014. Details of the revitalised work are not available yet but the works are anticipated to be relatively small scale. Given that the former Police Married Quarters site is located about 250m away from the Project Site and separated by dense buildings, no cumulative dust impact is expected during the construction phase.

Since the electric stoves will be used for kitchens at the Site and the recent 5-year average NO<sub>2</sub> and SO<sub>2</sub> monitoring data obtained from EPD AQMS show the compliance of AQOs in the area, no adverse cumulative stack emissions are anticipated during operation phase of the Project.

As the design of the Project encourages visitors to get to the Site via footbridge and pedestrian crossings, traffic flow induced by operations of the Project (eg tourist bus and private cars) is anticipated to be small. As discussed in *Section 6.6.3*, no adverse cumulative traffic emission impact during the operation phase of the Project is therefore expected.

### **6.8 MITIGATION MEASURES**

#### **6.8.1 Construction Phase**

The following dust control measures stipulated in the *Air Pollution Control (Construction Dust) Regulations* and good site practices will be incorporated into the Contract Specification and implemented throughout the construction period:

- The area at which demolition work takes place will be sprayed with water or dust suppression chemical immediately prior to, during and immediately after the demolition activity;
- Impervious dust screen or sheeting will be implemented for demolition of structures and renovation of outer surfaces of structures that abuts or fronts open area accessible to the public to no less than 1m higher than the highest level of the structure being demolished;
- An effective dust screen will be provided to enclose scaffolding, if required, from the ground floor level of building for construction of superstructure of the new buildings;
- Impervious sheet will be provided for skip hoist for material transport;

Stack No.	Description	Type of Use	Height of Stack (m)	Diameter of Stack (mm)	Fuel Type
1	Wah Fung Restaurant	Restaurants	20	250	Town Gas
2	Luk Yu Tea House	Restaurants	40	250	Unknown
3	Yung Kee Restaurant	Restaurants	50	250	Unknown

**Key**

- Stack in Operation
- Study Area (200m from the Site Boundary)
- Project Site

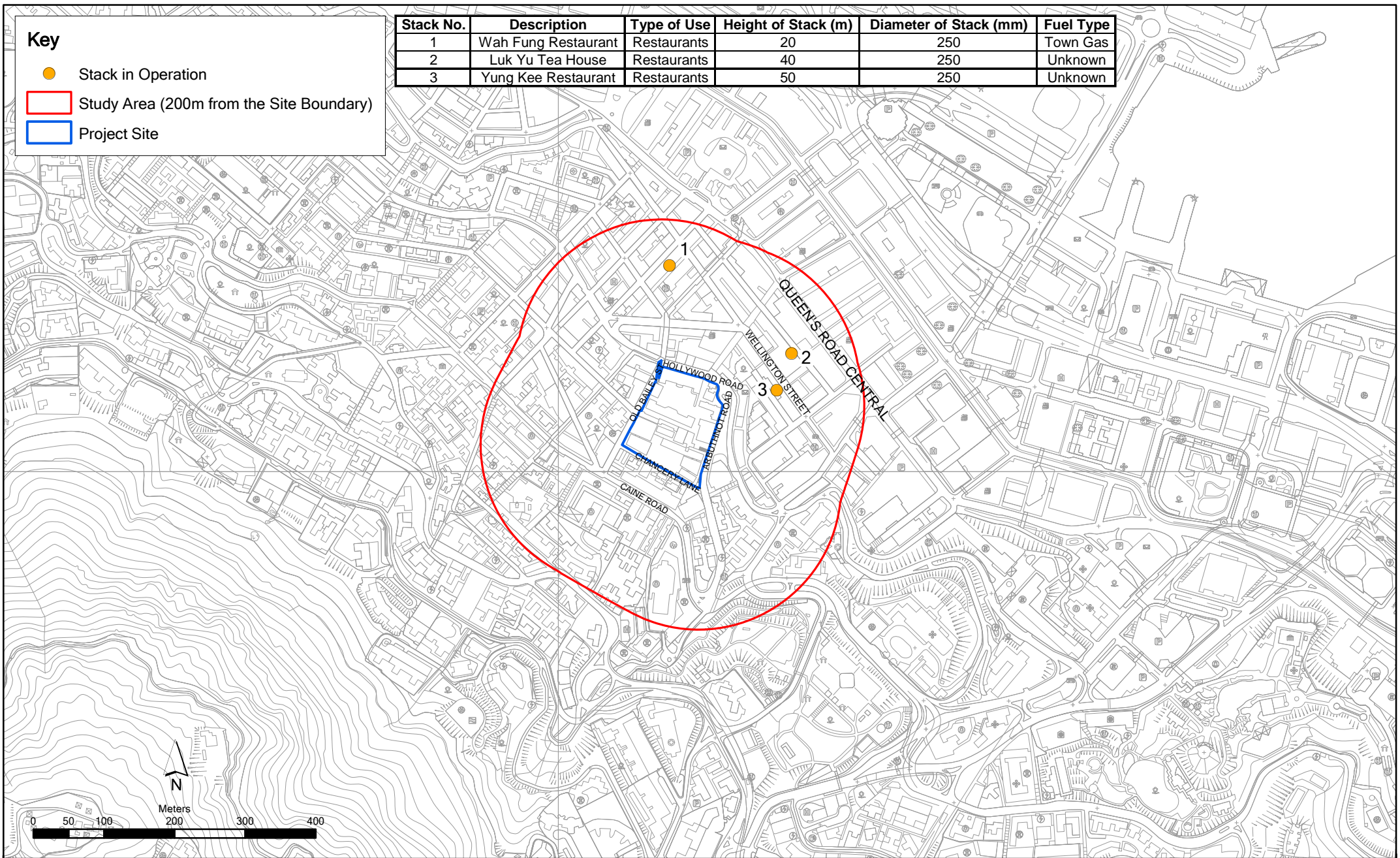


Figure 6.2

Locations of Operating Stacks within Study Area

- Vehicle washing facilities will be provided at the designated vehicle exit points;
- Every vehicle will be washed to remove any dusty materials from its chassis and wheels immediately before leaving the worksite;
- Road sections between vehicle-wash areas and vehicular entrances will be paved;
- The load carried by the trucks will be covered entirely to ensure no dust emission from the vehicles;
- Hoarding of not less than 2.4m high from ground level will be provided along the length of the Project Site boundary adjoining a road where the new buildings (Old Bailey Wing and Arbutnot Wing) will be located;
- The main haul road will be kept clear of dusty materials and will be sprayed with water so as to maintain the entire road surface wet at all the time;
- Temporary stockpiles of dusty materials will be either covered entirely by impervious sheets; place in an area sheltered on the top and three sides; or sprayed with water to maintain the entire surface wet at all the time;
- Stockpiles of more than 20 bags of cement, dry pulverised fuel ash and dusty construction materials will be covered entirely by impervious sheeting sheltered on top and 3-sides;
- All exposed areas will be kept wet always to minimise dust emission;
- ULSD will be used for all construction plant on-site;
- The engine of the construction equipment or trucks during idling will be switched off; and
- Regular maintenance of construction equipment deployed on-site will be conducted to prevent black smoke emission.

#### 6.8.2 Operational Phase

The following measures will be implemented for kitchens to minimize the potential kitchen fumes or stack emissions:

- Electric stoves will be used;
- Electrostatic precipitators (ESP) will be installed to control the oily fume and cooking odour;
- Siting the kitchen exhausts away from the nearby air sensitive uses as far as practicable;;
- Direct the kitchen exhausts vertically upwards; and
- Provide sufficient separation distance from the nearby air sensitive uses.

#### 6.9 RESIDUAL IMPACTS

No residual impact is anticipated from the construction of the Project with the implementation of the recommended mitigation measures and good construction site practices.

No residual impact is anticipated from the operation phase of the Project with the implementation fo the recommended mitigation measures.

#### 6.10 ENVIRONMENTAL MONITORING AND AUDIT

Adverse fugitive dust impact is not anticipated during the construction period, dust monitoring is considered not necessary. However, monthly environmental site audits are recommended to ensure that appropriate dust control measures are properly implemented and good construction site practices are adopted throughout the construction period.

#### 6.11 CONCLUSIONS

##### 6.11.1 Construction Phase

Dust generating activities and gaseous emissions from construction plants for the Project have the potential to cause adverse air quality impacts to the identified ASRs if not properly managed. The construction of the Project involves small-scale site formation/foundation works, new building construction, refurbishment works for the existing buildings, and minor-scale demolition of existing structures. Excavation, truck movements, materials handling and wind erosion of open stockpiles of dusty materials were identified as the major dust generating activities. In view of the small size of the worksite and small quantity of excavated materials to be generated, limited excavated soil will be stockpiled on-site. No adverse fugitive dust impact is envisaged with the implementation of dust control measures and adoption of good construction site practices.

Minor air quality impacts associated with gaseous emissions of diesel-powered construction plant and equipment are anticipated as only a small number of construction vehicles and plant will be operated in the limited works areas at any one time.

To ensure compliance with the relevant dust criterion at the identified ASRs and implementation of proposed control measures during the construction phase, regular environmental site audits (at a frequency of not less than once per week) are recommended.

##### 6.11.2 Operation Phase

During operation phase, it is confirmed that electric stoves will be used for the kitchens and electrostatic precipitators (ESPs) will also be installed at the exhausts of the kitchens to capture potential particulate emissions. Proper siting of kitchen exhaust will be considered during the detailed design stage. As such, potential air quality impacts associated with gaseous emissions from kitchen exhausts are not anticipated.

Three stacks were identified to be in operation within the study area and were all operated by restaurants. They are all located at least 30m above ground. It was anticipated that these operating stacks were operating with towngas or ULSD or alternative fuel types in which emissions are low and comply with the requirements in the *Air Pollution Control (Fuel Restriction) Regulation* and its amendment of 2008. With respect to the height of emission points, the presence of high-rise buildings located between the Project site boundary and the operating stacks and the recent 5 year NO<sub>2</sub> and SO<sub>2</sub> monitoring data obtained from the nearby EPD AQMS, no adverse air quality impacts are anticipated for the Project.

The design of the Project encourages visitors to get to the Site via footbridge and pedestrian crossings, therefore, traffic flow induced by operations of the Project (eg tourist buses and private cars) is anticipated to be small as compared to the existing traffic flow on nearby roads. No adverse traffic emission impact during the operation phase of the Project is therefore expected.

## 7 WATER QUALITY ASSESSMENT

### 7.1 INTRODUCTION

The modification works and operation of the CPS have the potential to cause adverse water quality impacts if not properly managed. This section examines the potential impacts on the nearby water resources due to discharge of wastewater and surface runoff during the modification works as well as from the operation of the facilities.

### 7.2 LEGISLATION AND STANDARDS

The regulatory requirements and standards to protect water quality are as follows:

- *Water Pollution Control Ordinance (WPCO) (Cap. 358);*
- *Environmental Impact Assessment Ordinance (Cap. 499. S.16), Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM), Annexes 6 and 14;*
- *Technical Memorandum Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Inshore Waters (TM);*
- *Practice Note for Professional Persons on Construction Site Drainage (Prop PECC PN 1/94); and*
- *Hong Kong Planning Standards and Guidelines (HKPSG).*

#### 7.2.1 Water Pollution Control Ordinance (WPCO)

The WPCO is the legislation for the control of water pollution and water quality in Hong Kong. Under the WPCO, Hong Kong waters are divided into 10 Water Control Zones (WCZs). Each WCZ has a designated set of statutory Water Quality Objectives (WQOs). The WQOs set limits for different parameters that should be achieved in order to maintain the water quality within the WCZs. Corresponding statements of WQO are stipulated for different water regimes, i.e. marine waters, inland waters, bathing beaches subzones, secondary contact recreation subzones and fish culture subzones, in the WCZ based on their beneficial uses.

In accordance with the WPCO, the Study Area is located inside the Victoria Harbour (Phase Three) WCZ. The WQOs for the Victoria Harbour (Phase Three) WCZ, which are presented in *Tables 7.1*, are applicable as evaluation criteria for assessing compliance of any effects from the discharges of the Project.

**Table 7.1 Water Quality Objectives for Victoria Harbour (Phase Three) Water Control Zone**

Water Quality Objectives	Victoria Harbour (Phase Three) WCZ
<b>A. AESTHETIC APPEARANCE</b>	
(a) Waste discharges shall cause no objectionable odours or discolouration of the water.	Whole Zone
(b) Tarry residues, floating wood, articles made of glass, plastic, rubber or of any other substance should be absent.	Whole Zone
(c) Mineral oil should not be visible on the surface. Surfactants should not give rise to lasting foam.	Whole Zone
(d) There should be no recognisable sewage-derived debris.	Whole Zone
(e) Floating, submerged and semi-submerged objects of a size likely to interfere with the free movement of vessels, or cause damage to vessels, should be absent.	Whole Zone
(f) Waste discharges shall not cause the water to contain substances which settle to form objectionable deposits.	Whole Zone
<b>B. BACTERIA</b>	
The level of <i>Escherichia coli</i> should not exceed 1000 per 100 ml, calculated as the geometric mean of the most recent 5 consecutive samples taken at intervals of between 7 and 21 days.	Inland waters
<b>C. COLOUR</b>	
Waste discharges shall not cause the colour of water to exceed 50 Hazen units.	Inland waters
<b>D. DISSOLVED OXYGEN (DO)</b>	
(a) Waste discharges shall not cause the level of DO to fall below 4 mg L <sup>-1</sup> for 90% of the sampling occasions during the whole year; values should be calculated as water column average (arithmetic mean of at least 3 measurements at 1 m below surface, mid-depth and 1 m above seabed). In addition, the concentration of DO should not be less than 2 mg L <sup>-1</sup> within 2 m of the seabed for 90% of the sampling occasions during the whole year.	Marine waters
(b) Waste discharges shall not cause the level of DO to be less than 4 mg L <sup>-1</sup> .	Inland waters
<b>E. pH</b>	
(a) The pH of the water should be within the range of 6.5-8.5 units. In addition, waste discharges shall not cause the natural pH range to be extended by more than 0.2 unit.	Marine waters
(b) Waste discharges shall not cause the pH of the water to exceed the range of 6.5-8.5 units	Inland waters
<b>F. TEMPERATURE</b>	
Waste discharges shall not cause the natural daily temperature range to change by more than 2.0°C.	Whole Zone
<b>G. SALINITY</b>	
Waste discharges shall not cause the natural ambient salinity level to change by more than 10%.	Whole Zone
<b>H. SUSPENDED SOLIDS (SS)</b>	
(a) Waste discharges shall neither cause the SS concentration to be raised by 30% nor give rise to accumulation of SS which may adversely affect aquatic communities.	Marine waters
(b) Waste discharges shall not cause the annual median SS to exceed 20 mg L <sup>-1</sup> .	Inland waters

Water Quality Objectives	Victoria Harbour (Phase Three) WCZ
I. AMMONIA	
The un-ionized ammonia nitrogen level should not be more than 0.021 mg L <sup>-1</sup> , calculated as the annual average (arithmetic mean).	Whole Zone
J. NUTRIENTS	
(a) Nutrients shall not be present in quantities sufficient to cause excessive or nuisance growth of algae or other aquatic plants.	Marine waters
(b) Without limiting the generality of objective (a) above, the level of inorganic nitrogen should not exceed 0.4 mg L <sup>-1</sup> , expressed as annual water column average (arithmetic mean of at least 3 measurements at 1 m below surface, mid-depth and 1 m above seabed).	Marine waters
K. 5-DAY BIOCHEMICAL OXYGEN DEMAND (BOD <sub>5</sub> )	
Waste discharges shall not cause the BOD <sub>5</sub> to exceed 5 mg L <sup>-1</sup> .	Inland waters
L. CHEMICAL OXYGEN DEMAND (COD)	
Waste discharges shall not cause the COD to exceed 30 mg L <sup>-1</sup> .	Inland waters
M. TOXIC SUBSTANCES	
(a) Waste discharges shall not cause the toxic substances in water to attain such levels as to produce significant toxic, carcinogenic, mutagenic or teratogenic effects in humans, fish or any other aquatic organisms, with due regard to biologically cumulative effects in food chains and to interactions of toxic substances with each other.	Whole Zone
(b) Waste discharges shall not cause a risk to any beneficial use of the aquatic environment.	Whole Zone

### 7.2.2 Technical Memorandum for Effluent Discharges into Drainage and Sewerage Systems, Inland and Inshore Waters (TM)

All discharges from the Project are required to comply with the TM issued under Section 21 of the WPCO. The TM defines discharge limits for different types of receiving waters. Under the TM, effluents discharged into the drainage and sewerage systems, inshore and inshore waters of the WCZs are subject to pollutant concentration standards for particular discharge volumes. Any discharges within a WCZ are subject to licence conditions and the TM acts as a guideline for setting discharge standards for inclusion in the licence. As the sewage arising from the proposed construction and operational activities will be discharged to foul sewer (ie Table 1 of the TM), it should comply with the standards for effluent discharged into the foul sewers. The stormwater collected from the site will be discharged to the stormwater drains and then to the Victoria Harbour, effluent quality should therefore comply with the standards for discharged to inshore waters of the Victoria Harbour (Phase Three) WCZs (ie Table 9a of the TM).

### 7.2.3 Environmental Impact Assessment Ordinance (Cap. 499, S.16), Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM)

Annexes 6 and 14 of the EIAO and the EIAO-TM provide general guidelines and criteria to be used in assessing the potential water quality impacts.

### 7.2.4 Practice Note for Professional Persons on Construction Site Drainage (ProPECC PN 1/94)

The ProPECC PN 1/94 issued by the EPD provides environmental guidelines and good practices for the handling and disposal of construction site discharges to prevent or minimise impacts on water quality.

Whilst the technical circulars are non-statutory, they are generally accepted as the best guidelines in Hong Kong and have been considered in the design and construction of the Project and development of mitigation measures.

### 7.2.5 Hong Kong Planning Standards and Guidelines (HKPSG)

Chapter 9 of the HKPSG provides guidance for including environmental considerations in the planning of both public and private developments. It applies both to the planning of permanent or temporary uses which will have potential to cause significant changes to the biophysical environment or which are sensitive to environmental impacts. Section 5 in Chapter 9 of the HKPSG provides additional information on regulatory guidelines against water pollution for sensitive uses such as aquaculture and fisheries zones, bathing waters and other contact recreational waters.

## 7.3 WATER QUALITY SENSITIVE RECEIVERS AND BASELINE CONDITIONS

### 7.3.1 Existing Conditions

The marine water monitoring data of the nearest EPD monitoring stations (see Figure 7.1) in 2008 are summarised in Table 7.2.

Table 7.2 Summary of Water Quality Statistics for Victoria Harbour (Phase Three)

Parameter	EPD Monitoring Stations <sup>(a)</sup>		
	Victoria Harbour (VM5)	Victoria Harbour (VM6)	Victoria Harbour (VM7)
Temperature (°C)	23.5 (16.3-27.2)	23.5 (16.3-27.2)	22.7 (14.8-27.8)
Salinity (ppt)	30.9 (25.7-32.7)	30.9 (27.1-32.7)	31.0 (26.8-33.2)
DO (Surface to 2m above Bottom) (mg L <sup>-1</sup> )	5.0 (3.0-6.2)	5.1 (2.8-7.1)	5.4 (3.0-7.8)
DO (Bottom) (mg L <sup>-1</sup> )	5.0 (3.0-6.8)	4.8 (2.5-6.6)	5.3 (2.7-7.8)
SS (mg L <sup>-1</sup> )	5.0 (2.8-8.7)	5.3 (2.7-7.3)	4.6 (2.1-6.8)
BOD <sub>5</sub> (mg L <sup>-1</sup> )	1.2 (0.3-3.5)	0.8 (0.3-1.3)	0.8 (0.2-1.5)
Unionised Ammonia (mg L <sup>-1</sup> )	0.007 (0.001-0.010)	0.007 (0.002-0.011)	0.008 (0.002-0.015)
Total Inorganic Nitrogen (mg L <sup>-1</sup> )	0.39 (0.22-0.71)	0.38 (0.21-0.62)	0.40 (0.21-0.57)
Total Phosphorus (mg L <sup>-1</sup> )	0.05 (0.04-0.09)	0.05 (0.03-0.07)	0.05 (0.03-0.07)
Chlorophyll a (µg L <sup>-1</sup> )	3.9 (0.3-19.3)	3.8 (0.5-24.0)	1.8 (0.6-3.2)
E. coli (cfu 100mL <sup>-1</sup> )	4,200 (840-23,000)	4,500 (990-12,000)	5,100 (290-41,000)
<b>Note:</b>			
(a) Figures in bracket represent the range of monitoring results.			

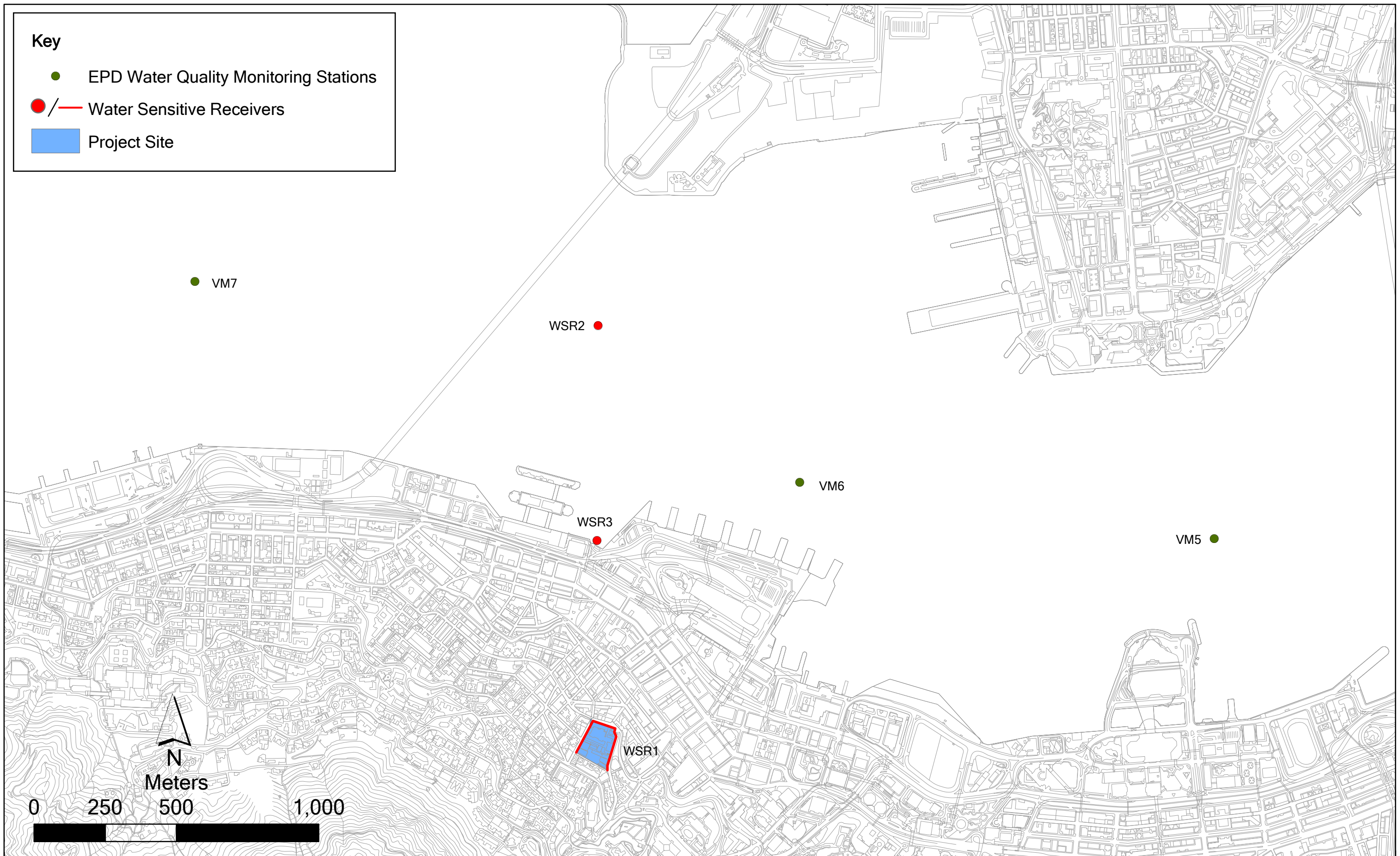


Figure 7.1

Locations of Water Sensitive Receivers

### 7.3.2 Water Sensitive Receivers

No inland watercourse such as river or natural stream is identified within the Study Area. The nearest water sensitive receivers include the existing stormwater drain along Old Bailey Street and drainage box culvert along Arbuthnot Road and Hollywood Road, of which the stormwater will be discharged to the Victoria Harbour. Any pollutant generated from the Project would potentially be discharged to the Victoria Harbour through the drainage system. Water sensitive receivers that are potentially affected by the Project would be the seawater intakes along the seafront of the Hong Kong Island.

The details of the identified Water Sensitive Receivers (WSRs) are summarised in *Table 7.3* and their locations are shown in *Figure 7.1*.

**Table 7.3 Water Sensitive Receivers**

No.	WSR	Approximate Distance from the Project Site
WSR 1	Existing stormwater drain along Old Bailey Street and box culverts along Arbuthnot Road and Hollywood Road	Adjacent to the Site
WSR 2	Victoria Harbour	650m
WSR 3	Seawater abstraction points along the seafront	650m

## 7.4 POTENTIAL SOURCES OF WATER QUALITY IMPACTS

Potential sources of water quality impact associated with the modification activities at the works areas have been identified and include:

- Site runoff from the Project Site; and
- Sewage produced by on-site workforce.

During operation phase of the Project, the sewage generated by the staff, visitors, café and restaurant have the potential to cause adverse water quality impacts if not managed properly.

## 7.5 WATER QUALITY IMPACTS ASSESSMENT

### 7.5.1 Construction Phase

#### Site Runoff and Drainage

Runoff from the construction works areas during demolition and foundation activities may contain increased loads of sediments, other suspended solids and potentially contaminants. Potential sources of pollution include:

- runoff and erosion from exposed soil surfaces, earth working areas and stockpiles;
- release of grouting and cement materials with rain wash;

- wash water from dust suppression sprays; and
- accidental discharge of fuel and lubricants from maintenance of construction vehicles and mechanical equipment.

Sediment laden runoff may carry pollutants (adsorbed onto the particle surfaces) into the nearby stormwater drainage system. Associated effects which may arise include increased suspended solids concentrations in receiving waters and blockage of stormwater drains.

Mitigation measures should be implemented to control construction site runoff and drainage from the works areas, and to prevent runoff and drainage water with high levels of suspended solids from entering the identified WSRs. Most of the modification works will be carried out within the existing buildings, and the foundation works for the new buildings are related small scale and will last for a few months. New building works will not increase the suspended solids concentration significantly. With the implementation of adequate construction site drainage and provision of sediment removal facilities as described in Section 6.6.1, it is anticipated that no unacceptable water quality impacts on the identified WSRs would arise.

#### General Construction Activities

The following on-site construction activities may cause water pollution:

- uncontrolled discharge of debris and rubbish such as packaging, construction materials and refuse; and
- spillages of liquids stored on-site, such as oil, diesel and solvents, which will result in water quality impacts if they enter the nearby stormwater drainage channels.

As detailed in Section 7.6, good construction and site management practices will be implemented to ensure that litter, fuels and solvents do not enter the surrounding stormwater drains.

#### Sewage Generated from Workforce

Sewage will arise from the construction workforce. It is estimated that a maximum of 200 workers will be working at the site at any one time. The amount of sewage to be generated will be about 30 m<sup>3</sup> per day. The existing toilet facilities of the CPS will be available to the construction workforce. The sewage will be discharged to the public sewer. With respect to the small volume of sewage to be discharged to the sewer (much lower comparing with the previous workforce of the CPS (Police Headquarters, prisons, etc)), the discharge will not cause adverse sewerage impacts. No adverse impact water quality is anticipated due to the treatment and disposal of sewage generated from the workforce.

### 7.5.2 Operation Phase

*Sewage from Staff, Visitors, Café and Restaurant* Sewage will arise from the dining areas, operation staff and visitors of the CPS. According to the Sewerage Impact Assessment of the Project (see Annex C), the proposed development will generate a peak flow of 50.25L/s. The hydraulic analysis concluded that



there is sufficient freeboard allowed in the existing 225mm diameter public sewers along Hollywood Road, Old Bailey Road and Arbuthnot Road. The existing sewers will be adequate to handle the anticipated volume of sewage to be discharged from the CPS and the adjacent developments, and no improvement to the existing sewers is required. No adverse water quality and sewerage impacts are envisaged.

## 7.6 WATER QUALITY MITIGATION MEASURES

### 7.6.1 Construction Phase

The impact assessment has indicated that the modification works, if properly controlled, will not cause adverse impacts to the existing drainage and sewerage systems. Hence, no additional mitigation measures are required.

Appropriate on-site measures are defined to reduce potential impacts, which will be sufficient to prevent adverse impacts to water quality from the construction, demolition and renovation activities. All effluent discharge from the works will be subject to control under the WPCO.

#### Site Runoff

Prior to the modification works, perimeter cut-off drains to direct off-site water around the site will be constructed and internal drainage works and erosion and sedimentation control facilities implemented. Channels, earth bunds or sand bag barriers will be provided on site to direct potential contaminated runoff to the on-site slit trap before discharged to the stormwater drains. The design of any slit removal facilities will be based on the guidelines in Appendix A1 of *ProPECC PN 1/94*.

- All drainage facilities and erosion and sediment control structures will be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rainstorms. Deposited silt and grit will be removed regularly and disposed of.
- Measures will be taken to reduce the ingress of stormwater into excavation areas. If the excavation of the concrete foundation is to be carried out in wet season, they will be dug and backfilled in short sections wherever practicable. Water pumped out from trenches or foundation excavations will be discharged into stormwater drains via silt removal facilities.
- Open stockpiles of excavated and demolition materials will be covered with tarpaulin or similar fabric during rainstorms. Measures will be taken to prevent the washing away of residues, chemicals or debris into any drainage system.
- Manholes (including newly constructed ones) will always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system.
- Precautions will be taken when a rainstorm is imminent or forecasted, and actions to be taken during or after rainstorms are summarised in Appendix A2 of *ProPECC PN 1/94*. Particular attention will be paid to the control of silty surface runoff during storm events.

- All temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge will be adequately designed for the controlled release of stormwater flows. All sediment traps will be regularly cleaned and maintained. The temporary diverted drainage will be reinstated to the original condition when the construction work has finished or the temporary diversion is no longer required.

#### Wastewater from Site Facilities

- Vehicle and plant servicing areas, vehicle washing bays and lubrication bays will, as far as possible, be located within roofed areas. The drainage in these covered areas will be connected to foul sewers via a petrol interceptor.
- Oil leakage or spillage will be contained and cleaned up immediately. Waste oil will be collected and stored for recycling or disposal, in accordance with the *Waste Disposal Ordinance*.

#### Storage and Handling of Oil, Other Petroleum Products and Chemicals

- Waste streams classifiable as chemical wastes will be properly stored, collected and treated for compliance with *Waste Disposal Ordinance* or *Waste Disposal (Chemical Waste) (General) Regulation* requirements.
- All fuel tanks and chemical storage areas will be provided with locks and be sited on paved areas.
- The storage areas will be surrounded by bunds with a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled oil, fuel and chemicals from reaching the receiving waters.
- The Contractors will prepare guidelines and procedures for immediate clean-up actions following any spillages of oil, fuel or chemicals.
- Surface runoff from bunded areas will pass through oil/grease traps prior to discharge to the stormwater system.

The stormwater discharge from the site will be monitored as part of the routine monitoring under the WPCO licence, if applicable.

### *Sewage from Workforce*

The existing toilet facilities of the CPS will be available to the construction workforce. The sewage will be discharged to the public sewer system.

#### **7.6.2 Operation Phase**

As no adverse water quality impacts are identified during the operation of the CPS, no mitigation measures will be required.

#### **7.7 RESIDUAL ENVIRONMENTAL IMPACTS**

With the implementation of the recommended mitigation measures, no residual impacts are anticipated from the modification works and operation of the CPS.

#### **7.8 ENVIRONMENTAL MONITORING AND AUDIT**

With the implementation of the good site practice, no adverse water quality impact is anticipated during the construction and operation of the Project.

##### **7.8.1 Construction Phase**

Monthly site audits of the works areas will be carried out during the construction phase to monitor the environmental performance of the Project and to enable prompt actions to rectify any malpractice which may give rise to water pollution problem.

##### **7.8.2 Operation Phase**

No environmental and monitoring works will be required for the operation of the CPS.

#### **7.9 CONCLUSION**

The anticipated quantities of wastewater to be generated during the Project will be small. With the implementation of general good site practices, the construction and operation of the Project will not cause adverse water quality impact.

## 8 WASTE MANAGEMENT IMPLICATIONS

### 8.1 INTRODUCTION

This section identifies the potential wastes arising from the construction and operation of the Project and potential environmental impacts associated with the handling and disposal of waste. The assessment was undertaken in accordance with the criteria presented in *Annexes 7 and 15* of the *EIAO-TM*.

As mentioned in the Project Profile submitted for this Project (ref: ESB 205/2009), a review of available information regarding site history including historical aerial photographs, historical maps as well as visual site inspection did not identify potential sources of soil and groundwater contamination at the Site. In particular, by examining the existing facilities in the Garage, there is no provision of underground fuel tank / oil sump pit identified as well as no permanent repairing / maintenance / refuelling tools and equipment being installed. In fact, the Site was concrete paved. It is therefore not anticipated that there will be contaminated soil or groundwater at the Site which will require treatment or disposal during the construction phase of the Project.

### 8.2 LEGISLATION REQUIREMENTS AND EVALUATION CRITERIA

The following legislation covers, or has some bearing upon, the handling, treatment and disposal of wastes in Hong Kong, and has been considered in the assessment.

- *Waste Disposal Ordinance (WDO) (Cap 354)*;
- *Waste Disposal (Chemical Waste) (General) Regulation (Cap 354C)*;
- *Land (Miscellaneous Provisions) Ordinance (Cap 28)*; and
- *Public Health and Municipal Services Ordinance (Cap 132) - Public Cleansing and Prevention of Nuisances Regulation*.

#### 8.2.1 Waste Disposal Ordinance (Cap 354)

The WDO prohibits the unauthorised disposal of wastes, with waste defined as any substance or article, which is abandoned. Under the WDO, wastes can only be disposed of at a licensed site. A breach of these regulations can lead to the imposition of a fine and/or a prison sentence. The WDO also provides for the issuing of licences for the collection and transport of wastes. Licences are not, however, currently issued for the collection and transport of construction waste or trade waste.

The *Waste Disposal (Charges for Disposal of Construction Waste) Regulation* defined construction waste as any substance, matters or things that is generated from construction work and abandoned, whether or not it has been processed or stockpiled before being abandoned, but does not include any sludge, screening or matter removed in or generated from any desludging, desilting or dredging works.

The Construction Waste Disposal Charging Scheme came into operation on 1 December 2005. Processing of account applications by the EPD started on the same day. A contractor who undertakes construction work with value of HK\$1 million or above is required to open a billing account solely for the contract. Charging for the disposal of construction waste started on 20 January 2006.

Depending on the percentage of inert materials in the material, construction waste can be disposed of at public fill reception facilities, landfills and outlying islands transfer facilities, where differing disposal costs would be applied. The scheme encourages waste reduction so that the contractor or Project Proponent can minimise their costs. *Table 8.1* summarises the Government's construction waste disposal facilities, the types of waste accepted and the associated disposal costs.

**Table 8.1 Government Waste Disposal Facilities for Construction Waste**

Government Waste Disposal Facilities	Type of Construction Waste Accepted	Charge Per Tonne
Public fill reception facilities	Consisting entirely of inert construction waste	\$27
Sorting facilities	Containing more than 50% by weight of inert construction waste	\$100
Landfills	Containing not more than 50% by weight of inert construction waste	\$125
Outlying Islands Transfer Facilities	Containing any percentage of inert construction waste	\$125

#### 8.2.2 Waste Disposal (Chemical Waste) (General) Regulation

Chemical waste as defined under the *Waste Disposal (Chemical Waste) (General) Regulation* includes any substance being scrap material, or unwanted substances specified under *Schedule 1* of the *Regulation*, if such a substance or chemical occurs in such a form, quantity or concentration so as to cause pollution or constitute a danger to health or risk of pollution to the environment.

Chemical waste producers shall register with the EPD. Any person who contravenes this requirement commits an offence and is liable to a fine and imprisonment. Producers of chemical wastes must treat their wastes, utilising on-site plant licensed by the EPD or have a licensed collector take the wastes to a licensed facility. For each consignment of wastes, the waste producer, collector and disposer of the wastes must sign all relevant parts of a computerised trip ticket. The system is designed to allow the transfer of wastes to be traced from cradle-to-grave.

The *Regulation* prescribes the storage facilities to be provided on site including labelling and warning signs. To minimise the risks of pollution and danger to human health or life, the waste producer is required to prepare and make available written procedures to be observed in the case of emergencies due to spillage, leakage or accidents arising from the storage of chemical wastes. He/she must also provide employees with training in such procedures.

### 8.2.3 Land (Miscellaneous Provisions) Ordinance (Cap 28)

The inert portion of construction waste <sup>(1)</sup> (also called public fill) may be taken to public fill reception facilities. Public fill reception facilities are operated by the Civil Engineering and Development Department (CEDD). The *Land (Miscellaneous Provisions) Ordinance* requires that individuals or companies who deliver public fill to the public fill reception facilities obtain Dumping Licences. The licences are issued by the CEDD under delegated authority from the Director of Lands.

Individual licences and windscreen stickers are issued for each vehicle involved. Under the licence conditions, public fill reception facilities will only accept inert earth, soil, sand, rock, boulder, rubble, brick, tile, concrete, asphalt, masonry or used bentonite. In addition, in accordance with paragraph 11 of Environment, Transport and Works Bureau (ETWB) Technical Circular (Works) (ETWB-TC(W)) No. 31/2004, Public Fill Committee will advise on the acceptance criteria (eg no mixing of construction waste, nominal size of the materials less than 250mm, etc. The material should, however, be free from marine mud, household refuse, plastic, metal, industrial and chemical wastes, animal and vegetable matter and any other materials considered unsuitable by the public fill reception facility.

### 8.2.4 Public Cleansing and Prevention of Nuisances Regulation

This *Regulation* provides further control on the illegal dumping of wastes on unauthorised (unlicensed) sites. The illegal dumping of wastes can lead to a fine and/or imprisonment.

### 8.2.5 Other Relevant Guidelines

Other 'guideline' documents, which detail how the project proponent or contractor should comply with the local regulations, are as follows:

- *Waste Disposal Plan for Hong Kong* (December 1989), Planning, Environment and Lands Branch Government Secretariat, Hong Kong Government;
- *Environmental Guidelines for Planning In Hong Kong* (1990), Hong Kong Planning Standards and Guidelines, Hong Kong Government;
- *New Disposal Arrangements for Construction Waste* (1992), EPD & CED, Hong Kong Government;
- *Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes* (1992), EPD, Hong Kong Government;
- *Works Branch Technical Circular (WBTC) No. 32/92, The Use of Tropical Hard Wood on Construction Site*; Works Branch, Hong Kong Government;
- *WBTC No. 2/93, Public Dumps*. Works Branch, Hong Kong Government;

(1) "Construction waste" refers to materials arising from any land excavation or formation, civil/building construction, road works, building renovation or demolition activities. It includes various types of reusable materials, building debris, rubble, earth, concrete, timber and mixed site clearance materials. When sorted properly, materials suitable for land reclamation and site formation (known as public fill) should be reused at public fill reception facilities. The rock and concrete can be crushed and processed to produce aggregates for various civil and building engineering applications. The remaining construction waste (comprising timber, paper, plastics, and general refuse) are to be disposed of at landfills.

- *WBTC No. 2/93B, Public Filling Facilities*, Works Branch, Hong Kong Government;
- *Waste Reduction Framework Plan, 1998 to 2007*, Planning, Environment and Lands Bureau, Government Secretariat, 5 November 1998;
- *WBTC Nos. 25/99, 25/99A and 25/99C, Incorporation of Information on Construction and Demolition Material Management in Public Works Sub-committee Papers*; Works Bureau, Hong Kong SAR Government;
- *WBTC No. 12/2000, Fill Management*; Works Bureau, Hong Kong SAR Government;
- *WBTC No. 12/2002, Specification Facilitating the Use of Recycled Aggregates*. Works Bureau, Hong Kong SAR Government;
- *ETWB-TC(W) No. 33/2002, Management of Construction and Demolition Material Including Rock*; Environment, Transport and Works Bureau, Hong Kong SAR Government;
- *DevB TC(W) No. 6/2010, Trip Ticket System for Disposal of Construction & Demolition Materials*, Development Bureau, Hong Kong SAR Government; and
- *ETWB-TC(W) No. 19/2005, Environmental Management on Construction Sites*, Hong Kong SAR Government.

## 8.3 EXPECTED WASTE ARISING DURING THE CONSTRUCTION PHASE

During the construction phase, the main activities, which will potentially result in the generation of waste, include site formation, demolition of infrastructure and construction of new buildings. The typical waste types associated with these activities include:

- excavated material from foundation works;
- construction waste from construction of new buildings;
- waste from renovation /modification works;
- chemical waste; and
- general refuse.

### 8.3.1 Excavated Material

The quantity of excavated material to be generated during the construction period is around 12,900 m<sup>3</sup> mainly from the construction of basement in Lower Courtyard, the tunnel underneath A Hall and B Hall, and the new buildings (the Old Bailey Wing and Arbuthnot Wing). *Table 8.2* summarised the quantities of excavated materials arising from the construction works.

**Table 8.2 Excavated Materials Generation during Construction**

Building/ Structure	Excavated Materials ( m <sup>3</sup> )
Lower Courtyard Basement for Plant Rooms	4,000
Tunnel Passageway	600
New Building at Old Bailey Wing – Basement	6,800
New Building at Arbutnot Wing – Foundation and Plant Rooms	700
Loading / Unloading Bay	300
M&E Trenches	500
<b>Total</b>	<b>12,900</b>

Due to limited site area, it is not practical to stockpile the excavated material on-site and reuse for subsequent backfilling works. The excavated material will be delivered to the government public filling reception facilities (ie Public Filling Barging points on Hong Kong Island or Fill Banks in Tuen Mun or Tseung Kwan O). In view of the relatively small quantity of excavated material to be disposed off-site, it is not expected that the disposal of the anticipated amount of excavated materials to the public filling facilities will cause adverse impact to the operation of these facilities. It is estimated that about 6 truck trips per day <sup>(1)</sup> will be required to dispose the materials during construction phase. In view of the small quantity of excavated materials generated and with proper implementation of good site practices and mitigation measures recommended in *Sections 8.5*, potential environmental impacts (including potential hazard, dust emissions, noise and wastewater discharge) associated with the on-site handling and off-site disposal of the excavated material are not expected. The off-site disposal of the small quantity of excavated materials will only generate a few trucks per day. Hence, there will be no adverse impact on the local traffic and public transport.

### 8.3.2 Construction and Demolition Materials

#### Construction of New Buildings and Structures

Construction and Demolition (C&D) material (consisting of concrete, brick, wood, packing materials, plastics, metal, steel and general refuse) will be generated from the construction of new buildings and structures. The inert portion of the C&D material is referred to public fill and the non-inert portion is referred to construction waste. Public fill will be disposed of at the Government Public Filling Facilities and the construction waste will be disposal of at landfill. The main building and structures and the assoicated gross floor area (GFA) to be constructed are summarised in *Table 8.3*.

(1) Assuming a capacity of 7.5 m<sup>3</sup> per truck, bulk factor of 1.4 and 26 working days per month. The duration of foundation, excavation and basement construction works is 17 months.

**Table 8.3 GFA of Major Buildings and Structures to be Constructed**

Buildings and Structures to be constructed	GFA (m <sup>2</sup> )
F&B and Ancillary Support	745
Public Circulation	1,935
Toilet	95
Multipurpose and Ancillary Support	308
Art Gallery and Ancillary Support	1,207
<b>Total</b>	<b>4290</b>

Based on the generation rate of 0.1 m<sup>3</sup> per m<sup>2</sup> of GFA constructed <sup>(2)</sup>, it is estimated that a total of about 430 m<sup>3</sup> of C&D material will be generated from the construction of new buildings and structures at the Project. The C&D material will be sorted on-site into public fill (about 340 m<sup>3</sup>) and construction waste (about 90 m<sup>3</sup>) <sup>(3)</sup> in order to reduce the amount of construction waste to be disposed of at landfill.

With the proper implementation of good construction site practice, the on-site handling, transportation and disposal of small quantities of public fill and construction waste to public filling facilities and landfill, respectively will not cause adverse environmental impacts (including potential hazard, dust emissions, noise and wastewater discharge).

#### Renovation / Modification Works

Most of the existing buildings in the CPS will need to be fitted with some modern services and with improved fire compartmentation and fire escape provisions. Many will need floors strengthening to accommodate greater floor loads than they were designed for. Based on the latest engineering design, it is estimated that about 4,000 m<sup>3</sup> of C&D material will be generated from the renovation and modification works. The C&D material will be sorted on-site into public fill (about 3,200 m<sup>3</sup>) and construction waste (about 800 m<sup>3</sup>) <sup>(4)</sup> in order to reduce the amount of construction waste to be disposed of at landfill.

It is estimated that a total of 28 truck trips per months (about 22 truck trips per months for public fill and 6 truck trips per months for construction waste) will be required to dispose the materials/waste off-site respectively <sup>(5)</sup> during construction / modification works of the Project. In view of the small quantity of C&D material generated and with proper implementation of good site practices and mitigation measures recommended in *Sections 8.5*, potential water quality, dust and noise impacts associated with on-site handling and transportation of the public fill and construction waste to disposal sites are not expected.

The off-site disposal of the small quantity of C&D material will only generate a maximum of a few trucks per day. Hence, there will be no adverse impact on the local traffic and public transport.

(2) Hong Kong Polytechnics (March 1993) Reduction of Construction Waste Final Report.

(3) Approximate ratio for (inert waste): (non-inert waste) is 8:2 (Source: Monitoring of Solid Waste in Hong Kong 1997).

(4) Approximate ratio for (inert waste): (non-inert waste) is 8:2 (Source: Monitoring of Solid Waste in Hong Kong 1997).

(5) Assuming a capacity of 7.5 m<sup>3</sup> per truck and bulk factor of 1.4. The duration of construction / modification work is 30 months.

### 8.3.3 Chemical Wastes

Chemical waste, as defined under the *Waste Disposal (Chemical Waste) (General) Regulation*, includes any unwanted substances specified under *Schedule 1* of the *Regulation*. Substances likely to be generated from the construction and modification works of the Project will include:

- Used paint, engine oils, hydraulic fluids and waste fuel;
- Spent mineral oils/cleaning fluids from mechanical machinery; and
- Spent solvents/solutions from equipment cleaning activities.

Chemical wastes will pose environmental, health and safety hazards if not stored and disposed of in an appropriate manner as outlined in the *Waste Disposal (Chemical Waste) (General) Regulation* and the *Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes*. These hazards may include:

- Toxic effects to workers;
- Adverse effects on air, water and land from spills; and
- Fire hazards.

The amount of chemical waste that will arise from the construction activities will be highly dependent on the Contractor's on-site maintenance activities and the quantity of plant and equipment utilised. With respect to the scale of the construction activities, it is anticipated that the quantity of chemical waste to be generated will be small (less than a hundred litres per month during the construction phase).

With the incorporation of suitable arrangements for the storage, handling, transportation and disposal of chemical wastes under the requirements stated in the *Waste Disposal (Chemical Waste) (General) Regulation* and the *Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes*, no adverse environmental (including air and odour emissions, noise and wastewater discharge) and health impacts, and hazards will result from the handling, transportation and disposal of chemical waste arising from the Project.

### 8.3.4 General Refuse

The presence of a construction site with workers and associate site office will result in the generation of general refuse (mainly consists of food waste, aluminium cans and waste paper) which requires off-site disposal. The storage of general refuse has the potential to give rise to adverse environmental impacts. These include odour if the waste is not collected frequently, windblown litter and visual impact.

Assuming up to 200 construction workers will be working on site at any one time, with a general refuse generation rate of 0.65 kg per worker per day, the maximum amount of general refuse to be generated will be about 130 kg per day.

Recyclable materials (ie paper, plastic bottles and aluminium cans) will be separated for recycling, in order to reduce the amount of general refuse to be disposed of at landfill. Adequate number of enclosed waste containers will be provided to avoid over-spillage of waste.

The non-recyclable refuse will be placed in bags and stored in enclosed containers, and disposed of on a daily basis to the landfills. Given that the quantity of general refuse to be disposed of at landfill is small, no adverse impact on the operation of the landfill is anticipated.

With the implementation of the mitigation measures recommended in *Section 8.5*, no adverse environmental impacts (including potential hazard, dust emissions, noise and wastewater discharge) caused by the storage, handling, transport and disposal of general refuse are expected. The off-site disposal of the refuse will only generate a maximum of a few trucks per day. Hence, there will be no adverse impact on the local traffic and public transport.

## 8.4 EXPECTED WASTE ARISING DURING OPERATION PHASE

The CPS will become a centre for cultural and leisure activities in Hong Kong after the revitalisation works. Waste generated during the operation phases is mainly confined to:

- General refuses from staff and visitors;
- Food and beverage waste from café and restaurant; and
- Chemical waste.

### 8.4.1 General Refuse

General refuse will arise from the CPS operation staff and visitors. General refuse may consist of plastic, aluminium can and waste paper. It is estimated up to about 24,200 of staff and the visitor will be working or visiting the site daily. With a general refuse generation rate of 0.382 kg per guest per day<sup>(1)</sup>, the amount of general refuse to be generated will be about 9,250 kg per day.

Recyclable materials (ie paper, plastic bottles and aluminium cans) will be separated for recycling, in order to reduce the amount of general refuse to be disposed of at the landfill. Adequate number of enclosed waste containers will be provided to avoid over-spillage of waste. The non-recyclable refuse will be placed in bags and disposed of at the transfer station on Hong Kong Island (ie Island East and Island West Transfer Stations) on a daily basis. With respect to the small quantity of general refuse to be disposed of at the transfer station, no adverse impact on the operation of the transfer station is anticipated. With the implementation of the mitigation measures recommended in *Section 8.5*, no adverse environmental impacts (including potential hazard, air and odour emissions, noise and wastewater discharge) caused by the storage, handling, transport and disposal of general refuse are expected. The off-site disposal of the refuse will only generate a maximum of a few trucks per day. Hence, there will be no adverse impact on the local traffic and public transport.

(1) Repositioning and Long Term Operation Plan of Ocean Park – Environmental Impact Assessment, 2006. EIA Register No.: AEIAR-101/2006.

#### 8.4.2 Food and Beverage Waste

Food and beverage waste will be generated from the café and restaurants. Based on the estimated maximum number of guests using the café and restaurants (9,800 per day) and a generation rate of 0.047 kg per guest per day <sup>(1)</sup>, the estimated maximum quantity of food and beverage waste would be 460 kg per day. With the implementation of the mitigation measures recommended in Section 8.5, no adverse environmental impacts (including potential hazard, air and odour emissions, noise and wastewater discharge) caused by the storage, handling, transport and disposal of food and beverage waste are expected. The off-site disposal of the food and beverage waste will only generate a maximum of a few trucks per day. Hence, there will be no adverse impact on the local traffic and public transport.

#### 8.4.3 Chemical Waste

Limited chemical waste (mainly waste lube oil and spent solvents from maintenance of mechanical and electrical equipments and audio/visual system) will arise from the operation activities at the CPS. With reference to the existing similar local cultural and recreational facilities, it is anticipated that the quantity of chemical waste to be generated during the operation phase will be small (on average about a few litres per month depending on the maintenance schedule).

With the incorporation of suitable arrangements for the storage, handling, transportation and disposal of chemical wastes in accordance with the requirements stated in the *Waste Disposal (Chemical Waste) (General) Regulation* and the *Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes*, no adverse environmental (including air and odour emissions, noise and wastewater discharge) and health impacts, and hazards will result from the handling, transportation and disposal of chemical waste arising from the operation of the CPS.

### 8.5 MITIGATION MEASURES

#### 8.5.1 Construction Phase

The assessment indicates that with the implementation of the proposed waste management practices at the work site, no adverse environmental impacts are envisaged for the handling, collection and disposal of waste arising during the construction phase of the Project.

This section further describes the good construction site practices to avoid or further reduce the potential environmental impacts associated with the handling, collection and disposal of construction and chemical wastes arising from the construction.

The Contractor must ensure that all the necessary waste disposal permits or licences are obtained prior to the commencement of the construction works.

(1) Repositioning and Long Term Operation Plan of Ocean Park – Environmental Impact Assessment, 2006. EIA Register No.: AEIAR-101/2006.

#### Management of Waste Disposal

The construction contractor will open a billing account with the EPD in accordance with the *Waste Disposal (Charges for Disposal of Construction Waste) Regulation*. Every construction waste or public fill load to be transferred to the Government waste disposal facilities such as public fill reception facilities, sorting facilities, landfills will require a valid “chit” which contains the information of the account holder to facilitate waste transaction recording and billing to the waste producer. A trip-ticket system will also be established in accordance with *ETWB-TC(W) No.31/2004* to monitor the disposal of construction waste at landfill and to control fly-tipping. The trip-ticket system will be included as one of the contractual requirements and implemented by the contractor.

A recording system (similar to summary table as shown in Annex 5 and Annex 6 of Appendix G of *ETWB-TC(W) No. 19/2005*) for the amount of waste generated, recycled and disposed of (including the disposal sites) will be established during the construction phase.

#### Measures for the Reduction of Construction Waste Generation

C&D material will be segregated on-site into public fill and construction waste and stored in different containers or skips to facilitate reuse of the public fill and proper disposal of the construction waste. Specific areas of the work site will be designated for such segregation and storage if immediate use is not practicable.

#### Chemical Waste

The contractor will register as a chemical waste producer with the EPD. Chemical waste will be handled in accordance with the *Code of Practice on the Packaging, Handling and Storage of Chemical Wastes* as follows.

Containers used for storage of chemical wastes will:

- Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed;
- Have a capacity of less than 450 L unless the specifications have been approved by the EPD; and
- Display a label in English and Chinese in accordance with instructions prescribed in *Schedule 2* of the *Regulations*.

The storage area for chemical wastes will:

- Be clearly labelled and used solely for the storage of chemical waste;
- Be enclosed on at least 3 sides;
- Have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest;

- Have adequate ventilation;
- Be covered to prevent rainfall entering (water collected within the bund must be tested and disposed of as chemical waste, if necessary); and
- Be arranged so that incompatible materials are appropriately separated.

Chemical waste will be disposed of:

- Via a licensed waste collector; and
- To a facility licensed to receive chemical waste, such as the Chemical Waste Treatment Facility which also offers a chemical waste collection service and can supply the necessary storage containers.

#### *General Refuse*

General refuse will be stored in enclosed bins separately from construction and chemical wastes. The general refuse will be delivered to the transfer station, separately from construction and chemical wastes, on a daily basis to reduce odour, pest and litter impacts.

Recycling bins will be provided at strategic locations to facilitate recovery of aluminium can and waste paper from the Site. Materials recovered will be sold for recycling.

#### *Staff Training*

At the commencement of the construction works, training will be provided to workers on the concepts of site cleanliness and on appropriate waste management procedures, including waste reduction, reuse and recycling.

### **8.5.2 Operation Phase**

#### *Chemical Waste*

Measures are similar to those outlined in *Section 8.5.1*.

#### *General Refuse and Food and Beverage Waste*

General refuse and food and beverage waste will be stored in enclosed bins and disposed of at the tipping area on a daily basis to reduce odour, pest and litter impacts. Once the proposed Organic Waste Treatment Facility (OWTF) at Siu Ho Wan is available, the management office of the CPS should consider segregate the food waste from the café and restaurants and delivered to the OWTF for treatment.

Recycling bins will be provided at strategic locations to facilitate recovery of aluminium can and waste paper from the Site. Materials recovered will be sold for recycling.

## **8.6 RESIDUAL ENVIRONMENTAL IMPACTS**

No residual waste management impact is envisaged during the construction and operation of the Project.

## **8.7 ENVIRONMENTAL MONITORING AND AUDIT**

### **8.7.1 Construction Phase**

It is recommended that monthly audits of the waste management practices be carried out during the construction phases to determine if wastes are being managed in accordance with the recommended good site practices. The audits will examine all aspects of waste management including waste generation, storage, recycling, transport and disposal.

### **8.7.2 Operation Phase**

No environmental and monitoring programme is required for the operation of the CPS.

## **8.8 CONCLUSIONS**

*Table 8.4* summarises the waste arisings and disposal location during the construction and operation of the Project.

**Table 8.4 Summary of Waste Arisings and Disposal Location**

Type	Quantity	Disposal Location
<u>Construction Phase</u>		
Excavated material	12,900 m <sup>3</sup>	Public Fill
C&D Material - inert	3,540 m <sup>3</sup>	Public Fill
C&D Material - construction waste	890 m <sup>3</sup>	Landfill
Chemical waste	Less than 100 L per month	Chemical Waste Treatment Facility
General refuse	130 kg per day	Transfer Station / landfill
<u>Operation Phase</u>		
General refuse	9,250 kg per day	Transfer Station / landfill
Food waste	460 kg per day	Transfer Station / landfill <sup>(a)</sup>
Chemical waste	Few litres per month	Chemical Waste Treatment Facility

Note:

(a) Once the Organic Waste Treatment Facility (OWTF) at Siu Ho Wan is available, the management office of the CPS could consider segregating the food waste and delivered to the OWTF for treatment.

### **8.8.1 Construction Phase**

It is estimated that a total of 16,440 m<sup>3</sup> of public fills (consisting of 12,900 m<sup>3</sup> of excavated materials, 3,540 m<sup>3</sup> of public fill from new building construction and modification/ renovation works) and 890 m<sup>3</sup> of



construction waste will be generated during the construction phase. The public fill will be sent to public filling facilities for beneficial reuse while the construction waste will be disposed of at landfills.

With respect to the scale of the construction activities, it is anticipated that the quantity of chemical waste to be generated will be small (less than a hundred litres per month during the construction phase). It is also estimated that about 130 kg of general refuse will be generated per day by the construction workers. With the implementation of general good construction site practices, the construction of the Project will not cause adverse waste management, traffic or environmental impacts (including potential hazard, air and odour emissions, noise and wastewater discharge).

#### **8.8.2 Operation Phase**

It is estimated that general refuse (9,250 kg per day) and food waste (460 kg per day) will be generated during the operation phase. With good site practices, the potential environmental impacts (including potential hazard, air and odour emissions, noise and wastewater discharge) associated with the storage, handling, collection, transport and disposal of waste arising from the operation of the Project will meet the criteria specified in the *EIAO-TM* and no adverse waste management impacts are anticipated.

## 9 ENVIRONMENTAL MONITORING AND AUDIT REQUIREMENTS

### 9.1 INTRODUCTION

The assessments presented in the preceding sections have predicted that the implementation of the Project is not expected to give rise to adverse environmental impacts with the implementation of good construction site practices and mitigation measures. A focused EM&A programme is considered appropriate, however, to ensure that the proposed mitigation measures are effectively implemented and the quality of the surrounding environment is not prejudiced. This Section presents the scope of the EM&A requirements.

A summary of the requirements for each of the environmental parameters is detailed in Table 9.1.

**Table 9.1 Summary of EM&A Requirements**

Parameters	Construction Phase <sup>(a)</sup>	Operation Phase <sup>(a)</sup>
Cultural Heritage	M + SA	SA
Landscape and Visual	M + SA	M
Air Quality	SA	-
Noise	M + SA	M <sup>(b)</sup>
Water Quality	SA	-
Waste	SA	-

**Note:**  
 (a) M = monitoring, SA = site audit  
 (b) Monitoring will be required for outdoor events only and will be implemented through contract requirement for the event organisers.

### 9.2 EM&A MANUAL

A detailed EM&A Manual has been prepared for this Project as part of the EIA study. The following sections provide a summary of the need for monitoring and auditing of the individual environmental aspects. In accordance with the requirements of the EIA Study Brief, an Implementation Schedule of the environmental mitigation measures recommended in the EIA study has been prepared in the form of a checklist. The Implementation Schedule is presented Annex E.

### 9.3 CULTURAL HERITAGE

#### 9.3.1 Detailed Design Stage

Prior to construction commencement, the following works will be conducted:

- Comprehensive survey, impact assessment and protection schedule of historic features of monuments;
- Archival recording;

- Addition and alteration (A&A) works proposal submissions;
- Restoration proposal of historic building and structures;
- Detailed structural assessment;
- Archaeological investigation (No EM&A is required at the archaeological potential area of the Garage and the Married Inspectors' Quarters and Deputy Superintendent's House); and
- Detailed Heritage Operation Strategies and Manuals.

Details of the above works are presented in Section 3.9 and Section 3 of the EM&A Manual.

#### 9.3.2 Construction

Prior to commencement of the construction works, a baseline condition survey and baseline vibration impact has been recommended to be conducted by a specialist covering the existing historic buildings and structures in the CPS Site, the granite walls at Old Bailey Street and the Proposed Grade 3 Historic building (No. 20 Hollywood Road) outside CPS to define the vibration control limits and recommend a vibration monitoring proposal for the concerned historic buildings and structures in and outside the CPS Site for AMO's prior approval.

If the evaluated and/or measured vibrations have been found to exceed the allowable values or if damage to either structural or non-structural elements of the historic buildings has been identified, the construction work should be stopped and the construction method and appropriate mitigation measures should be the reviewed and submitted to the AMO for approval.

For the built heritage, the following works will be conducted prior to the commencement of site works:

- A detailed proposal of the regular audit for cultural heritage such as methodology (e.g. performance and monitoring indicators, control tools, frequency of the audit, etc) and the conservation professionals to be engaged; and
- Staff training for the on-site staffs, contractors, subcontractors and workers of the project to ensure their full understanding of the approved protection schedule of historical features and the work methodologies for repair and restoration works to the historical features, character defining elements, historical buildings and structures in the Site, and their respective responsibilities in the implementation of the environmental protection measures.

During the course of works, the following works will be carried out to the satisfaction of the AMO:

- Regular site audit for cultural heritage to investigate the site practice of the work contractors and the compliance and effectiveness of the approved mitigation measures and work methodologies, and to report the findings to the authorities;

- Archival recording during the course of works and submission of the archival records to AMO after the completion of the works.

### 9.3.3 Operation

Regular audit is recommended for checking the compliance and effectiveness of the strategies and mitigation measures mentioned in Sections 3.7.4 and 3.7.5 of the EIA report. The detailed proposal of the regular audit such as methodology (e.g. performance and monitoring indicators, control tools, frequency of the audit, etc) and the conservation professionals to be engaged should be agreed with AMO prior to operation commencement.

The management team of the CPS Ltd. shall ensure the audit to be carried out by an experience building conservation expert to investigate the site practice and work methodologies of the work contractors, the tenants and any other stakeholders with respect of conservation works, mitigations for cultural heritage, and any related works.

At present no operational phase EM&A for archaeological resources and built heritage outside the CPS Site is considered necessary.

## 9.4 LANDSCAPE AND VISUAL

### 9.4.1 Construction

Monthly inspections of affected trees by an experienced and appropriately trained arborist or horticulturist using Form 1 – Tree Group Inspection Form and Form 2 – Tree Risk Assessment Form developed by Development Bureau ([http://www.trees.gov.hk/en/doc/TRAGuideline\\_July2010version\\_combine.pdf](http://www.trees.gov.hk/en/doc/TRAGuideline_July2010version_combine.pdf)) or a form designed by a tree expert and approved by Tree Management Office. All irregularities that deviate from the recommended tree protection measures, or could impose deleterious impacts on the protected trees, must be reported to the authorised person or the tree expert within two days.

Implementation of the mitigation measures for landscape and visual resources recommended in the EIA Report will be monitored through the site inspection and audit programme.

### 9.4.2 Operation

A detailed specifications and methods statement could be drafted and included in the soft landscape maintenance contract to circumscribe the scope and to ascertain the quality of the work. Following this, quarterly inspections of affected and newly planted trees should be undertaken by an experienced and appropriately trained arborist or horticulturist for a period of 12 months. Hard landscape maintenance will be covered by the Conservation Management Plan and Operational Phase Manual, as detailed in Sections 3.7.1 and 3.7.4 of the EIA Report.

## 9.5 AIR QUALITY

Adverse fugitive dust impact is not anticipated during the construction period, dust monitoring is considered not necessary. However, monthly site audits are recommended to ensure that appropriate dust control measures are properly implemented and good construction site practices are adopted throughout the construction period.

## 9.6 NOISE

Noise monitoring is recommended during the construction phase to ensure compliance with the noise criterion at the NSRs. Weekly noise monitoring will be undertaken at the representative NSRs N2 Ho Fook Building and N5 Chancery House. Considering the nature of the Project, real-time reporting monitoring data was not proposed. However, the monitoring data shall be uploaded to the dedicated internet website as soon as they are ready. Monthly site audits will be conducted to ensure that the recommended mitigation measures are properly implemented during the construction stage.

Monitoring will be required for outdoor events only and will be specified in the contract document for the event organisers for implementation.

## 9.7 WATER QUALITY

Monthly site audits will be carried out during the construction phase to monitor the environmental performance of the Project and to enable prompt actions to rectify any malpractice which may give rise to water pollution problem. The site audit will also ensure that the recommended mitigation measures are properly implemented during the construction stage.

## 9.8 WASTE MANAGEMENT

It is recommended that monthly site audits of the waste management practices be carried out during the construction phases to determine if wastes are being managed in accordance with the recommended good construction site practices. The audits will examine all aspects of waste management including waste generation, storage, recycling, transport and disposal.

## **10 CONCLUSIONS AND SUMMARY OF ENVIRONMENTAL OUTCOMES**

### **10.1 CONCLUSIONS**

This *Section* summarises the environmental impacts associated with the construction and operation of the Project. An impact summary is shown *Table 10.1*.

### **10.2 EM&A REQUIREMENT**

An archaeological investigation will be conducted during the detailed design stage of the Project to obtain field data for subsequent detailed impact assessment. Subject to the outcome of the archaeological investigation, if archaeological deposits are identified to be impacted by the proposed development, appropriate mitigation measures and monitoring, if necessary, will be recommended and agreed with AMO

Monthly environmental site audits shall be conducted throughout the construction phase of the Project to ensure that the proposed mitigation measures are properly implemented. In addition, monitoring of construction noise and vibration and inspection of trees have been recommended during construction phase.

During the operational phase, in any event that outdoor events is expected, the event organizer is required to undertake noise monitoring at agreed monitoring station. Quarterly inspections of affected and newly planted trees should be undertaken by an experienced and appropriately trained arborist or horticulturist for a period of 12 months. Regular audit is recommended for checking the compliance and effectiveness of the mitigation measures recommended in *Sections 3.7.4* and *3.7.5*.

### **10.3 OVERALL CONCLUSION**

The environmental impact assessment has concluded that no unacceptable environmental impacts are envisaged as a result of the construction and operation of the Project, provided that the recommended mitigation measures are implemented.

## **10.4 SUMMARY OF ENVIRONMENTAL OUTCOMES**

### **10.4.1 Population and Environmentally Sensitive Areas Protected**

Being a sensitive heritage site in Hong Kong, the implementation of the Project will have a positive impact to the conservation of the CPS, as well as turning the Site to a cultural and leisure space in the heart of Central for public's enjoyment.

The EIA has concluded that there are no adverse residual impacts as a result of the construction and operation of the Project. With the implementation of the recommended mitigation measures, the populations surrounding the Site are effectively protected from environmental nuisance.

### **10.4.2 Environmentally Friendly Design**

The preferred design scheme strives a balance between the operational need, the preservation of heritage resources and potential environmental nuisance. For the proposed adaptive reuses in the existing buildings, a concerted approach has been taken to find uses that can be accommodated in the existing buildings with the minimum of disturbance and alterations. For example, the option of centralising the E&M facilities in a few locations is preferred as this will minimise modification works at many of the existing buildings as well as being more energy efficient and environmental friendly.

### **10.4.3 Key Environmental Problems Avoided**

To minimise intervention to the existing buildings, a fire engineering approach has been adopted to assess the fire safety level of the existing buildings and to propose alteration only in cases where the assessment result fails to meet the fire engineering standard. By adopting this approach, special features with great heritage values can be preserved as much as possible.

### **10.4.4 Benefits of Environmental Protection Measures Recommended**

Environmental protection measures have been recommended through the impact assessment to minimise the potential impacts to the environment and sensitive receivers. The implementation of the conservation management plan, the heritage operational strategies and interpretation strategies/plans also addressed opportunities present within the Site which would benefit the nature of the CPS as an important heritage resource in Hong Kong.

**Table 10.1 Impact Summary**

Assessment Aspect	Construction Phase	Operation Phase
<b>Cultural Heritage</b>		
Assessment Points / Sensitive Receivers	<ul style="list-style-type: none"> <li>The CPS (including three Declared Monuments: the Central Police Station, the Central Magistracy and the Victoria Prison)</li> <li>Potential archaeological remains within the CPS</li> <li>Built heritage resources within 50m of the Project Site (including the Grade 1 historic street (Pottinger Street), Proposed Grade 3 historic building (No. 20 Hollywood Road), Hollywood Road, Old Bailey Street, Chancery Lane and Steps, Arbuthnot Road and Walls at Old Bailey Street)</li> </ul>	<ul style="list-style-type: none"> <li>The CPS (including three Declared Monuments: the Central Police Station, the Central Magistracy and the Victoria Prison)</li> <li>Potential archaeological remains within the CPS</li> </ul>
Relevant Criteria	<ul style="list-style-type: none"> <li><i>Environmental Impact Assessment Ordinance (EIAO) (Cap. 499. S16), Technical Memorandum on the EIA Process, Annex 10 and 19 (EIAO TM) and Guidance Notes on Assessment of Impact on Sites of Cultural Heritage in EIA Studies;</i></li> <li><i>Antiquities and Monuments (AM) Ordinance (Cap. 53);</i></li> <li><i>Guidelines for Cultural Heritage Impact Assessment (CHIA) for Adaptive Reuse Projects (as at May 2009);</i></li> <li><i>Hong Kong Planning Standards and Guidelines (HKPSG); and</i></li> <li><i>Land (Miscellaneous Provisions) Ordinance.</i></li> </ul>	<ul style="list-style-type: none"> <li><i>Environmental Impact Assessment Ordinance (EIAO) (Cap. 499. S16), Technical Memorandum on the EIA Process, Annex 10 and 19 (EIAO TM) and Guidance Notes on Assessment of Impact on Sites of Cultural Heritage in EIA Studies;</i></li> <li><i>Antiquities and Monuments (AM) Ordinance (Cap. 53);</i></li> <li><i>Guidelines for Cultural Heritage Impact Assessment (CHIA) for Adaptive Reuse Projects (as at May 2009);</i></li> <li><i>Hong Kong Planning Standards and Guidelines (HKPSG); and</i></li> <li><i>Land (Miscellaneous Provisions) Ordinance.</i></li> </ul>
Results of Impact	<p>Built Heritage within the CPS</p> <ul style="list-style-type: none"> <li>The range of Impact Category Ratings for the interventions in the following buildings are 1 (Beneficial), 2 (Acceptable), and 3 (Acceptable with Mitigation Measures). The overall Heritage Impact of the proposed interventions to these buildings is therefore regarded as acceptable to enable the building to have a new adaptive use: <ul style="list-style-type: none"> <li>Police Headquarters</li> <li>Armoury</li> <li>Barrack Block</li> <li>Married Inspectors' Quarters and Deputy Superintendents House</li> <li>Married Sergeant's Quarters</li> <li>Single Inspectors' Quarters</li> <li>Ablutions Block</li> <li>Central Magistracy</li> <li>Superintendent's House</li> <li>A Hall</li> <li>B Hall</li> <li>C Hall</li> <li>D Hall</li> <li>E Hall</li> <li>F Hall</li> <li>Bauhinia House</li> <li>Parade Ground</li> <li>Laundry (structure with little architectural interest and has been altered over time with substantial repairs to be demolished)</li> <li>Walls and Revetments</li> </ul> </li> <li>An impact rating of the interventions in the following buildings/features is 2 - Acceptable Impact: <ul style="list-style-type: none"> <li>Garage (structure with no architectural or historical significance to be demolished to make way for open space)</li> <li>General Office (structure with no architectural or historical significance to be demolished)</li> <li>Prison Yard</li> </ul> </li> </ul> <p>Potential Archaeological Resources within the CPS</p> <ul style="list-style-type: none"> <li>It is anticipated that the areas identified to have archaeological potential are considered to be low or fairly low. Therefore, the impact on the low archaeological potential resources areas is likely to be</li> </ul>	<p>It is anticipated that with the implementation of the Conservation Management Plan, the Heritage Operational Strategy &amp; Manual and the Interpretation Strategies/Plans, the impact rating for the CPS as a whole will be 1 - Beneficial.</p>

Assessment Aspect	Construction Phase	Operation Phase
	<p>acceptable with mitigation measures being taken. Impact ratings for specific areas are as follows:</p> <ul style="list-style-type: none"> <li>○ Parade Ground: 3 – Acceptable Impact with Mitigation Measures</li> <li>○ Prison Yard: 3 – Acceptable Impact with Mitigation Measures</li> <li>○ Barracks Lane (cell blocks south of building 3): 3 – Acceptable Impact with Mitigation Measures</li> <li>○ The Garage: No impact</li> <li>○ Married Inspectors’ Quarters and Deputy Superintendent’s House: No Impact</li> <li>○ The area between A Hall and B Hall: 3 – Acceptable Impact with Mitigation Measures</li> <li>○ The area between and beneath Ablutions block and the revetment wall to the south: 3 – Acceptable Impact with Mitigation Measures</li> <li>○ West end of D Hall: 3 – Acceptable Impact with Mitigation Measures</li> <li>○ Laundry: 3 – Acceptable Impact with Mitigation Measures</li> <li>○ General Office: 3 – Acceptable Impact with Mitigation Measures</li> </ul> <p>Built Heritage Resources Outside the CPS</p> <ul style="list-style-type: none"> <li>● Generally the works within the Site will have little or no impact on built heritage resources outside the CPS. This is in large part because the changes to occur within the CPS are contained within the constraints of the compound itself. Impact ratings for specific areas are as follows: <ul style="list-style-type: none"> <li>○ Grade 1 historic building (Pottinger Street): 1 – Beneficial Impact</li> <li>○ Proposed Grade 3 historic building (No. 20 Hollywood Road): 2 – Acceptable Impact with mitigation measures</li> <li>○ Hollywood Road: 2 – Acceptable Impact</li> <li>○ Old Bailey Street: 2 – Acceptable Impact</li> <li>○ Chancery Lane: 1 – Beneficial Impact</li> <li>○ Arbuthnot Road: 1 – Beneficial Impact</li> <li>○ Walls and Tunnel of Old Bailey Street: 2 – Acceptable Impact</li> <li>○ Chancery Lane Steps: 1 – Beneficial Impact</li> </ul> </li> </ul>	
Extents of Exceedance	Not expected	Not expected
Avoidance / Mitigation Measures	<p>Prior to construction commencement during the detailed design stage of the Project, the following works will be conducted to ensure adequate information are obtained to finalise the design and conservation work required:</p> <ul style="list-style-type: none"> <li>● Comprehensive survey and impact assessment of Character Defining Elements (CDE);</li> <li>● Archival recording;</li> <li>● Addition and alteration (A&amp;A) works proposal submissions;</li> <li>● Detailed structural assessment; and</li> <li>● Archaeological investigation.</li> </ul> <p>The modification/refurbishment works at the existing buildings are kept to a minimum by carefully assigning appropriate uses to fit in the spaces and adopting a fire engineering approach to minimise alteration while complying with fire safety requirements. The general mitigation measures to be used during the construction phase will include:</p> <ul style="list-style-type: none"> <li>● Prior identification and recording of the all the significant features, finishes, fittings and contents in the existing buildings, and assessment of their vulnerability during construction. This should include for instance the recording of historic doors which are vulnerable to damage if left in situ or carelessly removed and stored.</li> <li>● Permanent or temporary removal off site of loose or vulnerable items.</li> <li>● Preparation of a schedule of protection works to preserve or secure items and finishes remaining in situ during construction.</li> <li>● Non-percussive piling methods will be adopted for the construction of the foundation for the new</li> </ul>	<p>To implement the Conservation Management Plan (June 2008), the Heritage Operational Strategy and Manual and the Interpretation Strategies/Plans.</p> <p>Regular audit for checking the compliance and effectiveness of the mitigation measures recommended in Sections 3.7.4 and 3.7.5 of the EIA report. The detailed proposal of the regular audit such as methodology (e.g. performance and monitoring indicators, control tools, frequency of the audit, etc) and the conservation professionals to be engaged should be agreed with AMO prior to operation commencement.</p>

Assessment Aspect	Construction Phase	Operation Phase
	<p>buildings and a lateral support system will be used to minimise the potential vibration impact to adjacent historic buildings during construction.</p> <ul style="list-style-type: none"> <li>• Protection measures to the exteriors and interiors of the buildings during construction operations.</li> <li>• Ensuring the responsible contractor understands the significance and vulnerabilities of the building structures, constructions, features and finishes prior to starting the work to avoid overloading or inappropriate storage or construction activities.</li> <li>• Use of appropriate heritage related construction methods for the modification and refurbishment works</li> </ul> <p>As there is no development proposal that involves soil excavation on one of the nine areas (Garage), other than possibly for new underground services which will be designed during the detailed drawing stage no impact on this archaeological potential area is anticipated.</p> <p>Subject to the findings of the archaeological investigation, appropriate mitigation measures will be recommended and agreed with the AMO.</p> <p>Prior to commencement of the construction works, a baseline condition survey and baseline vibration impact has been recommended to be conducted by a specialist covering the existing historic buildings in the CPS Site and the Proposed Grade 3 Historic building (No. 20 Hollywood Road) outside CPS to define the vibration control limits and recommend a vibration monitoring proposal for the concerned historic buildings in CPS. As the concerned historic buildings in the CPS Site are declared monuments, the proposal should be submitted to the Antiquities Authority under the AM Ordinance for granting a permit for the work. If the evaluated and/or measured vibrations have been found to exceed the allowable values or if damage to either structural or non-structural elements of the historic buildings has been identified, the construction work should be stopped and the construction method and appropriate mitigation measures should be reviewed and submitted to the Antiquities Authority for approval.</p>	
Residual Impact	<p>Slight to moderate residual impact is expected due to the alteration to the overall visual appearance of the Site. However, the majority of the potential impact is beneficial to the CPS and its users. With the implementation of the CMP and the mitigation measures recommended in Section 3.7 the residual impact is considered acceptable.</p>	Not expected
Environmental Acceptability	Impacts to cultural heritage resources are acceptable with mitigation measures.	Impacts to cultural heritage resources are acceptable with mitigation measures.
<b>Landscape &amp; Visual</b>		
Assessment Points / Sensitive Receivers	<p><u>Landscape Resources (LRs):</u>            LR1 - Transport Route            LR2 - Commercial / Residential / Institutional Building Area            LR3 - Buildings within Declared Monument            LR4 - Open Space within Declared Monument            LR5 - Public Park/ Recreational Area            LR6 - Hong Kong Zoological &amp; Botanical Garden            LR7 - Vegetated Slope            LR8 - Natural Woodland on Hillside            LR9 - Temple Area</p> <p><u>Landscape and Visual Character Areas (LCAs):</u>            LCA1 - Historical Landscape            LCA2 - LCSD Theme Park Landscape            LCA3 - Medium/High-rise Commercial Urban Landscape            LCA4 - Residential/ Commercial Urban Landscape            LCA5 - Central Civic Administration Landscape            LCA6 - Natural Hillside Landscape            LCA7 - Major Transport Corridor</p> <p><u>Visually Sensitive Receivers (VSRs) and Vantage Points (VPs)</u></p>	<p><u>Landscape Resources (LRs):</u>            LR1 - Transport Route            LR2 - Commercial / Residential / Institutional Building Area            LR3 - Buildings within Declared Monument            LR4 - Open Space within Declared Monument            LR5 - Public Park/ Recreational Area            LR6 - Hong Kong Zoological &amp; Botanical Garden            LR7 - Vegetated Slope            LR8 - Natural Woodland on Hillside            LR9 - Temple Area</p> <p><u>Landscape and Visual Character Areas (LCAs):</u>            LCA1 - Historical Landscape            LCA2 - LCSD Theme Park Landscape            LCA3 - Medium/High-rise Commercial Urban Landscape            LCA4 - Residential/ Commercial Urban Landscape            LCA5 - Central Civic Administration Landscape            LCA6 - Natural Hillside Landscape            LCA7 - Major Transport Corridor</p> <p><u>Visually Sensitive Receivers (VSRs) and Vantage Points (VPs)</u></p>

Assessment Aspect	Construction Phase	Operation Phase
	<p>VSR T2 – Central/ Mid-Levels Escalator above Hollywood Road (VPa)  VSR H/O1 – Medium/ High Level Commercial/Residential Building(s) above Hollywood Road (VPb)  VSR T3 – Street Level at The Centrium on Arbuthnot Road (VPc)  VSR H2 – Medium/High Rise Level Residential Building(s) on Chancery Lane (VPd)  VSR T4 – Street Level at Old Bailey Street/ Chancery Lane Junction (VPe)  VSR T5 – Street Level at Hollywood Road/ Pottinger Street Junction (VPf)  VSR T1 Street Level at Staunton Street/ Peel Street Junction  VSR O1 Medium/High Level Commercial Building(s) (IFC Building)  VSR O2 Medium/High Level Commercial Building(s) (QRC Building)  VSR H1 Medium/High Level Residential Buildings in Mid-levels (Grand Panorama Building)  VSR R1 Open/Park Area off Old Bailey Street  VSR H3 Medium/High Level Residential Buildings on Old Bailey Street</p> <p>The tree survey undertaken indentified eleven trees within the Site, using the government's definition of a tree as a woody plant with a trunk diameter of at least 95 mm at 1.3 m height. None of the trees can be gauged as being in 'excellent' health and only two trees, namely the large T5 (<i>Mangifera indica</i>) in the Parade Ground, and the relatively small wall tree T10 (<i>Ficus microcarpa</i>) between the Police and Prison sites, have performed sufficiently well to deserve the good rating.</p>	<p>VSR T2 – Central/ Mid-Levels Escalator above Hollywood Road (VPa)  VSR H/O1 – Medium/ High Level Commercial/Residential Building(s) above Hollywood Road (VPb)  VSR T3 – Street Level at The Centrium on Arbuthnot Road (VPc)  VSR H2 – Medium/High Rise Level Residential Building(s) on Chancery Lane (VPd)  VSR T4 – Street Level at Old Bailey Street/ Chancery Lane Junction (VPe)  VSR T5 – Street Level at Hollywood Road/ Pottinger Street Junction (VPf)  VSR T1 Street Level at Staunton Street/ Peel Street Junction  VSR O1 Medium/High Level Commercial Building(s) (IFC Building)  VSR O2 Medium/High Level Commercial Building(s) (QRC Building)  VSR H1 Medium/High Level Residential Buildings in Mid-levels (Grand Panorama Building)  VSR R1 Open/Park Area off Old Bailey Street  VSR H3 Medium/High Level Residential Buildings on Old Bailey Street</p> <p>Trees within the Site.</p>
Relevant Criteria	<ul style="list-style-type: none"> <li>• <i>Environmental Impact Assessment Ordinance (Cap.499, S.16) and the Technical Memorandum on EIA Process (EIAO TM), particularly:</i> <ul style="list-style-type: none"> <li>◦ <i>Annex 10 (Criteria for Evaluating Visual and Landscape Impact, and Impact on Sites of Cultural Heritage)</i></li> <li>◦ <i>Annex 18 (Guidelines for Landscape and Visual Impact Assessment)</i></li> </ul> </li> <li>• <i>EIAO Guidance Note No. 8/2002 (Preparation of Landscape and Visual Impact Assessment under the Environmental Impact Assessment Ordinance);</i></li> <li>• <i>ETWB TCW No. 3/2006 - Tree Preservation;</i></li> <li>• <i>ETWB TCW No. 29/2004 - Registration of Old and Valuable Trees, and Guidelines for their Preservation</i></li> <li>• <i>ETWB-TC(W) No. 10/2005 - Planting on Footbridges and Flyovers</i></li> <li>• <i>Land Administration Office (LAO), Lands Department Practice Note No. 7/2007 - <a href="#">Tree Preservation and Tree Removal Application for Building Development in Private Projects</a></i></li> <li>• <i>WBTC No. 7/2002 - Tree Planting in Public Works;</i></li> <li>• <i>Hong Kong Planning Standards and Guidelines Chapter 4 (Recreation, Open Space and Greening) and Chapter 11 (Urban Design Guidelines); and</i></li> <li>• <i>Study on Landscape Value Mapping of Hong Kong</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Environmental Impact Assessment Ordinance (Cap.499, S.16) and the Technical Memorandum on EIA Process (EIAO TM), particularly:</i> <ul style="list-style-type: none"> <li>◦ <i>Annex 10 (Criteria for Evaluating Visual and Landscape Impact, and Impact on Sites of Cultural Heritage)</i></li> <li>◦ <i>Annex 18 (Guidelines for Landscape and Visual Impact Assessment)</i></li> </ul> </li> <li>• <i>EIAO Guidance Note No. 8/2002 (Preparation of Landscape and Visual Impact Assessment under the Environmental Impact Assessment Ordinance);</i></li> <li>• <i>ETWB TCW No. 3/2006 - Tree Preservation;</i></li> <li>• <i>ETWB TCW No. 29/2004 - Registration of Old and Valuable Trees, and Guidelines for their Preservation</i></li> <li>• <i>ETWB-TC(W) No. 10/2005 - Planting on Footbridges and Flyovers</i></li> <li>• <i>Land Administration Office (LAO), Lands Department Practice Note No. 7/2007 - <a href="#">Tree Preservation and Tree Removal Application for Building Development in Private Projects</a></i></li> <li>• <i>WBTC No. 7/2002 - Tree Planting in Public Works;</i></li> <li>• <i>Hong Kong Planning Standards and Guidelines Chapter 4 (Recreation, Open Space and Greening) and Chapter 11 (Urban Design Guidelines); and</i></li> <li>• <i>Study on Landscape Value Mapping of Hong Kong</i></li> </ul>
Results of Impact / Extent of Exceedance	<p>During the construction stage, potential landscape and visual impacts may arise from:</p> <ul style="list-style-type: none"> <li>• works for demolition of surrounding stone brick wall and construction of entrance to service yard;</li> <li>• works for demolition of existing building structures – the Garage, Workshop &amp; Laundry and General Office;</li> <li>• works for cleaning, re-painting, dismantling and reinstatement of sections of surrounding stone brick wall;</li> <li>• conservation, repair and refurbishment work on the external façade of the retained buildings including erection of scaffolding;</li> <li>• excavation work including that for construction of basement in lower courtyard;</li> <li>• new custom paving works throughout the Site;</li> <li>• construction of new built structures (Old Bailey Wing, Arbuthnot Wing, new footbridge);</li> <li>• construction of new pavement west of Arbuthnot Road and extension of existing pavement on Old Bailey Street around pier for new footbridge;</li> <li>• temporary stockpiling of construction and demolition materials and temporary storage of construction equipment;</li> <li>• temporary use of construction equipment on-site including cranes and vehicles;</li> <li>• off-site construction traffic such as haulage of excavated materials;</li> </ul>	<p>During the operation stage, potential landscape and visual impacts would be related to the following:</p> <ul style="list-style-type: none"> <li>• landscaping works (eg new planting site, new green wall, existing tree treatment);</li> <li>• repaired and refurbished external façades of retained buildings;</li> <li>• operation of new built structures (Old Bailey Wing, Arbuthnot Wing, new footbridge, new access points);</li> <li>• new pavement – west of Arbuthnot Road and extension of existing on Old Bailey Street around pier for new footbridge;</li> <li>• cleaned, re-painted, refurbished and repaired sections of external stone wall and building façades; and</li> <li>• night time lighting.</li> </ul> <p>The impacts of the Project's operation phase before mitigation on any LR/LCA are not considered significant.</p> <p><u>Moderate</u> impact on the following LR/LCA at operation phase without mitigation</p> <ul style="list-style-type: none"> <li>• LR3 – Buildings within Declared Monument</li> <li>• LCA1 – Historical Landscape</li> </ul> <p><u>Insignificant</u> impact on the following LR/LCA at operation phase without mitigation</p> <ul style="list-style-type: none"> <li>• LR1 – Transport Route</li> <li>• LR4 – Open Space within Declared Monument</li> </ul>



Assessment Aspect	Construction Phase	Operation Phase
	<ul style="list-style-type: none"> <li>temporary traffic/ road diversions;</li> <li>night-time lighting; and</li> <li>dust during dry weather.</li> </ul> <p><u>Significant</u> Impact on the following LRs/LCA at construction phase without mitigation:</p> <ul style="list-style-type: none"> <li>LR3 – Buildings within Declared Monument</li> <li>LR4 – Open Space within Declared Monument</li> <li>LCA1 – Historical Landscape</li> </ul> <p><u>Slight</u> Impact on the following LRs/LCA at construction phase without mitigation:</p> <ul style="list-style-type: none"> <li>LR1 – Transport Route</li> <li>LCA4 – Residential/Commercial Urban Landscape</li> </ul> <p>Impacts on all other LRs/LCAs at construction phase without mitigation are <u>insignificant</u>.</p> <p>Amongst the eleven trees found on site, four dead/damaged trees (T1, T2, T3 and T4) and one healthy tree (T10) will be removed. The rest of the trees will be retained. The size, tree form, performance, and landscape and amenity value of T10, in comparison with the large and robust wall trees in other parts of the city, are relatively low. Due to site and technical constraints, in situ preservation and transplanting cannot be recommended.</p> <p><u>Significant</u> Impact on the following VSRs at construction phase without mitigation:</p> <ul style="list-style-type: none"> <li>T2 – Central/ Mid-Levels Escalator above Hollywood Road</li> <li>H/O1 – Medium/High Level Commercial/Residential Building(s) above Hollywood Road</li> <li>T3 – Street Level at The Centrium on Arbuthnot Road</li> <li>H2 – Medium/High Rise Level Residential Building(s) on Chancery Lane</li> <li>T5 – Street Level at Hollywood Road/Pottinger Street Junction</li> <li>H3 – Medium/High Level Residential Buildings on Old Bailey Street</li> </ul> <p><u>Moderate</u> Impact on the following VSRs at construction phase without mitigation:</p> <ul style="list-style-type: none"> <li>T4 – Street Level at Old Bailey Street/ Chancery Lane Junction</li> <li>H1 – Medium/High Level Residential Buildings in Mid-levels (Grand Panorama Building)</li> </ul> <p><u>Slight</u> Impact on the following VSRs at construction phase without mitigation:</p> <ul style="list-style-type: none"> <li>T1 – Street Level at Staunton Street/ Peel Street Junction</li> <li>O1 – Medium/High Level Commercial Building(s) (IFC Building)</li> <li>O2 – Medium/High Level Commercial/Residential Building(s) (QRC Building)</li> <li>R1 – Open/Park Area off Old Bailey Street</li> </ul>	<ul style="list-style-type: none"> <li>LCA4 – Residential/Commercial Urban Landscape</li> </ul> <p><u>Significant</u> Impact on the following VSRs at operation phase without mitigation:</p> <ul style="list-style-type: none"> <li>T3 – Street Level at The Centrium on Arbuthnot Road</li> <li>H2 – Medium/High Rise Level Residential Building(s) on Chancery Lane</li> <li>H3 – Medium/High Level Residential Buildings on Old Bailey Street</li> </ul> <p><u>Moderate</u> Impact on the following VSRs at operation phase without mitigation:</p> <ul style="list-style-type: none"> <li>T2 – Central/Mid-Levels Escalator above Hollywood Road</li> <li>H/O1 – Medium/High Level Commercial/Residential Building(s) above Hollywood Road</li> <li>T4 – Street Level at Old Bailey Street/ Chancery Lane Junction</li> <li>H1 – Medium/High Level Residential Buildings in Mid-levels (Grand Panorama Building)</li> </ul> <p><u>Slight</u> Impact on the following VSRs at operation phase without mitigation:</p> <ul style="list-style-type: none"> <li>T5 – Street Level at Hollywood Road/Pottinger Street Junction</li> <li>T1 – Street Level at Staunton Street/ Peel Street Junction</li> <li>O1 – Medium/High Level Commercial Building(s) (IFC Building)</li> <li>O2 – Medium/High Level Commercial Building(s) (QRC Building)</li> <li>R1 – Open/Park Area off Old Bailey Street</li> </ul> <p><u>Glare Impact</u></p> <p>The design intention for the new buildings is to use non-reflective material for the façade which will help to minimise potential glare interference.</p> <p>At night, light emitted from the building will be partially screened by the façade units, creating a balance between being able to express the life of the buildings within while also being able to reduce light pollution. The most open area within the new buildings at night is the public restaurant which is located on the north end of Old Bailey Wing and away from the row of residential buildings directly to the south. All lights within the CPS will be turned to night time mode (dimmed) after 11pm. Currently no façade lighting is proposed for the existing buildings. Given the choice of façade treatment and Site lighting considerations, the glare impact from the Project is considered to be acceptable.</p>
Avoidance / Mitigation Measures	M1 Detailed Design Consideration CM1 In-situ Tree Protection - Cordon Zone (CZ) CM2 In-situ Tree Protection - Advanced & Phased Root Pruning CM3 In-situ Tree Protection - Foliage cleansing system CM4 In-situ Tree Protection - Monthly inspection CM5 Light Control CM6 Compensatory Tree Planting CM7 Vertical Greening CM8 New Custom Paving	OM1 In-situ Tree Protection - Quarterly inspection OM2 Soft Landscape Maintenance OM3 Architectural Maintenance OM4 Light Control
Residual Impact	<p><u>Moderate</u> Impact on the following LRs/LCA at construction phase with mitigation:</p> <ul style="list-style-type: none"> <li>LR3 - Buildings within Declared Monument</li> <li>LR4 – Open Space within Declared Monument</li> </ul>	<p>The residual impacts on all LCAs at day 1 of operation with mitigation are <u>insignificant</u>, with the exception of a <u>slight</u> residual impact on <u>LR3</u> – Buildings within Declared Monument <u>LCA1</u> – Historical Landscape.</p> <p>All ratings for the residual impacts at year 10 of operation with mitigation remain the same, with the exception of LR4 –</p>

Assessment Aspect	Construction Phase	Operation Phase
	<ul style="list-style-type: none"> <li>LCA1 - Historical Landscape</li> </ul> <p><u>Slight</u> Impact on the following LR/LCA at construction phase with mitigation:</p> <ul style="list-style-type: none"> <li>LR1 - Transport Route</li> <li>LCA4 - Residential/Commercial Urban Landscape</li> </ul> <p>Impacts on all other LR/LCAs at construction phase with mitigation are <u>insignificant</u>.</p> <p>Mitigation measures to protect the retained trees and compensation of the removal of T10 will be implemented. With the implementation of the mitigation measures, impacts on the trees are considered acceptable.</p> <p>Construction is assumed to be carried out following standard good practise, and the construction impact will not be significantly reduced by additional mitigation measures such that upon mitigation, all the visual impacts are considered to remain the same as prior to mitigation. However, it is worth noting that the impact will be transient and will be reduced gradually following operation.</p>	<p>Open Space within Declared Monument which is enhanced from insignificant to slightly beneficial.</p> <p>Upon implementation of mitigation measures, at operation day 1 the visual impacts on:</p> <ul style="list-style-type: none"> <li>T3 (Street Level at the Centrium on Arbuthnot Road), H2 (Medium/High rise Level residential Building(s) on Chancery Lane) and H3 (Medium/High Level Residential Buildings on Old Bailey Street) will reduce to moderate while that for T2 (Central/Mid-levels Escalator above Hollywood Road) will remain moderate.</li> <li>H/O1 (Medium/High Level Commercial/Residential Building(s) above Hollywood Road), T4 (Street Level at Old Bailey Street/ Chancery Lane Junction) and H1 (Medium/High Level Residential Buildings in Mid-levels [Grand Panorama Building]) will reduce to slight while impacts on T5 (Street Level at Hollywood Road/Pottinger Street Junction), T1 (Street Level at Staunton Street/ Peel Street Junction) and O2 (Medium/High Level Commercial Building(s) [QRC Building]) will remain slight.</li> <li>O1 (Medium/High Level Commercial Building(s) [IFC Building]) and R1 (Open/Park Area off Old Bailey Street) will reduce to insignificant.</li> </ul> <p>At operation year 10 with mitigation, the residual impacts remain the same for all the VSRs.</p>
Environmental Acceptability	Impacts on landscape resources and sensitive receivers are <u>acceptable with mitigation measures</u> .	Impacts on landscape resources and sensitive receivers are <u>acceptable with mitigation measures</u> .
<b>Air Quality</b>		
Assessment Points / Sensitive Receivers	A1 - Au's Building A2 - Chinachem Hollywood Centre A3 - Carfield Commercial Building A4 - Vimark House A5 - Yu Yuet Lai Building A6 - The Centrium A7 - Chancery Mansions A8 - Chancery House A9 - Cambridge Villa A10 - Sunrise House A11 - Old Bailey Street Junior Police Office Married Quarter A12 - Ho Fook Building A13 - Winning House	A1 - Au's Building A2 - Chinachem Hollywood Centre A3 - Carfield Commercial Building A4 - Vimark House A5 - Yu Yuet Lai Building A6 - The Centrium A7 - Chancery Mansions A8 - Chancery House A9 - Cambridge Villa A10 - Sunrise House A11 - Old Bailey Street Junior Police Office Married Quarter A12 - Ho Fook Building A13 - Winning House
Relevant Criteria	Hong Kong Air Quality Objectives: TSP : Daily average of 260 $\mu\text{g m}^{-3}$ ; annual average of 80 $\mu\text{g m}^{-3}$  EIAO-TM: TSP : Hourly average of 500 $\mu\text{g m}^{-3}$	Hong Kong Air Quality Objectives: NO <sub>2</sub> : Hourly average of 300 $\mu\text{g m}^{-3}$ ; daily average of 150 $\mu\text{g m}^{-3}$ ; annual average of 80 $\mu\text{g m}^{-3}$ SO <sub>2</sub> : Hourly average of 800 $\mu\text{g m}^{-3}$ ; daily average of 350 $\mu\text{g m}^{-3}$ ; annual average of 80 $\mu\text{g m}^{-3}$ RSP : Daily average of 180 $\mu\text{g m}^{-3}$ ; annual average of 55 $\mu\text{g m}^{-3}$
Results of Impact	<p>The construction of the Project involves small-scale site formation/foundation works, new building construction, refurbishment works for the existing buildings, and minor-scale demolition of existing structures. Excavation, truck movements, materials handling and wind erosion of open stockpiles of dusty materials were identified as the major dust generating activities. In view of the small size of the worksite and small quantity of excavated materials to be generated, limited excavated soil will be stockpiled on-site. No adverse fugitive dust impact is envisaged with the implementation of dust control measures and adoption of good construction site practices.</p> <p>Minor air quality impacts associated with gaseous emissions of diesel-powered construction plant and equipment are anticipated as only a small number of construction vehicles and plant will be operated in the limited works areas at any one time.</p>	<p>Gaseous emissions from kitchens are identified as potential sources of air pollutants. Electric stoves will be installed in the kitchens within the Project, and therefore no gaseous or liquid fuels will be used for cooking operations. Electrostatic precipitators (ESPs) will also be installed at the exhausts of the kitchens to capture potential particulate emissions and the location of the exhaust will be sited vertically upward and away from the nearby air sensitive uses as far as practicable. As such, potential air quality impacts associated with gaseous emissions from kitchen operations to the surroundings are not anticipated.</p> <p>As the design of the Project encourages visitors to get to the Site via footbridge and pedestrian crossings, traffic flow induced by operations of the Project (eg tourist bus and private cars) is anticipated to be small and no adverse cumulative traffic emission impact during the operation phase of the Project is therefore expected.</p> <p>Three restaurant stacks were identified within 500m Study Area. The nearest stack is located at about 70m from the Site</p>

Assessment Aspect	Construction Phase	Operation Phase
		boundary and all the stacks were identified to be at least 30m above ground with high-rise buildings located in between. Through the interview with the stack owners, one of the restaurants indicated that Towngas was used for the cooking stoves. However, the owners of the other two stacks refused to provide stack emissions information. Nonetheless, it is anticipated that both premises are using ultra low sulphur diesel (ULSD), gaseous fuel or alternative fuel types in which emissions must comply with the requirements in the <i>Air Pollution Control (Fuel Restriction) Regulation</i> and its amendment of 2008. The five-year average of NO <sub>2</sub> (54µgm <sup>-3</sup> ) and SO <sub>2</sub> (22µgm <sup>-3</sup> ) data from 2005 to 2009 recorded at the Central/Western AQMS demonstrated that the ambient concentrations of the respective pollutants are low. As a result, no adverse air quality impacts are anticipated for the Project.
Extents of Exceedance	Not expected.	Not expected.
Avoidance / Mitigation Measures	<p>The following dust control measures stipulated in the <i>Air Pollution Control (Construction Dust) Regulations</i> and good site practices will be incorporated into the Contract Specification and implemented throughout the construction period:</p> <ul style="list-style-type: none"> <li>The area at which demolition work takes place will be sprayed with water or dust suppression chemical immediately prior to, during and immediately after the demolition activity;</li> <li>Impervious dust screen or sheeting will be implemented for demolition of structures and renovation of outer surfaces of structures that abuts or fronts open area accessible to the public to no less than 1m higher than the highest level of the structure being demolished;</li> <li>An effective dust screen will be provided to enclose scaffolding, if required, from the ground floor level of building for construction of superstructure of the new buildings;</li> <li>Impervious sheet will be provided for skip hoist for material transport;</li> <li>Vehicle washing facilities will be provided at the designated vehicle exit points;</li> <li>Every vehicle will be washed to remove any dusty materials from its chassis and wheels immediately before leaving the worksite;</li> <li>Road sections between vehicle-wash areas and vehicular entrances will be paved;</li> <li>The load carried by the trucks will be covered entirely to ensure no dust emission from the vehicles;</li> <li>Hoarding of not less than 2.4m high from ground level will be provided along the entire length of that portion of the Project Site boundary adjoining a road or other area accessible to the public except for a site entrance or exit;</li> <li>The main haul road will be kept clear of dusty materials and will be sprayed with water so as to maintain the entire road surface wet at all the time;</li> <li>Temporary stockpiles of dusty materials will be either covered entirely by impervious sheets; place in an area sheltered on the top and three sides; or sprayed with water to maintain the entire surface wet at all the time;</li> <li>Stockpiles of more than 20 bags of cement, dry pulverised fuel ash and dusty construction materials will be covered entirely by impervious sheeting sheltered on top and 3-sides;</li> <li>All exposed areas will be kept wet always to minimise dust emission;</li> <li>ULSD will be used for all construction plant on-site;</li> <li>The engine of the construction equipment or trucks during idling will be switched off; and</li> <li>Regular maintenance of construction equipment deployed on-site will be conducted to prevent black smoke emission.</li> </ul>	<p>The following measures will be implemented for kitchens to minimize the potential kitchen fumes or stack emissions:</p> <ul style="list-style-type: none"> <li>Electric stoves will be used;</li> <li>Electrostatic precipitators (ESP) will be installed to control the oily fume and cooking odour;</li> <li>Siting the kitchen exhausts away from the nearby air sensitive uses as far as practicable;;</li> <li>Direct the kitchen exhausts vertically upwards; and</li> <li>Provide sufficient separation distance from the nearby air sensitive uses.</li> </ul>
Residual Impact	Not expected.	Not expected.
Environmental Acceptability	No adverse air quality impact with the implementation of mitigation measures.	No adverse air quality impact with the implementation of mitigation measures.
<b>Noise</b>		
Assessment Points / Sensitive Receivers	N1 - Amber Lodge N2 - Ho Fook Building N3 - Old Bailey Street Police Married Quarters N4 - Cambridge Villa N5 - Chancery House	N1 - Amber Lodge N2 - Ho Fook Building N3 - Old Bailey Street Police Married Quarters N4 - Cambridge Villa N5 - Chancery House

Assessment Aspect	Construction Phase	Operation Phase
Relevant Criteria	<p>N6 – Chancery Mansion</p> <p>Daytime (0700-1900 hours) construction noise standards stipulated in the EIAO-TM is Leq 30min75 dB(A) for all domestic premises on any day not being a Sunday or general public holiday for general construction works.</p> <p>General construction works during the restricted hours follow the criteria set in the GW-TM. These are:</p> <ol style="list-style-type: none"> <li>1. LAeq, 5min 65 dB for area with Area Sensitivity Rating of B for all days during the evening (1900-2300 hours) and general holidays (including Sundays) during the day and evening (0700-2300 hours); and</li> <li>2. LAeq, 5min 50 dB for area with Area Sensitivity Rating of B for all days during the night-time (2300-0700 hours)</li> </ol>	<p>N6 – Chancery Mansion</p> <p>The criteria noise limits for planning purposes are set out in the EIAO-TM as follows:</p> <ul style="list-style-type: none"> <li>• the total fixed source noise level at the facade of the nearest NSR is at least 5 dB(A) lower than the appropriate Acceptable Noise Levels (ANL) as specified in the IND-TM; or</li> <li>• the prevailing background noise level (for quiet areas with level 5 dB(A) below the ANL).</li> </ul> <p>Based on the above EIAO-TM and IND-TM specification, daytime and evening (0700-2300 hours) noise limit for N1-N3 and N4-N6 is 59 dB(A) and 54 dB(A), respectively. The night-time (2300-0700 hours) noise limit for N1-N3 and N4-N6 is 50 dB(A) and 49 dB(A), respectively.</p>
Results of Impact	The predicted unmitigated noise levels at NSRs ranges from 79 to 89 dB(A). With the implementation of mitigation measures, the noise levels predicted at NSRs ranges from 67 to 75 dB(A).	The predicted noise levels during day-time and evening time period at NSRs range from 52 to 56 dB(A). The predicted noise levels during night-time period at NSRs range from 42 to 49 dB(A).
Extents of Exceedance	Without the implementation of mitigation measures, exceedance up to 14 dB(A) is predicted. With the implementation of mitigation measures, noise levels at all NSRs comply with the criteria.	Not expected.
Avoidance / Mitigation Measures	<ul style="list-style-type: none"> <li>• Good construction site practice;</li> <li>• Use of quiet PME;</li> <li>• Adoption of movable noise barriers;</li> <li>• Use of noise insulation sheet; and</li> <li>• Scheduling of PME/construction activities.</li> </ul>	<p>Although no adverse noise impact is expected due to the operation of fixed plant items, it is still recommended that the following good practices be implemented as far as practicable to minimise the potential impact:</p> <ul style="list-style-type: none"> <li>• Choose quieter equipment;</li> <li>• Include noise levels specification when ordering new plant items;</li> <li>• Locate fixed plant items or noise emission points away from the NSRs as far as practicable;</li> <li>• Locate noisy machines in completely enclosed plant rooms or buildings with suitable and practicable noise remedies; and</li> <li>• Develop and implement a regularly scheduled plant maintenance programme so that plant items are properly operated and serviced. The programme should be implemented by properly trained personnel.</li> </ul> <p>The maximum sound power levels for the fixed plant will be included in the contract specification to be issued to suppliers or contractors for the requirement.</p> <p><i>Noise Emissions from Courtyard Events and Public Address (PA) System</i></p> <ul style="list-style-type: none"> <li>• good management practices shall be in place, including noise monitoring, setting up a complaint hotline, and distributing advance notice to nearby NSRs. It is recommended that good management practices be implemented during both rehearsals and shows;</li> <li>• in any event that an outdoor event is expected, the event organizer is required to undertake noise monitoring at least at one of the affected NSR. One set of Leq(30min) noise measurements before and during the event should be taken;</li> <li>• as a fallback option, should non-compliance of the relevant noise criteria at the NSRs be identified for the event, immediate mitigation measures (such as turning down/off of music volume) should be implemented; and</li> <li>• the requirements of not exceeding the total sound power level (as given in Section 5.8) and noise monitoring for each independent event are specified in the event organisers' contract document.</li> </ul>
Residual Impact	Not expected.	Not expected.
Environmental Acceptability	No adverse noise impact with the implementation of mitigation measures.	No adverse noise impact with the implementation of good practices.
<b>Water Quality</b>		
Assessment Points / Sensitive Receivers	<ul style="list-style-type: none"> <li>• Existing stormwater drain along Old Bailey Street and box culverts along Arbuthnot Road and Hollywood Road</li> <li>• Victoria Harbour at about 650m from the Site</li> <li>• Seawater abstraction points along the seafront at about 650m from the Site</li> </ul>	<ul style="list-style-type: none"> <li>• Existing stormwater drain along Old Bailey Street and box culverts along Arbuthnot Road and Hollywood Road</li> <li>• Victoria Harbour at about 650m from the Site</li> <li>• Seawater abstraction points along the seafront at about 650m from the Site</li> </ul>
Relevant Criteria	<ul style="list-style-type: none"> <li>• <i>Water Pollution Control Ordinance (WPCO) (Cap. 358);</i></li> <li>• <i>Environmental Impact Assessment Ordinance (Cap. 499. S.16), Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM), Annexes 6 and 14;</i></li> <li>• <i>Technical Memorandum Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Inshore Waters (TM);</i></li> <li>• <i>Practice Note for Professional Persons on Construction Site Drainage (Prop PECC PN 1/94); and</i></li> <li>• <i>Hong Kong Planning Standards and Guidelines (HKPSG).</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Water Pollution Control Ordinance (WPCO) (Cap. 358);</i></li> <li>• <i>Environmental Impact Assessment Ordinance (Cap. 499. S.16), Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM), Annexes 6 and 14;</i></li> <li>• <i>Technical Memorandum Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Inshore Waters (TM); and</i></li> <li>• <i>Hong Kong Planning Standards and Guidelines (HKPSG).</i></li> </ul>

Assessment Aspect	Construction Phase	Operation Phase
Results of Impact	Given the scale and nature of the construction work, with the implementation of good construction and site management practices, adverse water quality due to site runoff and general construction activities is not anticipated.	It is estimated that up to about 565 m <sup>3</sup> of sewage will be discharged per day. According to the Sewerage Impact Assessment of the Project, the two existing 150mm diameter public sewers along Hollywood Road and Old Bailey Street will be maintained for future use and no improvement to the existing sewers is required.
Extents of Exceedance	The amount of sewage to be generated will be about 30 m <sup>3</sup> per day. The existing toilet facility of the CPS will be available to the construction workforce. The sewage will be discharged to the public sewer. If necessary, portable toilet will be provided on site to ensure that sewage from the site staff is properly collected. No adverse impact water quality is anticipated due to the treatment and disposal of sewage generated from the workforce.	Not expected.
Avoidance / Mitigation Measures	Not expected. Prior to the modification works, perimeter cut-off drains to direct off-site water around the site will be constructed and internal drainage works and erosion and sedimentation control facilities implemented. Channels, earth bunds or sand bag barriers will be provided on site to direct potential contaminated runoff to the on-site slit trap before discharged to the stormwater drains. The design of any slit removal facilities will be based on the guidelines in <i>Appendix A1 of ProPECC PN 1/94</i> .  Vehicle and plant servicing areas, vehicle washing bays and lubrication bays will, as far as possible, be located within roofed areas. The drainage in these covered areas will be connected to foul sewers via a petrol interceptor. Oil leakage or spillage will be contained and cleaned up immediately. Waste oil will be collected and stored for recycling or disposal, in accordance with the <i>Waste Disposal Ordinance</i> .  The stormwater discharge from the Site will be monitored as part of the routine monitoring under the <i>WPCO</i> licence, if applicable.  The existing toilet facilities of the CPS will be available to the construction workforce. The sewage will be discharged to the public sewer system.	Not required.
Residual Impact	No residual impact.	No residual impact.
Environmental Acceptability	No adverse water quality impact with the implementation of good site practices and mitigation measures.	No adverse water quality impact is expected.
Waste		
Assessment Points / Sensitive Receivers	CPS	CPS
Relevant Criteria	<ul style="list-style-type: none"> <li>• <i>Waste Disposal Ordinance (Cap 354)</i>;</li> <li>• <i>Waste Disposal (Chemical Waste) (General) Regulation (Cap 354C)</i>;</li> <li>• <i>Land (Miscellaneous Provisions) Ordinance (Cap 28)</i>; and</li> <li>• <i>Public Health and Municipal Services Ordinance (Cap 132) - Public Cleansing and Prevention of Nuisances Regulation</i></li> <li>• <i>Hong Kong Planning Standards and Guidelines</i></li> <li>• <i>Waste Reduction Framework Plan, 1998 to 2007</i></li> <li>• <i>Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes (1992)</i></li> <li>• <i>WBTC No. 32/92, 2/93, 2/93B, 25/99, 25/99A, 25/99C, 12/2000, 12/2002</i></li> <li>• <i>ETWBTC No. 33/2002, 19/2005</i></li> <li>• <i>DevBTC No. 6/2010</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Waste Disposal Ordinance (Cap 354)</i>;</li> <li>• <i>Waste Disposal (Chemical Waste) (General) Regulation (Cap 354C)</i>;</li> <li>• <i>Land (Miscellaneous Provisions) Ordinance (Cap 28)</i>; and</li> <li>• <i>Public Health and Municipal Services Ordinance (Cap 132) - Public Cleansing and Prevention of Nuisances Regulation</i></li> <li>• <i>Hong Kong Planning Standards and Guidelines</i></li> <li>• <i>Waste Reduction Framework Plan, 1998 to 2007</i></li> <li>• <i>Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes (1992)</i></li> </ul>
Results of Impact	It is estimated that 12,900 m <sup>3</sup> of excavated materials, 3,540 m <sup>3</sup> of public fills and 890 m <sup>3</sup> of construction waste will be generated during the construction phase.  With respect to the scale of the construction activities, it is anticipated that the quantity of chemical waste to be generated will be small (less than a hundred litres per month during the construction phase). It is also estimated that about 130 kg of general refuse will be generated per day by the construction workers.	It is estimated that general refuse (9,250 kg per day) and food waste (460 kg per day) will be generated during the operation phase.

Assessment Aspect	Construction Phase	Operation Phase
Extents of Exceedance	N/A	N/A
Avoidance / Mitigation Measures	<p>C&amp;D material will be segregated on-site into inert and non-inert materials and stored in different containers or skips to facilitate reuse of the inert materials and proper disposal of the non-inert construction waste. Specific areas of the work site will be designated for such segregation and storage if immediate use is not practicable.</p> <p>The contractor will register as a chemical waste producer with the EPD. Chemical waste will be handled in accordance with the <i>Code of Practice on the Packaging, Handling and Storage of Chemical Wastes</i>.</p> <p>General refuse will be stored in enclosed bins separately from construction and chemical wastes. The general refuse will be delivered to the transfer station or landfill, separately from construction and chemical wastes, on a daily basis to reduce odour, pest and litter impacts. Recycling bins will be provided at strategic locations to facilitate recovery of aluminium can and waste paper from the Site. Materials recovered will be sold for recycling.</p> <p>At the commencement of the construction works, training will be provided to workers on the concepts of site cleanliness and on appropriate waste management procedures, including waste reduction, reuse and recycling.</p>	<p>Chemical waste will be handled in accordance with the <i>Code of Practice on the Packaging, Handling and Storage of Chemical Wastes</i>.</p> <p>General refuse and food and beverage waste will be stored in enclosed bins and disposed of at the tipping area on a daily basis to reduce odour, pest and litter impacts.</p> <p>Recycling bins will be provided at strategic locations to facilitate recovery of aluminium can and waste paper from the Site. Materials recovered will be sold for recycling</p>
Residual Impact	No residual impact	No residual impact
Environmental Acceptability	No adverse environmental impact associated with the handling and disposal of waste.	No adverse environmental impact associated with the handling and disposal of waste.