

4 Cultural Heritage Impact

4.1 Introduction

The EIA Study Brief for SCL (HHS) requires a Cultural Heritage Impact Assessment (CHIA) comprising a Built Heritage Impact Assessment (BHIA) and an Archaeological Impact Assessment (AIA) to be conducted. The BHIA needs to search historic buildings, clan graves and landscape features within the study area while the AIA requires a terrestrial investigation of the archaeological potential of the study area, particularly the former Tai Hom Village Archaeological Site.

The field investigation for former Tai Hom Village was carried out in March 2009. Tang/Song Dynasty remains found are sparse and redeposited and hence of lesser archaeological significance. However, assemblage of Tang/ Song archaeological finds within urban setting is considered rare in Hong Kong.

Other than the former Tai Hom Village Archaeological Site, the CHIA has also studied the impacts on the 2 historical buildings within former Tai Hom Village and, after studying their cultural significance and all possible options, recommended the most appropriate mitigation measures.

The possible impacts caused by the construction and operation of the Project on other built heritages have also been studied and the impacts have been minimised by adopting alternative construction methodologies. More details of the assessment findings and mitigation measures are given in this Chapter.

4.2 Environmental Legislation, Standards and Guidelines

The assessment and protection of cultural heritage within HKSAR is governed by the following legislative standards and guidelines:

- Environmental Impact Assessment Ordinance (EIAO);
- Antiquities and Monuments Ordinance; and
- Hong Kong Planning Standards and Guidelines (HKPSG).

4.2.1 Environmental Impact Assessment Ordinance

The Environmental Impact Assessment Ordinance (Cap 499) stipulates that consideration shall be given to cultural heritage and archaeological issues as part of the EIA process. Annexes 10 and 19 of the TM-EIAO cite the following:

- criteria for evaluating the impacts on sites of cultural heritage;
- guidelines for impact assessment;
- 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 identified for culture and tradition; and
- adverse impacts on sites of cultural heritage shall be kept to the absolute minimum.

The Guidance Note on Assessment of Impact on Site of Cultural Heritage in Environmental Impact Assessment Studies (<http://www.epd.gov.hk/eia/english/guid/cultural/basis.html>) serves as a reference to facilitate an understanding of the requirements set out in Annex 10 and Annex 19 of the TM-EIAO for assessing impacts on sites of cultural heritage in EIA studies.

The Cultural Heritage Impact Assessment (CHIA) Mechanism applies to “Sites of Cultural Heritage” within a project Study Area. A Site of Cultural Heritage is defined “as an antiquity or monument, whether being a place, building, site or structure or a relic, as defined in the Antiquities and Monuments Ordinance (Cap. 53) and any place, building, site, or structure or

a relic identified by the Antiquities and Monuments Office to be of archaeological, historical or palaeontological significance”.

A CHIA must be undertaken in order to identify construction and operational phase impacts of the Project may have on the cultural heritage of the Study Area. The specific objectives of the CHIA include the following:

- To provide cultural heritage and archaeological impact assessment to satisfy the requirements of Section 3.4.9 of the EIA Study Brief (No. ESB-233/2011);
- To undertake a baseline study of the project study area in order to identify all heritage items as identified in the Guidelines for Cultural Heritage Impact Assessment;
- To identify any Sites of Cultural Heritage (i.e. Proposed and Declared Monuments) within the project study area and assess any impacts that will arise from the proposed project and recommend mitigation measures as appropriate; and
- To identify the impacts to identified heritage items and recommend mitigation for these items.

4.2.2 Antiquities and Monuments Ordinance

The Antiquities and Monuments Ordinance (Cap 53) was enacted in 1976. It prescribes the regulation over the discovery, excavation and protection of antiquities in HKSAR.

Under this Ordinance, the Secretary for Development is the Antiquities Authority. The statutory Antiquities Advisory Board (AAB) consists of members with expertise in various relevant fields to advise the Antiquities Authority on any matters relating to antiquities and monuments. The Antiquities and Monuments Office (AMO), as the executive arm of the Antiquities Authority, provides secretarial and executive support to the AAB in conserving places of historical and archaeological interest.

The Antiquities Authority may, after consulting AAB and with the approval of the Chief Executive as well as the publication of the notice in government gazette, legally declare a place to be protected. The Antiquities Authority is empowered to prevent alterations, or to impose conditions upon any proposed alterations as appropriate to protect the monument.

In addition to declared monuments, a large number and variety of sites of cultural heritage are identified and recorded by AMO. Recorded historic buildings and structures are classified into Grades 1, 2 and 3 by AAB to indicate their relative importance, as defined below:

- Grade 1 – Buildings of outstanding merit, which every effort should be made to preserve if possible.
- Grade 2 – Buildings of special merit; efforts should be made to selectively preserve.
- Grade 3 – Buildings of some merit; preservation in some form would be desirable and alternative means could be considered if preservation is not practicable.

Although graded buildings and structures carry no statutory protection, the Government has administrative procedures that require conservation be given to those historic buildings and sites of cultural heritage.

For archaeological sites, relics (defined under the Antiquities and Monuments Ordinance as fossils and objects/artefacts created, modified, etc. by human agency before 1800 AD) discovered after 1976 are, by law, properties of the government. All discoveries of antiquities or supposed antiquities must also be reported.

The excavation and search for relics require a licence from the Antiquities Authority. Once identified as having the potential for conservation, sites of archaeological interest are entered into a list. Archaeological items are administratively classified into 2 categories:

- Designated archaeological sites – Those which have been declared as monuments. These are gazetted under the Antiquities and Monuments Ordinance (Cap 53) and are to be protected and conserved at all costs.
- Recorded sites of archaeological interest – These are under administrative protection and are considered to be of archaeological interest but which are not declared as monuments.

4.2.3 Hong Kong Planning Standards and Guidelines

Chapter 10 of the Hong Kong Planning Standards and Guidelines (HKPSG) provides guidelines relating to the conservation of historic buildings, archaeological sites and other antiquities. The guidelines detail the methods for the conservation and preservation of protected monuments, the method of identifying and recording antiquities, particularly buildings which should be conserved and the recording and grading of such buildings and archaeological sites.

4.3 Assessment Methodology

4.3.1 Background

The definition/interpretation for Sites of Cultural Heritage under Schedule 1 of the EIAO consists of “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 CHIA comprises the identification of terrestrial and marine archaeological and built heritage impacts to Sites of Cultural Heritage and the assessment methodology for each of these tasks is highlighted below. It should also be noted that as stipulated in the Guidelines for Cultural Heritage Impact Assessment, all items that fall within the scope of the guidelines will be included in this report.

4.3.2 General

As stipulated in Section 3.4.9 of the EIA Study Brief (No. ESB-233/2011), the CHIA will follow the criteria and guidelines as stated in Annexes 10 and 19 of the TM-EIAO. The key stages for CHIA include the following:

- Baseline study (including both desktop study and field survey);
- Impact evaluation; and
- Formulation of recommended mitigation measures.

4.3.3 Study Area

According to the EIA Study Brief, the study area for field survey and impact evaluation includes the area of potential impact that would be caused by the proposed stations and stabling sidings. These have been defined within the study brief as follows:

- For terrestrial archaeology, this is defined as a 50m buffer from the site boundary of the Project; and
- For built heritage this is defined as a 50m buffer from the site boundary of the Project.

The construction of the Project would not involve any marine works. No marine archaeological issues would be anticipated.

4.3.4 Baseline Study

According to Annex 19 of the TM-EIAO, a baseline study will be conducted which includes both a desktop study and field survey, where necessary, within the study area to determine areas of archaeological and built heritage potential.

This will include any areas impacted by rail construction and operation as well as direct and indirect impacts of ancillary works areas and access sites etc. The desktop review of known terrestrial archaeology and built heritage items within the SCL (HHS) study area are given in **Sections 4.4 and 4.5** respectively. This provides key data for more focussed survey, if required, of cultural heritage impact.

4.3.5 Desktop Study

AMO maintains a list of known and potential sites of cultural heritage which is being updated from time to time. This list can be consulted at AMO, or EPD's EIAO Register Office. However, the list is neither meant to be exhaustive, nor is the information contained therein comprehensive, particularly in the case of archaeological sites or cultural features buried underground.

Other useful sources of relevant information include the tertiary institutions (e.g. the Hong Kong Collection at the University of Hong Kong Library, Departments of History and Architecture at the University of Hong Kong and the Chinese University of Hong Kong), public libraries and archives (e.g. the reference libraries under LCSD, the Public Records Office), District Offices, District Lands Offices and Land Registries, etc.

4.3.6 Field Survey Methodology – Terrestrial Archaeology

The key steps for the terrestrial archaeological field survey are:

- Apply a licence from the relevant authority for the person leading and undertaking a ground survey involving search and excavation of antiquities. For those activities or works involving search and excavation of antiquities, the requirements set out in the Antiquities and Monuments Ordinance must be followed.
- Define areas of natural land undisturbed in the recent past;
- Conduct a field scan of the natural land undisturbed in the recent past in detail with special attention paid to areas of exposed soil which were searched for artefacts;
- Conduct systematic auger survey/shovel testing to establish the horizontal spread of cultural materials deposits;
- Excavate test pits to establish the vertical sequence of cultural materials. Test pits are to be of sufficient dimensions to record vertical sequence of artefacts if present. Typical dimensions of 1x1m or 1.5 x 1.5m are commonly used in Hong Kong;
- Prepare maps showing the boundary of each archaeological sites as supported and delineated by field walking, augering and test-pitting. Drawing of stratigraphic section of test-pits excavated which shows the cultural sequence of a site will also be prepared;
- Provide a full bibliography and the sources of information consulted to assist the evaluation of the quality of the evidence;
- Report to AMO as soon as possible if the field survey identifies any additional sites of cultural heritage within the study area which are of potential historic or archaeological importance. The historic and archaeological value of the items will be assessed and reported during the field program and in liaison with the AMO. Should a rescue excavation be necessary this will form part of the mitigation program.

4.3.7 Field Survey Methodology – Built Heritage

The key steps for built heritage fieldwork include:

- To conduct field survey in accordance to the requirements of Appendix I-1, *Guidelines for Cultural Heritage Impact Assessment*, of the EIA Study Brief (No. ESB-233/2011).
- Prepare maps in 1:1000 scale showing the boundary of each historic building or structure. Assemble records of each historical building or structure and detailed record of each historic building or structure including its construction year, previous and present uses, architectural characteristics, as well as legends, historic persons and events, and cultural activities associated with the structure.

4.3.8 Impact Assessment

Following the baseline research (including desktop study and field evaluation), an assessment of any impacted Sites of Cultural Heritage and the heritage items listed on **Section 3.4.9.2** of the EIA Study Brief (No. ESB – 233/2011) will be conducted, for both the construction and operational stages.

The impacts will include the following:

- Direct loss, destruction or disturbance of an element of cultural heritage;
- Impact on its settings which impinge on its character through inappropriate siting or design; and
- Potential damage to the physical fabric of archaeological remains, historic buildings or historic landscapes through air pollution, change of water-table, vibration, recreation pressure and ecological damage by the development.

Preservation in totality of any cultural heritage features impacted should be taken as the first priority. Detailed requirements of the impact assessment are contained in paragraph 4.3.1(c), item 2 of Annex 10, items 2.6 to 2.9 of Annex 19 and other relevant parts of the TM-EIAO. These include:

- If, due to site constraints and other factors, only preservation in part is possible, this must be fully justified with alternative proposals or layout designs which confirm the impracticability of total preservation;
- Total destruction must be taken as the very last resort in all cases and shall only be recommended with a meticulous and careful analysis balancing the interest of preserving the archaeological, historical, architectural and other cultural values as against that of the community as a whole; and
- A detailed description and plans should be provided to elaborate to what extent the sites of cultural heritage will be affected.

4.3.9 Mitigation Measures

It is always a good practice to recognise the sites of cultural heritage early in the planning stage and site selection process, and to avoid it, i.e. preserve it in-situ, or leaving a buffer zone around the site. Built heritage, sites and landscapes are to be in favour of preservation unless it can be shown that there is a need for a particular development which is of paramount importance and outweighs the significance of the heritage features.

If avoidance of impact on the cultural heritage is not possible, amelioration can be achieved by reduction of the potential impacts and the preservation of heritage features, such as physically relocating it. Measures like amendments of the siting, screening and revision of the detailed design of the development are required to lessen its degree of exposure if it causes visual intrusion to the cultural heritage and affecting its character.

For total destruction or for areas where preservation *in-situ* of terrestrial archaeological remains is not possible, a comprehensive and practical rescue plan must be worked out. This is also applicable to sites of cultural heritage where only partial preservation is proposed. The rescue programme may involve preservation of the historic building or structure together with the relics inside, and its historic environment through relocation, detailed cartographic and photographic survey.

The implementation programme for mitigation measures shall list out clearly the proposed mitigation measures to be implemented, by whom, when, where, to what requirements and the various implementation responsibilities. A comprehensive plan and programme for the protection and conservation of the partially preserved site of cultural heritage, if any, during the planning and design stage of the proposed project should be detailed.

4.4 Desktop Review for Archaeological Sites

4.4.1 Known Archaeological Sites

The known archaeological sites in the vicinity of the study area are shown in **Figures 4.1.1 to 4.1.3**. It is emphasised that the boundary of the archaeological sites delimits an area within each region of both proven and potential archaeology. The “archaeological site” has been defined by AMO to include areas where archaeology has been found and areas of archaeological potential.

4.4.2 Former Tai Hom Village (大磡村)

Based on previous studies, former Tai Hom Village has been identified as a site with potential archaeological value (**Figure 4.1.3**). A total of 2 archaeological surveys were conducted in Year 2002. These surveys include the following:

- “Archaeological Survey at Tai Hom Tsuen”, by Archaeo-Environments Ltd ^[4-1]
- “九龍鑽石山舊大磡村考古搶救發掘報告”，區家發文物考古顧問公司 ^[4-2]

The site of the Tai Hom old village lies at about 1km to the northeast of Kowloon City and 500m north of the old Kai Tak airport in East Kowloon. The demolished Diamond Hill squatter village was developed beside the villages of Tai Hom and Yuen Leng during the 1960's. In the 1970's, the population within the small corrugated iron and narrow laneways reached about 15,000 (Smart A 1992).

The site was cleared in year 2000 for future development and is currently planned as the site for the railway facilities for SCL. According to the latest Tsz Wan Shan, Diamond Hill & San Po Kong OZP (No S/K11/23), this site has been zoned as a Comprehensive Development Area (CDA) and the proposed use for railway facilities will need to be authorised under the Railways Ordinance and the Town Planning Ordinance.

4.4.2.1 Settlement History of former Tai Hom Village

Before World War II

Before development in recent decades which had altered the topography of the area, Tai Hom was a village built on the northern edge of an area of low-quality rice-land about 1 – 2 km north-east of Kowloon City. The village was sited where the fertile, flat lands of the Kowloon plain sloped upwards towards Temple Hill. The area was rocky and rather unattractive to subsistence rice-farmers, as the village name, "At the Great Cliff", suggests.

The early origins of Kowloon can be dated to the Imperial Salt Monopoly of Nan Yue times (200BC). In addition the Lei Cheng Uk tomb dated to 200AD is almost certainly the tomb of a high official of the Salt Monopoly (P. Hase in AE Ltd report on former Tai Hom Village Dec. 2002 p7). The main villages of the Kowloon plain were founded over 800 years ago. Former Tai Hom Village has a much shorter history, which was founded in the late 18th century. The agricultural potential of the area near former Tai Hom Village was poor and the founders of the village had to supplement their livelihood by stone-cutting, in addition to the rice which they were able to grow.

The nearest old village to Tai Hom was Po Kong, which was a few hundred metres (or a few hundred yards) south-west of Tai Hom. This village lies below today's Choi Hung Road Sports-ground, and the Market Building on Sheung Hei Street, San Po Kong. It dates from the 3rd quarter of the 12th century, and the villagers farmed the fertile lands which comprise today's San Po Kong area.

Tai Hom (see **Plate 1.1 of Appendix 4.1**) is a single-surname village of the Chu clan. The founding ancestor of the Chu's was a Hakka from Ng Wah District far to the north-east of Hong Kong. He was a stone-cutter, and could not find enough work to feed his large family. He came to Hong Kong in Year 1762 to look for work in quarries which were at that date starting up in the eastern part of today's Victoria Harbour. He bought land at Tai Hom for two of his sons born in the 1750s. He supplemented by rice-growing with stone-cutting on the hills behind the village sold for use by masons in Kowloon City. Tai Hom was, therefore, a late settlement. It would probably take 40 years for the settlement and hence it is unlikely to have been founded much earlier than 1790.

During World War II

Nga Tsin Wai, Po Kong, Ngau Chi Wan, Tai Hom and the other villages of this area remained agricultural settlements throughout the 1930s. When the Japanese took Hong Kong in 1941, they immediately extended the Airport to make it usable by modern fighter planes. The extension of the Airport required the clearance of Po Kong and Sha Tei Yuen villages and their fields. All the land within the great loop of today's Choi Hung Road was used as Airport (this area was only freed for the San Po Kong development in the late 1950s, after the Airport was moved seawards onto new reclamation). This development did not affect Tai Hom directly, since the village stood to the north of the Japanese Airport perimeter fence. However, the Japanese period did bring serious hardship and hunger to the former Tai Hom Villagers.

Post World War II

After the War, the Tai Hom area resumed its traditional subsistence rice and market-gardening lifestyle. However, the capture of Canton by the victorious People's Liberation Army in 1949-1950 sent refugees into Hong Kong.

Given the lack of accommodation in Hong Kong at that time, most of the refugees lived in squatter huts. These huts were built on wherever land could be found and as close to the main urban area as possible. The Tai Hom area which lied at the edge of urban area at that time, became an obvious target for accommodation. By 1953-1955, most of the fields in former Tai Hom Village had disappeared beneath the new Diamond Hill squatter area. Only a few small fields survived between the new squatter huts. Most of the squatter huts in Diamond Hill were residences, but there were also many small squatter factories, shops and restaurants, some of which had become quite popular.

4.4.2.2 Geological Setting of former Tai Hom Village

The former Tai Hom Village is situated at the southerly margin of low granite hills and what was originally marshland along the original coastline.

According to geological mapping by Strange and Shaw (1986), this area is located almost entirely on Quaternary alluvium with a small edge of debris flow entering the southern end of the site. On inspection of the local geology during the archaeological survey by Archaeo-Enviroments Ltd (2002), however, it was noted that a low hill (+14mPD) composed of deeply weathered granite occupies much of the centre and eastern half of the site.

Modern road construction in the vicinity has removed part of this granite hill to the south, revealed in the cross section in a road cutting some 3-4m high and 100m long along Choi Hung Road. Directly opposite to the cutting is a small outcrop of granite which indicates the southerly extent of this hill. The hill can also be seen at Um Ling on the 1904 map of the area (see **Plate 1.1 of Appendix 4.1**).

Relief throughout the Tai Hom area varies from +6 to 8mPD on the lower lying western half of the study area, while to the east relief is from +8 to 14mPD.

4.4.2.3 Previous Investigations at former Tai Hom Village

Archaeological Survey July – August 2002

This survey was conducted by Archaeo-Environments Ltd aiming to determine the archaeological potential of Tai Hom area and to recommend any further investigation works and mitigation of impacts (if any).

The archaeological potential was evaluated based on 3 phases of field sampling of increasing resolution, following a progression from broad general survey to subsurface excavation work with closer focus on areas of archaeological discovery and archaeological potential. The key steps are:

- Baseline review;
- Survey baseline/sampling grid;
- Phase 1 - test trenches;
- Phase 2a - test pits;
- Phase 2b - focused test pits;
- Phase 3 - follow-up test pits;
- Finds analysis; and
- Reporting.

A sampling grid of 25m x 25m was established across the study area, which was adjusted during the field program to accommodate buildings and vegetation. A total of 53 test trenches, 23 test pits and 2 focused test pits were excavated at Tai Hom during the survey. The results are summarised in "Archaeological Survey at Former Tai Hom Village" which was subsequently submitted to AMO.

Archaeological and Landscape Summary at Tai Hom

Aerial photos taken in 1948 showed a low hill with the RAF hangar occupied by agricultural fields and slopes extending to the south and east (see **Plate 1.2 of Appendix 4.1**). Dark grey clay within trenches and test pits at Tai Hom (paddy soils) provide evidence of cultivation of the Qing and modern period. They were widespread and effectively sealing sands and colluvium in mid and lower slopes to the centre-east of Tai Hom. Subsurface geological and archaeological information recorded within 49 test trenches and 18 test pits provide the following summary of stratigraphy at Tai Hom:

- (a) A low hill (+14mPD) composed of coarse grained deeply weathered granite occupies the centre-east of the study area which is ostensibly the area occupied by the former Yuen Ling old village. Soil cover was thin in the upper landscape and where undisturbed (cut into) by the old RAF hangar and house development, parent material of orange sandy clay was less than 30cm below surface and can be seen in terraces and batters cut for house sites south of the hangar. A thin cultural layer persists throughout this area, manifest in a brown sandy clay. Most part of this layer is thin containing disturbed Qing, modern and occasional Song period pottery.

The only early feature was a ditch or depression of similar brown sandy clay containing Song-Yuan Dynasty pottery. Follow-up excavation revealed little evidence of Song material in the surrounding area.

- (b) To the east of this low hill, the granite bedrock was blanketed by colluvium. It could be seen as pebbles and small cobbles within a mottled matrix. Colluvium had been covered by coarse sandy alluvium, variably iron and manganese stained and weakly mottled, and present above colluvium in the lower landscape. The presence of sandy alluvium suggested deposition in and around the granite bedrock as outwash material from drainage from the hills to the rear of the site. These deposits contain Song Dynasty pottery within an area of about 800m² in the east of the study area near Luen Yee road. Over 5kg of Song Dynasty pottery was found within Test pit 12 in the centre of this area. Pottery found within this deposit was well preserved, suggesting transport/redistribution from a proximal source. Further to the east and below the elevated freeway, house

debris was thick and the natural surface was difficult to examine. Dark grey paddy soils appear to overlie alluvium and recovery of archaeological material was poor, though the coarse sands of context 4, with minor Song period pottery - extend as far as test pit 48.

- (c) The center-west of the study area was low lying (+6-8mPD) and for the most part underlain by coarse colluvium. Cobbles and coarse alluvium represented a broad alluvial fan at the confluence of two main streams which was since diverted by the western nullah but shown in the 1904 map of the area (see **Plate 1.1 of Appendix 4.1**).

Archaeological materials in this region were restricted to Qing and modern period pottery. These materials were present even within alluvial cobbles, which had provided a recent date for these phases of deposition. The only notable find within the western half of the study area was at test pit 37 which produced a thick layer of 19th century and early 20th century tile and earthenware (Dr. P.Lam p.comm.) within a disturbed context which also contained mixed Song period and a single Warring States period sherd.

Recommendations

The "Archaeological Survey at Former Tai Hom Tsuen" recommended the following investigation:

- 1) The low granite hill was represented by deposition of cultural material within a shallow ditch or depression offers the prospect of locating primary features. Although the surrounding area was highly disturbed, it had been truncated by house foundations, sewerage pits and pipelines. Excavation to follow the extent of this feature both to the west and east was recommended.
- 2) By contrast, Song period material at test pit 12 suggested a secondary deposit – material re-deposited from primary sites further up slope. A future excavation strategy should be centred on TP 12 with the aim of determining the extent and significance of this deposit, and the depth and relationship of the coarse alluvium in this part of the landscape. Primary occupation features were less likely in such a setting though investigation may repay further subsurface investigation.

Archaeological Excavation in October 2002

A follow-up excavation was conducted by Mr Au Ka Fat in October 2002 based on the findings and recommendations of the "Archaeological Survey at Tai Hom Tsuen" ^[4-2].

The excavation works were undertaken in 2 main areas, Area A and Area B, using 5m x 5m excavation trenches in each area as follows:

- Area A on the upper slope towards the eastern part of the study area occupying a total of 250m²; and
- Area B on the mid-lower slope towards the eastern part of the study area also occupying a total of 250m².

Song Dynasty artefacts discovered at Tai Hom reflected the importance of the general Kowloon region during that period. There was also limited presence of geometric pottery and stone tools of earlier prehistoric occupation. However, in both cases, it was concluded from both the archaeological survey and follow-up excavation that the Song and earlier archaeological deposition at Tai Hom was secondary and was the product of re-deposition from off-site.

Area A revealed little cultural material before the Qing Dynasty within typically thin soil and highly disturbed setting with likely truncation/removal of earlier archaeological deposits. Zone A was the focus of the squatter village with likely removal of earlier archaeological material flushed toward Zone B.

Throughout the study area, there was no evidence of building remains, ceramic roof tile, bricks, ancient trackways, wells or domestic features or remains, etc. The ceramic assemblage recovered for most part from Test Sections 1- 9 within Area B were found with

sandy colluvial deposits which imply redeposition, likely from Song Dynasty occupation (now removed – north of the Tai Hom area).

While being a secondary site, the ceramic assemblage at Tai Hom were from kiln in southern China. It demonstrated that the Kowloon area in Tang and Song Dynasty were the trading area of ceramic, probably the outer port of Guangzhou. The area in Kowloon Bay was a relatively rich area. According to historical records, this area was one of the 10 sea salt base in Guangdong.

Consolidating the 2 Archaeological Surveys Findings in 2002

The above sections have presented the findings from 2 previous archaeological surveys for former Tai Hom Village. The following consolidates all the key conclusions so far:

- The early settlement in former Tai Hom Village probably started in 1790;
- Before the World War II, former Tai Hom Village and surrounds was mainly an agricultural area;
- Some of the land was transferred into military uses during the war;
- After the war, former Tai Hom Village was mainly occupied as squatter area (with houses, factories and shops), all of which have been evacuated in year 2000;
- The squatter area, together with its associated utilities, sewers etc, had highly disturbed the original setting in former Tai Hom Village; and
- Modern infrastructure development such as the Choi Hung Road has significantly changed the original landscape greatly.

Qing Dynasty or modern pottery was common throughout the site with localised deposits of Song Dynasty artefacts and rare prehistoric artefacts in the centre-east and east of the study area. These latter deposits were found within secondary (colluvial) material and are therefore not part of an original (*in-situ*) occupation site. The author of the excavation report (Au Ka Fat 2002) concluded that the study area was not an important cultural site.

SCL Archaeological Survey at former Tai Hom Village

An archaeological survey for former Tai Hom Village has been completed in March 2009 (refer to **Appendix 4.2**). The survey report has provided more information to update the archaeological baseline information.

A total of nine test pits were excavated initially in the Stage 1 survey with an additional two test pits excavated for the Stage 2 survey. Based on the results of the test pit program at the former Tai Hom Village in 2009 and in light of the results from archaeological works in 2002, the following highlights are noted:

- The results of the excavation in 2002 culminated in conclusions that the Tang/Song Dynasty remains at the former Tai Hom Village were the product of redeposition.
- The results of the test pit survey have proven the presence of a sparse Tang/Song Dynasty layer which extends to the north-eastern part of the site.
- While the 2009 program has proven a wider extent of the Tang/Song Dynasty remains, the deposit is secondary with no further evidence of *in-situ* remains, foundations, postholes or evidence of occupation.

The survey at the former Tai Hom Village has revealed that the Tang/ Song Dynasty remains are both sparse and redeposited and hence of lesser archaeological significance. However, assemblage of Tang/ Song archaeological finds within urban setting is considered rare in Hong Kong. It is therefore recommended that a survey-cum-excavation works to be conducted prior to the construction works at the former Tai Hom Village site. The tentative extent for the survey-cum-excavation within former Tai Hom Village is shown in **Figure 4.3**. Before the excavation, the archaeologist shall conduct further test pits to refine the actual demarcation of the excavation area.

4.4.3 Kai Tak Area

According to the approved Kai Tak Development EIA Report, there are several known archaeological sites in Kai Tak that are relevant to this project. They are described below.

4.4.3.1 Lung Tsun Stone Bridge (龍津石橋) and Former Kowloon City Pier

Lung Tsun Stone Bridge was a landing pier built in 1873-1875 (**Figure 4.1.2**). The pier linked the east gate of Kowloon Walled City with the coastline. The stone bridge was subsequently buried underground during the Kai Tak reclamation in 1924.

A concrete extension of the Bridge was built in 1910 and used by the local steam-ferries. In 1930, it was removed and replaced by a new Government pier, which in turn disappeared when the Japanese reclaimed the foreshore during the Japanese Occupation.

Archaeological works in 2003 for Kai Tak Development did not find the bridge but in a subsequent development EIA work, a follow-up archaeological investigation in 2008 had revealed part of the Bridge and the Former Kowloon City Pier. Based on the information from the subsequent investigation on the Lung Tsun Stone Bridge and the unearthed structures at the archaeological site, three components/sections are identified including the following,

Lung Tsun Stone Bridge

The Bridge was constructed in three phases over a period of 35 years. The granite planks, masonry of six or seven spans and the Pier End Structure unearthed during the excavation in 2008 are part of the first phase Lung Tsun Stone Bridge. The third phase was a concrete extension built in 1910 to replace the second phase wooden structure. Both were at an angle of about 15° to the alignment built in 1875. According to the Conservation Management Plan for the Site of Lung Tsun Stone Bridge prepared by AMO in 2009, the remains of the Lung Tsun Stone Bridge are classified as archaeological features of high significance. The broken concrete supporting pillars and landing steps of the Former Kowloon City Pier are classified as archaeological features of medium significance.

1924 reclamation seawall attached to the Lung Tsun Stone Bridge and the landing steps of the 1924 reclamation seawall

The 1924 reclamation seawall marked the coastline at that time. Part of the first phase Lung Tsun Stone Bridge was buried by reclamation in 1924 behind the seawall. The landing steps of the 1924 seawall were located at approximately by 130 m east of the Bridge.

Former Kowloon City Pier and the attached 1930s causeway/seawall

Former Kowloon City Pier projected obliquely from the 1924 reclamation seawall and was approximately 60m long. It was constructed in 1930. The southern section of the Bridge and the Former Kowloon City Pier were likely demolished and buried in reclamation during the Japanese Occupation (1941 – 1945). A total of 47 supporting pillars and two landing steps of the Former Kowloon City Pier were exposed during the subsequent archaeological excavation conducted by CEDD. A section of 1930s causeway/ seawall attached to the Pier End Structure of Lung Tsun Stone Bridge was also unearthed. It marks the end of the first phase Lung Tsun Stone Bridge and the beginning of the Former Kowloon City Pier. It appears to have been incorporated into the construction of Former Kowloon City Pier. According to the Conservation Management Plan for the Site of Lung Tsun Stone Bridge prepared by AMO in 2009, the remains of the Lung Tsun Stone Bridge are classified as archaeological features of high significance. The broken concrete supporting pillars and landing steps of the Former Kowloon City Pier are classified as archaeological features of medium significance.

Two supporting concrete pillars of the Former Kowloon City Pier were exposed in 2008 archaeological excavation.

4.5 Desktop Review for Built Heritages

The following buildings within the study area represent a review of available data on built heritage which has been supplemented by partial field survey information. **Figures 4.2.1 to 4.2.3** show the locations of these built heritages. A field survey has also been conducted on these built heritages and the results are given in **Appendix 4.3**.

This EIA has assessed all built heritages explicitly stipulated in the EIA Study Brief (No. ESB-233/2011) and those identified throughout the EIA process. It has been concluded that there are no Sites of Cultural Heritage (namely Declared Monument) situated in the Study Area. The Project Proponent shall implement all the recommended mitigation measures accordingly as discussed in **Section 4.8**.

4.5.1 Former Royal Air Force Hangar (前英國皇家空軍飛機庫) at former Tai Hom Village (大磡村)

4.5.1.1 History of the hangar before and during 2nd World War

Prior to the Japanese occupation, there were plans by the authorities to expand Kai Tak Airfield and build paved runways. Owing to this purpose, the RAF hangar located at the eastern end of the airfield and constructed in 1934, was dismantled in June 1941.

While it is not entirely clear when the hangar at Tai Hom was erected and by whom (Japanese or British), the current hangar was re-erected on-site around 1941-45 (**Figure 4.2.3**). It was designed to be taken down and reassembled quickly. The Hangar has been used by the Japanese troop during the 2nd World War.

4.5.1.2 After the 2nd World War

After the war, the RAF used the hangar which included housing the Spitfire squadron (**Plate 1.1 in Appendix 4.4**). The 1945-1958 Kai Tak Airport comprised two paved crossing runways that were built by the Japanese with British prisoner-of-war labour. The main runway in similar direction to the reclaimed runway at Kai Tak was located in the area that we know today as San Po Kong.

Prior to the closure of RAF Kai Tak in the 1970s, Kai Tak Airport and the airfield were divided into civilian and military use. The RAF had always occupied the eastern end of Kai Tak (next to today's Richland and Telford Gardens) whilst the civilian airfield was located at the western end. From the 1930s till 1941, the RAF and the Harbour Department (which controlled civilian airport operations) both operated their own separate hangars.

This hangar is the only surviving pre-war military aircraft hangar in Hong Kong. After the 2nd World War, the hangar had been used by the RAF until in the 1970's when the hangar was vacated.

Over the last 40 years after the use by the RAF, the hangar had served for various functions such as small scale industries and godown storage. The structure has now fallen into disrepair with the roof exposed and overgrown with vegetation (**Plate 1.3 in Appendix 4.4**). Details of the historical background, structural condition and cultural significance of the hangar and other similar historical buildings are given in **Appendix 4.5** and a condition survey in **Appendix 4.6**. A summary is given below for easy reference.

Structural Conditions	<p>A structural survey was conducted in January 2009 on the Former Royal Air Force Hangar. The key findings and conclusion of the structural survey are summarised as follows:</p> <ul style="list-style-type: none">• The general structural conditions are poor;• Most of the steel members are extensively corroded and deteriorating, which would have significant effect on its structural integrity;• The condition of the Hangar is currently not safe for public
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viewing.

- The wall cladding and roofing materials have been identified as having asbestos containing material. It will therefore be necessary to remove and dispose of the wall cladding and roofing to meet health and safety standards.

Similar Heritage Items in HK

According to the information in Hong Kong Aviation Club web-site, there used to be an aircraft hangar in their previous club house at Kai Tak before they moved to Shek Kong (ref <http://www.hkaviationclub.com.hk/nav4b.html>). The picture taken by Ron Pattinson also suggested that the shape and dimension was generally consistent with that in the former Tai Hom Village. However, all the aircrafts had been relocated to Shek Kong Airfield when Kai Tak was closed down in 1998. Hence, the Former Royal Air Force Hangar in former Tai Hom Village is the only structure of its type in HK despite of its poor structural conditions.

Cultural Significance

- This hangar is unique as the only surviving pre-war military aircraft hangar in Hong Kong. It was used by the Japanese troop during 2nd World War.
- The hangar was first constructed in 1934 at the Kai Tak airfield, dismantled in 1941 and later re-erected at its current location. It was designed to be quickly dissembled and reassembled.
- Due to lack of regular maintenance, the structure of the hangar is not intact which diminishes its aesthetic and architectural value.
- Much of its surrounding associated historical landscape (such as the two crossing airport runways in 1945-1958) has disappeared and its original historical identity as a military aircraft hangar is blurred by previous use for small scale industries and godown storage.
- Organized historical information, including cartographic and photographic record would be necessary to communicate its historical value as a pre-war military aircraft hangar.
- Together with the Old Pillbox, they contribute to the recollection of wartime history.

4.5.2 Stone House, No 4 Tai Koon Yuen (大觀園 4 號石寓)

The Stone House, No. 4 Tai Koon Yuen (大觀園 4 號石寓) was built in 1947 (**Figure 4.2.3**). It was originally owned by Wu Junzhao (吳君肇), the ex-manager of the former Shanghai Bank of Communications, and was rented to actor Qiao Hong (喬宏) between 1950s and 1960s. The neighboring house at No 5 Tai Koon Yuen, now demolished, was once home of Li Hanxiang (李翰祥), a famous film director (**Photo 1.4 in Appendix 4.4**).

This Stone House was built of granite from quarry located within the Diamond Hill areas. It was a two storey building with temporary structure of corrugated steel sheets on the roof. The windows are framed with metal. The front part of the house is single storey with steel balustrade around the flat roof, used as a roof terrace.

The stone building is the only surviving building from the former Tai Hom Village. It is in disrepair and currently surrounded by perimeter fencing. Details of the historical background, structural condition and cultural significance of the Stone House and other similar historical buildings are given in **Appendix 4.5** and a condition survey in **Appendix 4.7**. A summary is given below for easy reference.

Structural Conditions	<p>A structural survey was conducted in February 2009 on the stone house. The key findings and conclusion of the structural survey are summarised as follows:</p> <ul style="list-style-type: none"> • The general structural condition is poor and not suitable for living; • Part of the temporary squatter structure at the roof had collapsed; • Spalling and exposed reinforcement found under the roof and on the wall; • Most of the installation foam board in the audio room were damaged or in poor condition • If it is not properly repaired, this house would have the risk of collapsing. • Careful planning is required to record each member of the house before disassembling into smaller pieces for relocation and later reassemble.
Similar Heritage Items in HK	<p>There are some stone houses of similar type in other places of Hong Kong. Examples are the one in Lok Fu district (within 何家園), and many others in the New Territories.</p>
Cultural Significance	<ul style="list-style-type: none"> • The Stone House, No. 4 Tai Koon Yuen has historical linkage with Hong Kong's early film industry • Many of its architectural features had been modified to a form different from its original style during 1947 – 1960. • This building is a decent but not unique representation of this type of stone house architecture in Hong Kong. The interior structure of stone house is not intact due to lack of regular maintenance. • The cultural significance of the stone house is slightly diminished by the absence of nearby evidence of the early film industry in Hong Kong with which the building is associated. All previous film studios and associated production facilities had been removed during development in and around former Tai Hom Village over the past 40 years.

4.5.3 Old Pillbox (機槍堡) at former Tai Hom Village (大磡村)

A fortified pillbox lies to the centre-north of the Tai Hom area, and close to the hangar (**Figure 4.2.3**). This old pillbox was constructed by the Japanese Air Force during the Japanese occupation (**Plates 1.5 and 1.6 in Appendix 4.4**). It was built to guard the eastern end of the Kai Tak Airport while holding the route from the north.

The pillbox is a dome-shaped structure, with an extension on one side to provide a protected entry. The domed section is approximately 5m in diameter and 2.4m from ground level to top. The walls are made of cut stone blocks which were rendered by cement. There were originally five firing loopholes in the dome walls, and a further one through the wall to the entry. The interior is commonly flooded as the floor is below ground level.

After the war, the pillbox was abandoned and subsequently occupied by squatters. However, the pillbox was retained after the demolition of former Tai Hom Village in 2000 and is one of the few remains of the old Kai Tak Airport. Details of the historical background, structural condition and cultural significance of the old pillbox and other similar historical buildings are given in **Appendix 4.5** and a condition survey in **Appendix 4.7**. A summary is given below for easy reference.

Structural Conditions A structural survey was conducted in February 2009 on the old pillbox. The key findings and conclusion of the structural survey are summarised as follows:

- The general condition of the old pillbox is more satisfactory as compared to the Former Royal Air Force Hangar and stone house, except for the delamination of the plastering at the roof and some broken pieces of brickwork.
- The structural integrity of the pillbox is such that it should not be lifted in one piece. Subject to further engineering study of its structural integrity, the pillbox will need to be dismantled.

Similar Heritage Items in HK

There were over seventy old pillboxes around the coast on Hong Kong Island and many more inland at the ends of the reservoirs and on road junctions during 1941. They were mainly British built pillboxes. Many survived and lay disrepair nowadays. Some of these old pillboxes are:

Some Other Old Remark

Pillboxes in HK

Old Pillbox on Chung Hom Kok beach The top of the pillbox is covered with debris that has fallen down from the hillside. But the top of the small round structure can still be noted.

(ref <http://www.batgung.com/node/1628>)

Old Pillbox near Waterfall Bay (currently called Cyber Port) It is constructed with an adjacent bunker. (ref '[Final EIA \(Environmental Impact Assessment\) Report for Agreement No CE 92/97](#)')

Old Pillboxes JLO1 and JLO2 at Wong Nei Chung They were manned by 3 Coy (Eurasian) of the Hong Kong Volunteer Defence Corps (HKVDC)

(ref <http://www.hkvc.ca/historical/banham.htm>)

Old Pillboxes along the Gin Drinker's Line The Gin Drinker's Line in the north of the Kowloon Peninsula extended from Gin Drinker's Bay in Kwai Chung in the west, passing the Shing Mun Reservoir and Shing Mun River, Sha Tin, Tate's Cairn, Sha Tin Pass, to reach Sai Kung in the east. Its total length was 18 km.

Ditches, pillboxes and bunkers were also built along the line. This plan was once shelved but was relaunched in 1939. Construction of the line was completed in 1941.

(ref http://www.lcsd.gov.hk/en/ppr_release_det2.php?id=588)

Old Pillbox at Luk Keng There are some trenches, pillboxes and observation posts in Luk Keng (ref "War Relics in the Green" by Ko Tim Keung)

These old pillboxes are constructed by the British troops but the old

pillbox at former Tai Hom Village is a Japanese built pillbox, of which it is the only one of its kind found in Hong Kong to date. Its historical value and interest is relatively high with a Grade 2 historic building status awarded by the Antiquities Advisory Board in 2002. It is part of the history of Japanese Invasion during the 2nd World War.

A complete picture of the old pillbox locations in the New Territories and on the Kowloon Peninsula is hard to find, but one exists for the Hong Kong Island can be found in the Japanese Record. **Photo 1.7 of Appendix 4.4** shows the locations of these British pillboxes in 1941. They were targets of the Japanese during their invasion. Many of them survived till now, although their conditions do vary a lot.

- Cultural Significance
- The old pillbox is a part of the Japanese fortification of Kai Tak airport during World War II.
 - It is the only Japanese constructed pillbox and the only graded old pillbox in HK.
 - Much of its surrounding associated historical landscape has disappeared (such as the old Kai Tak Airport during war time).
 - Together with the Hangar, they contribute to an important piece of wartime history.

4.5.4 Gradings for Built Heritages

The above built heritages have different gradings. In a recent comprehensive assessment of historical buildings, the grading for these built heritages have been reviewed by AMO and submitted to Antiquities Advisory Board (AAB's) consideration. A summary of the existing (at the time of writing this report) and the latest proposed grading is given below. The proposed grading of some of the built heritages has been confirmed according to the list of built heritage released by AMO on 2 September 2011. The 1:1000 plan maps showing the boundary of the built heritages are included in the built heritage survey (see **Appendix 4.3**).

Table 4.1: Existing and proposed grading of built heritages

1:1000 Plan Ref	Built Heritage	Ownership ^[1]	AMO Grading	
			Existing	Proposed ^[1]
A6.1-022	Former Royal Air Force Hangar, Diamond Hill, KLN (九龍鑽石山前英國皇家空軍飛機庫)	Gov't	Grade 3	Grade 3**
A6.1-023	Stone House, No. 4 Tai Koon Yuen (大觀園4號石寓)	Gov't	Grade 3	No Grade**
A6.1-024	Old Pillbox, Diamond Hill, KLN (九龍鑽石山機槍堡)	Gov't	Grade 2	Grade 2**

Note:

^[1] As per AMO's List of the Historic Buildings in Building Assessment (as of 2 September 2011)

** Grading has been confirmed for the Historic Building as per AMO's list (as of 2 September 2011)

4.6 Impact Assessment – Construction Phase

4.6.1 Archaeological Sites

4.6.1.1 Former Tai Hom Village

As can be seen in **Figure 4.1.3**, the DIH is located right at top of the former Tai Hom Village at Diamond Hill. In order to investigate the archaeological potential of former Tai Hom Village, a field investigation was carried out at various locations over the former Tai Hom Village in March of 2009. The archaeological survey report is given in **Appendix 4.2** for information.

The survey at the former Tai Hom Village has revealed that the Tang/ Song Dynasty remains are both sparse and redeposited and hence of lesser archaeological significance. However, assemblage of Tang/ Song archaeological finds within urban setting is considered rare in Hong Kong. Since the presence of the sparse Tang/ Song Dynasty layer extends to the north-eastern part of the former Tai Hom Village site would be directly impacted by the construction of the proposed DIH, appropriate mitigation measures would be recommended.

Therefore, the evaluation of cultural heritage impact assessment for Former Tai Hom Village can be classified as **acceptable impact with mitigation measures**.

4.6.1.2 Lung Tsun Stone Bridge and Former Kowloon City Pier Archaeological Site

Lung Tsun Stone Bridge (**Figure 4.1.2**) was a landing pier built in 1873-1875. The pier linked the east gate of Kowloon Walled City with the coastline. The Bridge was constructed in three phases over a period of 35 years. It appears to have been incorporated into the construction of Former Kowloon City Pier in 1930. The Former Kowloon City Pier projected obliquely from the 1924 reclamation seawall and was approximately 60m long. The southern section of the Bridge and the Former Kowloon City Pier were likely demolished and buried in reclamation during the Japanese Occupation (1941 – 1945).

The proposed station and refuge sidings would totally avoid the remains of the Lung Tsun Stone Bridge (including the dressed granite planks and masonry of six or seven spans and the Pier End Structure). Though there is a possibility that linking structures may be present beneath the excavation level between Lung Tsun Stone Bridge and Former Kowloon City Pier, the differential settlement imposed on such linking structure (if it does exist) is expected to be small and has negligible impact to Lung Tsun Stone Bridge.

Evidence of remains of the second and third phase of Lung Tsun Stone Bridge was not found in the subsequent archaeological excavation in 2009. Direct or indirect impact from the SCL works to the second and third phase of the Bridge is therefore considered unlikely.

A buffer zone to the Former Kowloon City Pier (as shown in **Figure 4.1.2**) will be maintained during the construction of the Project within which no at-grade construction activities to be carried out. To the east between Former Kowloon City Pier and KAT, trench excavation within braced cofferdam walls is proposed and a buffer zone of Former Kowloon City Pier will be maintained. This method has been adopted so as to preserve buried seawall steps of the 1924 seawall from open cut excavation during construction of the Project.

Indirect impacts on Lung Tsun Stone Bridge and the Former Kowloon City Pier due to ground-borne vibrations from construction equipment would not be significant as they do not possess sufficient power or energy to disrupt the relatively massive fragments. A buffer zone of Lung Tsun Stone Bridge and Former Kowloon City Pier (as shown in **Figure 4.1.2**) will also be provided.

Therefore, the evaluation of cultural heritage impact assessment for Lung Tsun Stone Bridge and Former Kowloon City Pier Archaeological Site can be classified as **acceptable impact**.

4.6.2 Built Heritage

4.6.2.1 Sites of Cultural Heritage (Declared Monuments)

There is no Declared Monument recorded in the Study Area.

4.6.2.2 Three Historical Buildings at Former Tai Hom Village

There are three built heritage structures within the former Tai Hom Village (**Figure 4.2.3**) and the former Royal Air Force Hangar together with the Old Pillbox are located within the proposed development.

The entire structure of the Former Royal Air Force Hangar will be directly impacted by the construction of the DIH area. In-situ preservation of this structure is not practicable. Detailed photographic and cartographic record of the structure would be recommended to document this historic building prior to disassembling it. The Former Royal Air Force Hangar is in poor condition. The wall and roof cladding of the hangar comprises asbestos containing materials and will have to be removed and disposed of for health and safety reasons. The steel frame of the hangar is highly corroded and could not safely be reassembled. It is therefore proposed to retain some portions of the structure that are of historical interest.

The stone house is an ungraded structure with limited heritage value which is located outside the temporary at-grade works sites. There will not be any impact to the structure.

The proposed east end of the DIH station box will encroach onto the footprint of the Old Pillbox. In view of the direct impact to the Old Pillbox, it is recommended to disassemble the Pillbox and store the parts at a location away from the heavy construction activities.

Detailed photographic and cartographic records of the Old Pillbox would be recommended to document it prior to disassembling the Old Pillbox and it is proposed to be reinstated as far as practicably possible. However it is a fragile and brittle structure and some parts may be subject to reassembly with new materials to maintain an adequate level of structural integrity.

Therefore, the impact on former Royal Air Force Hangar and the Old Pillbox would be considered as **acceptable impact with mitigation measures** while that for the Stone House would be considered as **acceptable**.

4.7 Impact Assessment – Operational Phase

4.7.1 Archaeological Sites

4.7.1.1 Former Tai Hom Village

Figure 4.1.3 indicates that the DIH is located right at top of the former Tai Hom Village at Diamond Hill. Recommended mitigation measures would be conducted prior to the construction. Further mitigation measure during the operational phase is therefore not considered necessary.

Therefore, the impact on Former Tai Hom Village would be considered as **acceptable**.

4.7.1.2 Lung Tsun Stone Bridge and Former Kowloon City Pier Archaeological Site

No impacts anticipated at this site during operation phase of SCL (HHS) due to its considerable distance from proposed station and refuge sidings.

Therefore, the impact on Lung Tsun Stone Bridge and Former Kowloon City Pier Archaeological Site would be considered **acceptable**.

4.7.2 Built Heritage

4.7.2.1 Sites of Cultural Heritage (Declared Monuments)

There is no Declared Monument recorded in the Study Area.

4.7.2.2 Former Tai Hom Village

As discussed in **Section 4.6.2.2**, the entire structure of Royal Air Force Hangar together with the Old Pillbox would be directly impacted during the construction phase.

As detailed photographic and cartographic records are recommended to document the Hangar and the Old Pillbox prior to disassembling them, no other mitigation measure is required during the construction phase of the SCL. However, the pillbox and some portions of the hangar will be stored temporary away from the DIH construction activities.

Description of the further details of the reassembling plan for each of the historical buildings at former Tai Hom Village is presented in **Section 4.8.2.2**.

During the operational phase, the pillbox will be reassembled within the former Tai Hom Village. As discussed in **Section 4.8.2.2**, the heritage value of the reassembled structure would be largely reduced. Hence, there would not be any impacts during the operational phase.

Therefore, impact on the former Royal Air Force Hangar and the Old Pillbox would be considered as **acceptable**.

4.7.2.3 Others

No direct or indirect impacts are expected during the operational phase of the proposed works for the Stone House No. 4.

4.8 Mitigation Measures – Construction Phase

4.8.1 Archaeological Sites

4.8.1.1 Former Tai Hom Village

As discussed in **Section 4.4.2.3**, previous studies at the former Tai Hom Village reveal that the Tang/ Song Dynasty remains found are both sparse and redeposited and hence of lesser archaeological significance. However, assemblage of Tang/ Song archaeological finds within urban setting is considered rare in Hong Kong. It is therefore recommended that a survey-cum-excavation works to be conducted prior to the construction works at the former Tai Hom Village. The tentative extent for the survey-cum-excavation within former Tai Hom Village is shown in **Figure 4.3**. Before the excavation, the archaeologist shall conduct further test pits to refine the actual demarcation of the excavation area. The locations and total numbers of these test pits would need to be determined by the archaeologist and agreed with AMO on-site during the survey-cum-excavation.

An Archaeological Action Plan (AAP) following the Guideline for Archaeological Impact Assessment should be submitted to the Antiquities and Monuments Office (AMO) for agreement. The project proponent should appoint qualified and experienced archaeologist(s) with sufficient funding, time and personnel arrangements to implement the AAP. The AAP should include a detailed plan for the survey-cum-excavation and a contingency plan to address possible arrangement if significant archaeological findings are unearthed during the survey-cum-excavation. Details of the proposal plan with specification for the survey-cum-excavation should be agreed with AMO prior to the submission of licence application.

4.8.1.2 Lung Tsun Stone Bridge and Former Kowloon City Pier

No impacts are expected during construction phase on the Lung Tsun Stone Bridge and Former Kowloon City Pier (see **Section 4.6.1.2**) and therefore mitigation measures are not required. In addition, a buffer zone for Lung Tsun Stone Bridge and Former Kowloon City Pier (as shown in **Figure 4.1.2**) would be maintained.

4.8.2 Built Heritages

4.8.2.1 Sites of Cultural Heritage (Declared Monuments)

There is no Declared Monument recorded in the Study Area.

4.8.2.2 Three Historical buildings at Former Tai Hom Village

As discussed in **Section 4.6.2.2**, the Former Royal Air Force Hangar and the Old Pillbox would be directly affected by the construction of the DIH. The Stone House No.4 would not be directly affected. As detailed photographic and cartographic records will be recommended to document the Royal Aircraft Hangar and the Old Pillbox prior to their removal, no other mitigation measure is required during the operational phase of the SCL (HHS). The Old Pillbox would be reinstated as far as practicable after being temporarily stored during the construction period. Portions of the hangar frame would also be stored during construction and placed in areas of the CDA site during operational stage to illustrate the structural technology used during war time. A model to represent the current form of the hangar will also be prepared to demonstrate the form and function of the hangar. The project proponent shall submit a separate Conservation Plan for these 2 historical buildings. The following shows an outline conservation plan for reference.

Appendix 4.8 presented the evaluation of a number of possible mitigation measures. As on-site preservation is not practicable, the following good practice is recommended for the 2 historical buildings:

- | | |
|---------------|---|
| Old Pill Box: | <ul style="list-style-type: none"> • Documentation prior to disassembling, temporary storage • Reinstatement (as per the conservation plan*) within CDA site |
| RAF Hangar: | <ul style="list-style-type: none"> • Documentation prior to disassembling, temporary storage of portions of historical interest • Display of retained portions and a model within CDA site as per the conservation plan |

Disassembling refers to the breaking down of the entire structure into smaller structural elements that would fit for temporary storage in an appropriate manner, either on-site or off-site. Nevertheless, it should be noted that the heritage values of these historical buildings would be largely reduced once they are disassembled based on the Principles for the Conservation of Heritage Sites in China (2003) and Burra Charter (1999).

The recording documentation and disassembling for temporary storage would be undertaken by the Project Proponent.

Below is a description of the further details of the mitigation measures for each of the historical buildings at former Tai Hom Village.

<u>2 Historical Buildings in Former Tai Hom Village</u>	<u>Pre-construction Proposed Mitigation Measure</u>	<u>Post-construction</u>
Former Royal Air Force Hangar	<p>Further structural survey and documentation, including cartographic and photographic record and structural component inventory of the existing structure would be conducted.</p> <p>Disassemble the building with care, record and securely transport some</p>	<p>The poor structural condition of the Hangar due to a lack of regular maintenance and the need to remove and dispose of wall and roof cladding asbestos containing materials would lead to the loss of most of its historical fabric.</p>

2 Historical Buildings in Former Tai Hom Village

Pre-construction

Proposed Mitigation Measure

Post-construction

portions of historical interest and store.

It should be noted that the remaining wall and roof cladding has been identified to be asbestos containing material and therefore all such material will need to be removed and disposed of for health reasons.

The Hangar is recommended to be dismantled and some portions of historical interest be retained for display within the future development site.

The Project Proponent will be the responsible party for disassembling of the historic structure.

The Project Proponent will be responsible for display the retained portions together with a model as per the recommendations in the conservation plan within the CDA Site.

Old Pillbox

Further structural survey and documentation, including cartographic and photographic record and structural component inventory of the existing structure would be conducted.

A structural survey was conducted in February 2009 on the old pillbox. The general condition of the old pillbox is more satisfactory as compared to the Former Royal Air Force Hangar and stone house, except for the delamination of the plastering at the roof and some broken pieces of brickwork. The structural integrity of the pillbox is such that it should not be lifted in one piece. Subject to further engineering study of its structural integrity, the pillbox will need to be dismantled.

Disassemble the building with care, record and securely transport and store each reusable component.

The temporary relocation within the Tai Hom Village site would lead to loss of heritage value to the Pillbox.

Reassembling the Pillbox as far as practicable is proposed.

The Project Proponent will be the responsible party for disassembling of the historic structure and reassembly.

The Project Proponent will be responsible for reinstating the Old Pillbox as per the recommendations in the conservation plan within the CDA Site.

The project proponent shall submit a separate Conservation Plan for these 2 historical buildings as another mitigation measure. The following shows an outline conservation plan for reference.

Key Aspects **Description**

Assessment of • Assess and confirm the historical and cultural significance of the 2

Cultural Significance	<p>historical buildings based on the latest information (including site visits, etc)</p> <ul style="list-style-type: none"> • Identify any special elements of cultural interest and significance (including facade, or architectural and structural elements for the period when the 2 historical buildings were actively used, etc) • Identify any gaps in the knowledge of the 2 historical buildings. • Prepare an inventory of heritage resources
Assessment and Analysis of Conservation Needs	<ul style="list-style-type: none"> • Physical conditions of the special elements of cultural interest and significance • Latest AAB's grading and public aspiration (including those from public consultation, if any) • List of special elements of cultural interest and significance that have to be conserved
Identification of constraints and opportunities	<ul style="list-style-type: none"> • Need and extent for physical repairing • Statutory requirements (e.g. means of public access and escape, utilities) • Safety constraints (e.g. asbestos containing materials have to be totally removed) • Land availability within the CDA site • Requirements on implementation timeframe / responsibility
The Proposed Use	<ul style="list-style-type: none"> • Conservation objectives • Conservation principles for proposal • Proposal plans (including design drawings) • Management plan and implementation agent
Review Arrangement	<ul style="list-style-type: none"> • Arrangement and timescale for a periodic review of the contents of the plan and the implementation of the actions recommended.
Supplementary Information	<ul style="list-style-type: none"> • Bibliography and references • Specialist reports and documentation • Plan, photographs and other site data (e.g. topo and building) • Survey data

Reference has been made to the following documents:

- Conservation Plan by James Semple Kerr
- Conservation Plan by Charter of Venice (ICOMOS)
- Conservation Plan by the Burra Charter (ICOMOS Australia)
- Conservation Plan by the Principles for the Conservation of Heritage Sites in China (China ICOMOS)
- Conservation Plan by the Standards and Guidelines for the Conservation of Heritage Sites in Canada.
- "Conservation Plans – A guide to the Preparation of Conservation Plans " - Historic Scotland 2000
- "Conservation Plan: A Guide to the Preparation of Conservation Plans for Places of European Cultural Significance" - Sydney: National Trust of Australia (NSW), Kerr, J. S. 2000
- "The Illustrated Burra Charter, Australia" - Australia ICOMOS Inc., Walker, M and Marquis-Kyle, P. 2004
- "Conservation Management Plan for the old Tai O Police Station" – Hong Kong Heritage Conservation Foundation Plan, April 2009

4.8.2.3 Others

No mitigation measure is required for the Stone House No. 4 as there will not be adverse impacts on this site from the proposed works.

4.9 Mitigation Measures – Operational Phase

No insurmountable adverse impacts are expected during the operational phase for all the heritage sites. Therefore, no mitigation measures are recommended for operational phase.

4.10 Conclusions

A summary of the impacts and mitigation measures for cultural heritage is given below.

Table 4.2: Summary of impacts and mitigation measures for construction and operational phases

Heritage Items	Horizontal Distance from Proposed Station	Construction Phase			Operational Phase		Construction Method
		Impact		Mitigation	Impact	Mitigation	
		Direct	Indirect				
Archaeological Sites							
Former Tai Hom Village	0 m	Y	N/A	Submission of Archaeological Action Plan Conduct Survey-Cum-Excavation prior to construction	N/A	N/A	Cut-&-cover
Lung Tsun Stone Bridge	365m	N	N	Allow a buffer zone (see Figure 4.1.2)	N	N	
Former Kowloon City Pier	305m	N	N	Allow a buffer zone (see Figure 4.1.2)	N	N	
Built Heritage							
Former Royal Air Force Hangar	0 m	Y	N	A full cartographic and photographic survey documentation after asbestos containing materials has been removed but prior to disassembling the remainder of the Hangar. A conservation plan to be submitted. Portions of historical interest will be displayed together with a model within CDA site as per the conservation plan.	N/A	N/A	Cut-&-cover
Old Pillbox	0 m			A full cartographic and photographic survey documentation prior to disassembling the Pillbox. A conservation plan to be submitted. Reinstatement as per the conservation plan within CDA Site.			
Stone House No. 4	45m	N	N	Nil	N	N	

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