

10. CULTURAL HERITAGE

10.1 Introduction

10.1.1 This section presents a cultural heritage impact assessment of the Project in accordance with the requirements set out by the EIA Study Brief and EIAO-TM. It identifies cultural heritage resources, and assesses potential direct and indirect impacts caused by proposed works on these resources, and recommends mitigation measures where required.

10.2 Environmental Legislation, Plans, Standards & Guidelines

Overview

10.2.1 Legislation, Plans, Standards, and Guidelines relevant to the consideration of Cultural Heritage impacts under this study include the following:

- *Environmental Impact Assessment Ordinance (EIAO) (Cap. 499, S.16);*
- *Technical Memorandum on Environmental Impact Assessment Process of the EIAO (EIAO-TM), Annexes 10 and 19;*
- *Antiquities and Monuments Ordinance (A&MO) (Cap. 53);*
- *Guidance Notes on Assessment of Impact on Sites of Cultural Heritage in EIA Studies;*
- *Hong Kong Planning Standards and Guidelines (HKPSG) (Chapter 10); and*
- *Specific Technical Requirements as Stipulated in the EIA Study Brief No.ESB-220/2011.*

Environmental Impact Assessment Ordinance (Cap.499, S.16)

10.2.2 Schedule 1 Interpretation of the EIAO defines “Sites of Cultural Heritage” 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 (AMO) to be of archaeological, historical or paleontological significance”.

Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM), Annexes 10 and 19

10.2.3 The criteria and guidelines for evaluating and assessing impacts are listed in Annexes 10 and 19 of the EIAO-TM respectively. The criteria for evaluating impact on sites of cultural heritage include:

- 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 culture and tradition; and
- Adverse impacts on sites of cultural heritage shall be kept to an absolute minimum.

Antiquities and Monuments Ordinance (Cap.53)

10.2.4 The *Antiquities and Monuments Ordinance* provides the statutory framework for the preservation of objects of historical, archaeological and paleontological interest.

10.2.5 The Ordinance contains the statutory procedures for the Declaration of Monuments. Under the Ordinance, a monument means a place, building, site or structure which is declared to be a monument, historical building, archaeological or paleontological site or structure because of its historical, archaeological or paleontological significance under section 3 of the Ordinance. The criteria for evaluating and assessing impacts are listed in relevant guidelines issued by AMO of Leisure and Cultural Services Department (LCSD).

10.2.6 Under section 6 and subject to subsection (4) of the Ordinance, the following acts are prohibited in relation to monuments, except under permit granted by the Antiquities Authority.

- *To excavate, carry on building works, plant or fell trees or deposit earth or refuse on or in a proposed monument or monument; or*

- To demolish, remove, obstruct, deface or interfere with a proposed monument or monument

10.2.7 The discovery of an Antiquity, as defined in the Ordinance, must be reported to the Antiquities Authority, or a designated person. The Ordinance also provides that, the ownership of every relic discovered in Hong Kong after the commencement of this ordinance shall vest in the Government from the moment of discovery. The Authority on behalf of the Government may disclaim ownership of the relic.

10.2.8 No archaeological excavation can be carried out by any person, other than the Authority and the designated person, without a licence issued by the Antiquities Authority. A licence will only be issued if the Authority is satisfied that the applicant has sufficient scientific training or experience to enable him to carry out the excavation and search satisfactorily, is able to conduct, or arrange for, a proper scientific study of any antiquities discovered as a result of the excavation and search, and has sufficient staff and financial support.

Guidance Note on Assessment of Impact on Sites of Cultural Heritage in EIA Studies

10.2.9 The set of guidance notes assists the understanding of the requirements set out in Section 2 of Annexes 10 and 19 of the EIAO-TM in assessing impact on sites of cultural heritage in EIA studies. The guidance notes serve only as a reference and are not meant to be exhaustive nor comprehensive.

Hong Kong Planning Standards and Guidelines (Chapter 10)

10.2.10 Chapter 10 of HKPSG covers planning considerations relevant to conservation. It also details the principles of conservation, the conservation of natural landscape and habitats, historic buildings and sites of archaeological interest, and addresses the issue of enforcement. The appendices list the legislation and administrative controls for conservation, other conservation related measures in Hong Kong, and Government departments involved in conservation.

Specific Technical Requirements as Stipulated in EIA Study Brief

10.2.11 The EIA Study Brief No. ESB-220/2011 (ESB) issued in March 2011 includes the scope for the cultural heritage impact assessment and requirements for engaging an archaeologist to identify any possible existence of sites or remains of archaeological interest that will be affected by the demolition and construction works of the Project. An archaeological survey will be required to further assess the archaeological potential of the Study Area if the findings reveal the existence of such possibility. Appropriate mitigation measures should be proposed and implemented prior to the commencement of any construction works if sites or remain of archaeological interest are identified during the survey.

10.3 Assessment Methodologies

Study Area

10.3.1 The Study Area covers an area that stretches 300m from the proposed boundary of project site. The Works Area and Study Area are shown in [Figure 10.1](#).

Baseline Study and Field Survey

10.3.2 A baseline study in form of literature review was conducted. The relevant information has been analyzed, collected and collated to determine the presence of historical occupation in the Study Area and thus assess the potential existence of cultural heritage within the potential impacted area:

- Background information (e.g. AMO files, Public Records Office, map libraries, university and public libraries, published and unpublished government and non-government documents, cartographic and pictorial documents) of heritage sites (including declared monuments, government historic sites, sites of archaeological interest and graded historic buildings identified by AMO) within and in close proximity to the study area;

- Identification of previously recorded cultural heritage resources within the project boundary which will be supplemented by field survey as necessary subject to findings of the desktop review; and
- AMO's most recent list of historic buildings with their existing and respective proposed grading.

10.3.3 Field surveys have been conducted with following tasks:

- Field walking was carried out at the Study and Works Areas to: identify archaeological potential areas and built heritage; provide photographic and written records of features of built heritage and mark the location of build heritage and cultural landscape in 1:1000 scale maps.

Archaeology

10.3.4 In accordance with the ESB, an archaeological baseline and desktop study has been conducted by an archaeologist to collect available and relevant information of previous archaeological, historic studies within the Study Area. Information on the sites of archaeological interest list by AMO has also been reviewed to identify the existence of any sites or archaeological remains to be affected by the demolition and construction works.

10.3.5 The baseline archaeological condition was established through the desktop review, field walking and impact assessment taking into consideration any archaeological resources that would be adversely affected by the demolition and construction works.

Built Heritage

10.3.6 Features of built heritage which fall within the scope of built heritage survey include:

- Pre-1950 structures, which include any built features (apart from historic or clan graves, historical land use, and cultural landscapes features, which are dealt with separately) such as domestic structures, temples, churches, monasteries and nunneries, wells, schools, historic walls, bridges and stone tablets;
- Post 1950 structures deemed to possess features containing architectural or cultural merit;
- Pre-World War II (pre-1942) historic graves;
- Cultural landscape features;
- Historical land use features, such as historical tracks and pathways, stone walls and terraces, ponds and other agricultural features; and
- AMO's most recent list of historic buildings.

10.3.7 In this assessment, the cultural significance of heritage resources have been assessed to establish a baseline condition for the identification of the potential impacts arising from the demolition and construction works as well as recommendations for the corresponding mitigation measures. With reference to the Charter for the Conservation of Places of Cultural Significance of 1999 (The Burra Charter) issued by the International Council on Monuments and Sites (ICOMOS) of the United Nations Educational, Scientific and Cultural Organization (UNESCO), cultural significance means aesthetic, historic, scientific, social or spiritual value.

10.4 Baseline Review and Field Survey Result

Archaeology

10.4.1 A desktop study and field walking exercise have been conducted to collate available information in order to establish the baseline conditions and identify the archaeological potential areas within the Study and Works Areas. Historical, geological and archaeological information of the Areas were reviewed, including previous historical, geological and archaeological studies, aerial photographs, historic maps and geological maps.

- 10.4.2 No sites of archaeological interest¹ and no archaeological potential landscape and archaeological remains were identified within the 300 m Study Area and Works Area.
- 10.4.3 The Sha Tin WTW was first commissioned in 1964, which has largely transformed the landscape into an urban one. On the other hand, with the development of New Town at Shatin since the 1970s, the coasts of Shing Mun River have also been largely transformed into an urban landscape. No archaeological survey has covered the area prior to these developments.
- 10.4.4 Prior to the development of Shatin New Town, historical villages are located at the arable lands where the Shing Mun River exited into Tide Cove (also known as "Sha Tin Hoi"). On the other hand, no historical settlement has been detected from ancient maps within the Works Area. Moreover, while many sites of archaeological interest in Hong Kong have been identified on river terraces, such landforms in this area have been converted into the Tai Po Road (since 1902) and the Toll Plaza for Eagle's Nest Tunnel of the Tsing Sha Highway (since 2007) (Refer to [Figure 10.2](#)). Furthermore, with the hilly landscape in the Works Area, it is suggested that the Works Area was less suitable for human occupation in the past in comparison to the arable flatlands to the northeast. It is therefore anticipated that no archaeological potential has remained within the Study and Works Areas.

Built Heritage

- 10.4.5 Review of historical maps revealed that there are several historical villages in Shatin. The nearest historical village is Keng-hau² village, which is situated at approximately 500 m east of the Works Area. In general, historical villages in the area are situated on flat arable lands on the coast of the pre-reclaimed Tide Cove (also known as "Sha Tin Hoi"). The Study Area is to the southwest of the Tide Cove, where the hilly landscape occupies, and is less suitable for human occupation.
- 10.4.6 Based on review of the List of the Historic Buildings in Building Assessment prepared (as of 27 December 2013) and Results of the Assessment of New Items in addition to 1,444 Historic Buildings, which are both prepared by AMO, together with the observations during site visits, built heritage resources within Study Area have been identified. Details of the built heritage resources within the Study Area are presented in [Appendix 10.1](#), with their locations showing in [Figure 10.1](#) and [Plate 10.1](#). Key resources are highlighted below:

Declared Monuments

- 10.4.7 No declared monument³ is identified within the 300 m Study Area.

Graded Historic Buildings

- 10.4.8 Three graded historic buildings⁴ have been identified within the 300 m Study Area.

- BH01 – Yeung Ancestral Hall, No. 7 Hin Tin, Shatin (Grade 3)
- BH02 – Law Ancestral Hall, No. 8 Hin Tin, Shatin (Grade 3)
- BH03 – So Ancestral Hall, No. 9 Hin Tin, Shatin (Grade 3)

- 10.4.9 Hin Tin (顯田) village was erected in the 1920s by the government to relocate three clans of villagers in the Shek Lei Pui Valley (石梨貝谷) due to the construction of the Shek Lei Pui Reservoir: the Yeungs, the Laws and the Sos. They were originally Hakkans from Nantou (南頭) who resided in Hong Kong perhaps some 300 years ago.

¹ AMO 2012 *List of Sites of Archaeological Interest in Hong Kong* (as at Nov 2012). Hong Kong: AMO pamphlet.

² Some maps spelt the village as "Kang-hau" with an "a".

³ AMO 2011 *Declared Monuments in Hong Kong* (as of 24 June 2011). AMO pamphlet.

⁴ AMO 2011 *List of Historic Buildings in Building Assessment* (as of 23 November 2011). AMO website.

10.4.10 The three ancestral halls were built connected together forming a single three-bay-block on the front row of the three rows of houses at Hin Tin village, which faces north. After a fire in 1988 in the Law Ancestral Hall (middle bay), the three halls were then repaired, with authenticities kept to its traditional vernacular design. Currently, the three halls retained their intended ancestral worship function by the local Yeungs, Laws and Sos.

10.4.11 An earth shrine was recorded in the latest available EIA Study near Hin Tin Village⁵. The structure is newly renovated and is therefore a modern structure. This earth shrine is used by the locals for casual ritual practices with no relation to any formal festivals or other significant intangible cultural heritage activities. As it lacks obvious cultural heritage value from architectural, historical and cultural perspective, this item is therefore not considered as cultural heritage resources.

Government Historic Site

10.4.12 One government historic site, Ex Kowloon-Canton Railway (KCR) Beacon Hill Tunnel⁶ has been identified within the Study Area, façade wall of tunnel portal in house shore shape, its 5.8 m high above the original railway, was built of granite ashlar work and retained as original.

- BH04 – Ex Kowloon-Canton Railway Beacon Hill Tunnel

10.4.13 The Ex KCR (also known as the “First KCR Beacon Hill Tunnel”⁷) was first constructed in 1906 and opened in 1910. It has been the major route between New Territories and Kowloon since then, where freight and passengers can swiftly move along by train.

A new Beacon Hill Tunnel (second KCR Beacon Hill Tunnel) was constructed in the 1980s, which replaced this first tunnel. Concrete lining, gas pipelines and some auxiliary systems, such as lighting, gas detectors etc were then installed along the tunnel after its disuse⁸.

Graves

10.4.14 A local spot for placing burial urns and graves has been identified to the west of Hin Tin village. Upon field inspection, it is observed that there has been major refurbishment of the graves in the 2000s, which render the grave styles to have modern appearances. On the other hand, none of the deceased has any significant historic status related to any historic events in Hong Kong. Therefore, these graves have negligible historic values, and are not considered as historic graves.

10.5 Evaluation of Cultural Heritage Impacts

Construction Phase

- 10.5.1 No historic buildings or graves are situated within the Works Area. Therefore, no direct impact is anticipated.
- 10.5.2 The three graded historic buildings are situated at approximately 270 m from the Works Area. With the roads and trees serving as soft buffers, indirect vibration impact due to drill activities during construction phase is anticipated to be insignificant.
- 10.5.3 The construction site office in the Works Area is in close proximity horizontally to the Ex KCR Beacon Hill Tunnel portal. Four existing staff quarters would be refurbished to be used as construction site office, and no ground works would be carried out at hill slope west to the

⁵ Ove Arup & Partners Hong Kong Ltd. 2011 SCL – NEX/2206 EIA Study for Tai Wai to Hung Hom Section. EPD website

⁶ AMO 2010 Government Historic Sites Identified by AMO. AMO website.

⁷ CEDD 2011 Catalogue of Hong Kong Tunnels (up to April 2011). CEDD website online document.

⁸ Hong Kong and China Gas Company Ltd 2011 Project Profile for Installation of 500mm NB Gas Pipelines inside the Existing Disused Tunnel (Old Beacon Hill Tunnel).

portal. As only refurbishment works would be carried out within 100 m from the Ex KCR Beacon Hill Tunnel, no significant vibration impact is therefore anticipated. The closest source of vibration during construction phase to this Tunnel is in the northwest to the portal at about 120 m in plan and 8 m in elevation, where a new administration building is proposed to be built (Refer to **item 11 in Figure 3.1**). Given that a considerable distance between the construction area and the tunnel, ground-borne vibration is not anticipated to be significant.

Operation Phase

- 10.5.4 No historic buildings or graves are situated within the Works Area. Therefore, no direct impact is anticipated.
- 10.5.5 The three graded historic buildings would remain as the existing conditions, as the water treatment facilities will continue to operate *in situ*. As the facilities have imposed no impact up on these buildings, no impact is anticipated during the operation phase.
- 10.5.6 The most of Ex KCR Beacon Hill Tunnel portal would remain in existing condition, the tunnel will continue to be run through by gas pipeline and as the water treatment facilities will continue to operate *in-situ*. As the facilities have no works in the tunnel, no impact is anticipated during the operation phase.

10.6 Mitigation of Cultural Heritage Impacts

- 10.6.1 As no impact is anticipated for the three graded historic buildings in Hin Tin village, no mitigation measure is therefore required for them.
- 10.6.2 It is noted that the nearest Works Area to the Ex KCR Beacon Hill Tunnel would involve only refurbishment works for four existing staff quarters as construction site office without major construction works (Refer to **Figure 2.1** and **Figure 10.1**) during construction phase (Refer to Section 10.5.3). The possible piling and drilling activities of the new administration building would take place at approximately 120 m away (horizontally) (and 8 m vertically) from the tunnel portal (Refer to **Figure 10.1**). As a precautionary measure, a peak particle velocity (ppv) limit of 7.5mm/s is recommended, measuring at the façade wall of tunnel portal and inside the tunnel where it is closest to the Works Area during piling and drilling works.

10.7 Evaluation of Residual Cultural Heritage Impacts

- 10.7.1 An EIA has been conducted for the Shatin-Central Link (SCL) project⁹, which has partial overlapping with this project. The SCL EIA Report anticipated no impact to the cultural heritage items identified in the area same as this EIA.
- 10.7.2 As no impact is anticipated on the three graded historic buildings in Hin Tin village in this EIA, no residual cultural heritage impact is anticipated.
- 10.7.3 Ground-vibration is anticipated from the construction works as stated in section 10.5.3, which would insignificantly impact the Ex KCR Beacon Hill Tunnel. With proper implementation of mitigation measures suggested in Section 10.6.2, potential impact to the Ex KCR Beacon Hill Tunnel would be minimized, and the residual impact is considered to be acceptable.

10.8 EM&A Requirements

Construction Phase

Terrestrial Archaeology

- 10.8.1 No specific EM&A requirements would be required during construction phase.

⁹ Ove Arup & Partners Hong Kong Ltd. 2011 SCL – NEX/2206 EIA Study for Tai Wai to Hung Hom Section. EPD website

Built Heritage

- 10.8.2 Given the considerable separation distance (approximately 270 m) between the three graded historic buildings at Hin Tin village and the Works Area, there would be neither adverse vibration nor visual impacts on the Hin Tin village built heritages, and thus no specific EM&A requirements would be required.
- 10.8.3 Given that distance between the Ex KCR Beacon Hill Tunnel and the proposed new administration building is about 120 m, vibration impact is anticipated to be insignificant. However, as a precautionary measure, a ppv limit of 7.5mm/s is recommended, including measuring the façade wall of tunnel portal and inside the tunnel where it is closest to any construction works during the piling and drilling works. Measurements should be made by properly calibrated device and under the supervision of the Registered Structural Engineers (RSE) or his representatives.

Operation Phase

- 10.8.4 No specific EM&A requirements would be required during operation phase.

10.9 Conclusion

- 10.9.1 Cultural heritage resources within the Study Area have been identified and reviewed through site surveys and literature review.
- 10.9.2 Based on baseline review, no archaeological potential is present within the Study Area. Therefore no impact to archaeology is anticipated.
- 10.9.3 Direct impact on three existing graded historic buildings at Hin Tin village and the Ex KCR Beacon Hill Tunnel during construction phase is not anticipated. Considering sufficient buffer distances between the built heritages at Hin Tin village (approximately 270 m) and the proposed works areas, there would be insignificant visual and vibration impact during construction and operation phases.
- 10.9.4 Four existing staff quarters would be refurbished to be used as construction site office located in close proximity to the west of Ex KCR Beacon Hill Tunnel portal (Refer to [Figure 2.1](#)), and the proposed Administration Building cum Mainland East Laboratory would also be built at about 120 m to the northwest of the portal (Refer to [Figure 10.1](#)). Due to the proposed work design and distance between these buildings and the tunnel portal, vibration impact on the facade wall of portal is considered to be insignificant. As precautionary measure, ppv limit of 7.5mm/s is recommended, including measuring at the facade wall of tunnel portal and inside the tunnel where it is nearest to any construction works within the Works Area.
- 10.9.5 In conclusion, the construction and operation of the Project would not cause unacceptable impacts on cultural heritage resources, with implementation of the recommended mitigation measures.

REFERENCE

- AMO 2010 *Government Historic Sites Identified by AMO*. Hong Kong: AMO website.
- AMO 2011(a) *Declared Monuments in Hong Kong (as of 24 June 2011)*, Hong Kong: AMO pamphlet.
- AMO 2011(b) *List of Historic Buildings in Building Assessment (as of 2 September 2011)*, Hong Kong: AMO website.
- AMO 2012(c) *List of Sites of Archaeological Interest in Hong Kong (as at Nov 2012)*, Hong Kong: AMO pamphlet.
- CEDD 2011 *Catalogue of Hong Kong Tunnels (up to April 2011)*, CEDD website online document.
- Ove Arup & Partners Hong Kong Ltd. 2011 *SCL – NEX/2206 EIA Study for Tai Wai to Hung Hom Section*. EPD website
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- 高添強 1995 《香港戰地指南》香港，三聯書店。

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