

11a. IMPACT ON CULTURAL HERITAGE (TTAL SITE)

11a.1 Introduction

11a.1.1.1 This section presents a cultural heritage impact assessment of the IWMF at Tsang Tsui Ash Lagoon (TTAL) site, identifying cultural heritage resources, and assessing potential direct and indirect impacts caused by the proposed works on any such resources, and recommending mitigation measures where required.

11a.2 Environmental Legislation and Standards

11a.2.1 Overview

11a.2.1.1 Legislation, Standards and Guidelines that are relevant to the consideration of Cultural Heritage impacts under this study include the following:

- *Environmental Impact Assessment Ordinance (EIAO)*;
- *Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM)*;
- *Antiquities and Monuments Ordinance (A&MO)*;
- *Hong Kong Planning Standards and Guidelines (HKPSG)*; and
- *Guidelines for Cultural Heritage Impact Assessment (GCHIA)*.

11a.2.2 Environmental Impact Assessment Ordinance (Cap.499) (EIAO)

11a.2.2.1 Schedule 1 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 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”.

11a.2.3 Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM)

11a.2.3.1 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.

11a.2.4 Antiquities and Monuments Ordinance (Cap.53) (AM & O)

11a.2.4.1 The A&MO (the Ordinance) provides the statutory framework for the preservation of objects of historical, archaeological and paleontological interest.

11a.2.4.2 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.

11a.2.4.3 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.

11a.2.4.4 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.

11a.2.4.5 No archaeological excavation can be carried out by any person, other than the Authority and the designated person, without a licence issued by the 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.

11a.2.5 *Hong Kong Planning Standards and Guidelines (HKPSG)*

11a.2.5.1 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 archaeological sites, 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.

11a.2.6 *Guidelines for Cultural Heritage Impact Assessment (GCHIA)*

11a.2.6.1 The GCHIA is attached in Appendix C of the EIA Study Brief No. ESB-184/2008 (ESB) covering baseline study, field evaluation, impact assessment and mitigation measures.

11a.2.7 *Vibration Limits on Heritage Buildings*

11a.2.7.1 The vibration limit for blasting operations will be assessed based on the condition of the historic building. In any case, a PPV limit of 25mm/s or less is recommended.

11a.3 *Assessment Methodology*

11a.3.1 *Study Scope*

11a.3.1.1 The study area covers an area that stretches 300m from the Project boundary. An archaeological review and a site visit have been conducted, taking into consideration any archaeological resources that would be adversely affected by the construction works. Information of archaeological sites recorded in the official archaeological site listed by AMO has been used as a reference to determine if there are areas with archaeological potential located within the study area.

11a.3.1.2 The baseline condition of cultural heritage has been established through a literature review and field surveys.

11a.3.2 Terrestrial Archaeology

11a.3.2.1 With reference to the EIA Study Brief and the GCHIA, an archaeological desktop research and a site visit has been undertaken to examine records and interpret archaeological resources within the study area. The archaeological impact assessment was conducted in accordance with the GCHIA.

11a.3.2.2 Desktop research was conducted to collect available and relevant information of previous archaeological, historic, geographic and geological studies related to the study area where excavation works had been conducted.

11a.3.3 Built Heritage

11a.3.3.1 With reference to the Guidelines for CHIA, features which fall within the scope of built heritage survey include:

- All pre-1950 buildings and structures;
- Selected post-1950 buildings and structures of high architectural and historical significance and interest;
- Cultural landscapes include places associated with historic event, activity, or person or exhibiting other cultural or aesthetic values, such as sacred religious sites, battlefields, a setting for buildings or structures or architectural or archaeological importance, historic field patterns, clan graves, old tracks, feng-shui woodlands and ponds, and etc.; and

11a.3.3.2 In this assessment, the cultural significance of built heritage and archaeological interest have been assessed so as to establish a baseline condition for the identification of the potential impact arising from the proposed construction works as well as to recommend 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 United Nations Educational, Scientific and Cultural Organization (UNESCO), cultural significance means aesthetic, historic, scientific, social or spiritual value.

11a.3.3.3 Cultural and historical landscapes assessed in this baseline study include places associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values, including:

- sacred religious sites;
- battlefields;
- a setting for buildings or structures of architectural or archaeological importance;
- historic field patterns;
- historic graves and foundation stones which are associated with historic figure or act as an important symbolic or visual landmark of a community; and
- old tracks and ponds.

11a.3.3.4 Desktop literature review and site survey were conducted. The following information has been analyzed, collected and collated to determine the presence of historical occupation in the project area and to assess the potential existence of cultural heritage within the potential impacted area:

- Background information (e.g. AMO's 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;
- Areas proposed for construction and operation activities and potential impacts induced by the project;
- Previous recorded cultural heritage resources within the project boundary; and
- AMO's 1,444 newly proposed historic buildings with their existing and respective proposed grading.

11a.3.3.5 Field surveys were conducted with following tasks:

- Recording of identified built heritage features;
- Interviews with local informants, residents and elders, if necessary. The interviews aim at gathering information, such as cultural and historical background of the buildings and structures, as well as historical events associated with the built heritage features; and
- Systematic documentation of all recorded features including:
 - Photographic records of historic buildings or structures including the exterior where possible;
 - A set of 1:1000 scale maps showing the location and boundary of each historic building, boundary stone, monument object, historic grave, and cultural landscape;
 - Written descriptions of recorded features of historic buildings, e.g. age of the building or structure, architectural features, condition of the building or structure, past and present uses, notes on any modifications, direction faced and associations with historical or cultural events or individuals; and
 - Written descriptions of recorded features of historic graves or foundation stones, boundary stones if any, a copy of the inscription of stone table, and architectural elements of the graves or stones where possible.

11a.4 Result of Terrestrial Archaeological Review

11a.4.1.1 An archaeological site namely Tsang Tsui Archaeological Site (TTAS) (**Figure 11a.1**) is identified partly within the study area. An archaeological investigation for TTAS was carried out in Year 2000. The archaeological investigation revealed approximately 600 pottery and stone tools dating to the Neolithic Age. A subsequent AMO investigation in Year 2001 concluded that with the exception of the existing TTAS, it is very unlikely to find any archaeological remains within the former beach and BBC site. However, the archaeological survey in Year 2008 for the WENT Landfill Extensions study at the TTAS has not identified any evidence of archaeological remains within a confined study area with the exception of T16 in the Northeastern corner of the area¹. In accordance with the recommendation of the WENT Landfill Extensions EIA Report, a full scale rescue excavation shall be launched to preserve the archaeological heritage of the TTAS in record prior to carrying out any construction works at TTAS. With reference to the approved WENT Landfill Extensions EIA Report and the conclusion of AMO's survey, the TTAS was an area with archaeological potential.

¹ Ove Arup & Partners Ltd 2008 *EIA Study for the West New Territories (WENT) Landfill Extensions*

11a.4.1.2 A site visit was conducted for the study area by in-house archaeologist and revealed no artefacts existed on the surface.

11a.4.1.3 Based on the results of the desktop review and survey, the TTAS has a high archaeological potential. However, the TTAS site is located approximately 150m from the project boundary and adverse impacts associated with this project are not expected.

11a.5 Result of Built Heritage Resources Review

11a.5.1.1 A desktop review and survey of built heritage were conducted. Details of the built heritage resources within the study area and their locations are presented in **Appendix 11a.1** and **Figure 11a.1**. One temple namely the Hung Shing and Dragon Mother Temple (Hung Shing Temple) located to the southwest of the Project area is identified as a key resource within the study area. Also, two clan graves (G5 and G6 as identified in the approved WENT Landfill Extension EIA Report) are located at approximately 250m and 300m from the IWMF. With reference to the approved WENT Landfill Extensions EIA Report, the architectural and historical value of the temple is considered relative low, and the various refurbishing in 1995 (G5) and 2007 (G6) happened to the two clan graves rendered the architectural value on par with modern terms. In addition, the original site of the temple will be no longer suitable for a cultural and religious setting as the WENT Landfill Extensions project will be carried out in this area. The mitigation measures recommended in the WENT Landfill Extension EIA Report will be followed.

11a.6 Identification of Potential Impacts

11a.6.1 Construction Phase

11a.6.1.1 Any heritage resources, located within close proximity to works area of the IWMF may have impact through:

- Direct impact to historic buildings, historical landscape and sites of terrestrial and marine archaeological potential (e.g. excavation, reclamation and dredging);
- Indirect vibration impact from construction and dust from construction works; and
- Indirect visual impact to historic buildings and cultural landscapes due to construction works.

11a.6.2 Operation Phase

11a.6.2.1 Impacts on cultural heritage during operation phase of the Project include:

- Indirect visual impact associated with alteration of the surrounding environment of historical structures and cultural landscapes due to the above-ground structures of the Project.
- Indirect vibration impact to historic buildings and cultural landscapes from operation of the project plant.

11a.7 Evaluation of Potential Impacts

11a.7.1 Construction Phase

Terrestrial Archaeology

11a.7.1.1 Based on the results of the desktop review and survey, the TTAS has a high archaeological potential. However, the TTAS site is located approximately 150m from the project boundary and adverse impacts associated with this project are not expected.

Built Heritage

11a.7.1.2 Existing built heritage (Hung Shing Temple) is located to the southwest of the Project area. The structures are generally located on elevated terrain while the Project site is situated at the existing ash lagoon. Direct impact on this built heritage site is therefore not anticipated. In addition, the architectural value of the Hung Shing Temple is relatively low, adverse impact on the Hung Shing Temple due to this project is not expected.

11a.7.1.3 Two clan graves (G5 and G6) are located to the south of the Project area. The structures are located on elevated terrain while the Project site is situated at the existing ash lagoon. Direct impact on these clan graves is therefore not anticipated. In addition, the architectural value of these clan graves are relatively low, adverse impact on the two clan graves due to this project is not expected.

11a.7.1.4 Indirect impacts such as dust, vibration and visual impacts may occur during the construction of the IWMF; however, due to the large horizontal separation of the structures from the construction site, such impacts are unlikely.

Table 11a.1 Potential Impact on Cultural Heritage Sites

ID	Built Heritage Resources	Existing Grading	Proposed Grading	Horizontal Distance from Project Site	Potential Impact and Impact Level
TT1	Hung Shing and Dragon Mother Temple	---	---	Approx. 150m	The structure is located about 150m away from the proposed site and therefore no impact is anticipated
G5	Tang clan grave	---	---	Approx. 250m	The grave is located about 250m away from the proposed site on elevated terrain and therefore no impact is anticipated
G6	Chan clan grave	---	---	Approx. 300m	The grave is located about 300m away from the proposed site on elevated terrain and therefore no impact is anticipated

11a.7.2 Operation Phase

11a.7.2.1 The Hung Shing Temple will have a direct line of sight to the IWMF. However, due to the large separation of the historic building to the Project site, visual impacts are not anticipated.

11a.7.2.2 The two clan graves are situated on elevated terrain, and have large horizontal separation to the Project site, visual impacts are not anticipated.

11a.7.2.3 Given large separation distance between the built heritages and the Project site, vibration impacts are not anticipated.

- 11a.7.2.4 Based on the preliminary design information, the proposed works under the Project would not result in any changes of access to the identified built heritage.

11a.8 Recommended Mitigation Measures

11a.8.1 Construction Phase

Terrestrial Archaeology

- 11a.8.1.1 Since the TTAS is located far away from the IWMF, no adverse impacts are anticipated and therefore no mitigation measures are necessary.

Built Heritage and Historical Landscape

- 11a.8.1.2 Given the large separation between the Project site and the built heritages (Hung Shing Temple TT1 and two clan grave G5 and G6), vibration, dust and visual impacts on such built heritages are not anticipated. No mitigation measures are therefore necessary.

11a.8.2 Operation Phase

Archaeology

- 11a.8.2.1 There would be no archaeological impact due to the operation of the IMWF. No mitigation measure is proposed.

Built Heritage

- 11a.8.2.2 Due to the large separation between the Project site and the built heritages, no impact is anticipated and therefore no mitigation measure is proposed.

11a.9 Environmental Monitoring and Audit

- 11a.9.1.1 No monitoring and audit programme on cultural heritage would be required.

11a.10 Conclusion

- 11a.10.1.1 Based on the results of the desktop review and survey, the TTAS has a high archaeological potential. However, the TTAS site is located approximately 150m from the project boundary and adverse impacts associated with this project are not expected.

- 11a.10.1.2 The Hung Shing and Dragon Mother Temple (TT1) and the two clan graves(G5 & G6) are identified within the study area. However, the Temple was built in early to mid 20th century and renovated in the 1980s and large separation between these built heritages and the IWMF, no adverse impacts during the construction and operation phases are anticipated.

11a.11 References

Ove Arup & Partners Ltd 2008 *EIA Study for the West New Territories (WENT) Landfill Extensions*.

Websites:

List of Archaeological Sites in Hong Kong (as at Dec 2007):

<http://www.lcsd.gov.hk/CE/Museum/Monument/form/AAB135-70-AnnexA-eng.pdf>

Antiquities and Monuments Office website: <http://www.amo.gov.hk/>