

Appendix H

Archaeological Impact Assessment

**Application for Planning Permission Under
Section 16 of the Town Planning Ordinance
(Cap. 131) for Proposed Residential
Development at Various Lots in D.D. 221 and
Adjoining Government Land, Sha Ha, Sai Kung**

Archaeological Impact Assessment

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1 INTRODUCTION

1.1 Background

1.1.1 Pete & Dave's Cultural Heritage Consultancy Limited is appointed in late May 2024 to provide services on Archaeological Impact Assessment (AIA) in support of an application under Section 16 of the Town Planning Ordinance (Cap. 131) for the proposed residential development at various lots in D.D. 221 and adjoining Government Land, Sha Ha, Sai Kung.

1.1.2 The Application Site (Study Area) is a strip of land falling within area shown as 'Road' in the Approved Sai Kung Town Outline Zoning Plan ("OZP") No. S/SK-SKT/6. To its north is Tai Mong Tsai Road which will be widened under the planned Hiram's Highway Improvement Stage 2 project, while to its south is the "Comprehensive Development Area (1)" ("CDA(1)") which has been approved by the Town Planning Board (TPB) under a Section 16 planning application No. A/SK-SKT/28 with conditions on 14 January 2022. The location of the Study Area is shown as edged blue on the plan at **Appendix A**.

1.1.3 The Study Area, with an area of about 9,038m², includes the Development Site (about 7,614m²) and the temporary works area within the limit of works area of the planned Hiram's Highway Improvement Stage 2 adjoining the Development Site for better rationalisation of boundary. Currently, the Application Site is partly used for temporary open storage and partly vacant with unmanaged vegetation.

1.2 Objective of AIA

1.2.1 The main objectives of this AIA are: (i) to assess the archaeological impact relevant to the Project and (ii) to propose archaeological mitigation measures in consultation with AMO before commencement of the Project. The Consultant carries out a desktop study on available archaeological information within and around the Study Area.

1.2.2 Following this introductory section, the remainder of this AIA comprises the following sections:

- Section 2 describes legislation, standards and guidelines of the AIA;
- Section 3 provides the baseline study based on desk-top review;
- Section 4 evaluates of archaeological potential;
- Section 5 provides impact assessment and recommendation of mitigation measures; and,
- Section 6 provides the list of references.

2 LEGISLATION, STANDARDS & GUIDELINES

2.1 Antiquities and Monuments Ordinance (Cap. 53)

2.1.1 Legislation relating to antiquities is set out in the Antiquities and Monuments Ordinance (Chapter 53 of the Laws of Hong Kong), which came into force on 1 January 1976. The Ordinance contains the statutory procedures for the Declaration of Monuments. Under the Ordinance, monument means a place, building, site or structure which is declared to be a monument, historical building, archaeological or palaeontological site or structure because of its historical, archaeological or palaeontological significance under section 3 of the Ordinance.

2.1.2 The Ordinance defines an antiquity as a relic (a moveable object made before 1800) and a place, building, site or structure erected, formed or built by human agency before the year 1800.

2.1.3 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.

2.2 Environmental Impact Assessment Ordinance (Cap. 499)

2.2.1 The Environmental Impact Assessment Ordinance (EIAO) was issued by the government of HKSAR on 1 April 1998. The EIAO defines “Sites of Cultural Heritage” in Schedule 1 (Interpretation of the EIAO) 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 to be of archaeological, historical or palaeontological significance”.

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

2.3.1 This technical memorandum is issued under Section 16 of the EIAO. The criteria and guidelines for evaluating and assessing impacts are listed respectively in Annex 10 of the EIAO-TM, Criteria for Evaluating Visual and Landscape Impact, and Impact on

Sites of Cultural Heritage, and Annex 19 of the EIAO-TM, Guidelines for Assessment of Impact on Sites of Cultural Heritage and Other Impacts.

- 2.3.2 Annex 10 of the EIAO-TM lists out the criteria for evaluating impact on sites of cultural heritage including: 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/or adverse impacts on sites of cultural heritage shall be kept to the absolute minimum.
- 2.3.3 Annex 19 of the EIAO-TM describes the commonly adopted approaches and methodologies for assessment of impact on sites of cultural heritage. Though there is no quantitative standard in deciding the relative importance of these sites, sites of unique archaeological, historical or architectural value will be considered as highly significant in general. Baseline study, methodology, impact assessment and mitigation measures form a basic skeleton in determination of impact on sites of cultural heritage.

2.4 Guidance Notes on Assessment of Impact on Sites of Cultural Heritage in Environmental Impact Assessment Studies

- 2.4.1 The purpose of this set of guidance notes is to assist the understanding of the requirements set out in Section 2 of Annex 10 and Annex 19 of the EIAO-TM in assessing impact on sites of cultural heritage in EIA studies. This set of guidance notes serves only as a reference and is not meant to be exhaustive nor comprehensive. The onus remains on the project proponents to conduct EIA studies, when required, in such manner and to such standard as to completely satisfy the Director in accordance with the EIAO-TM. This set of guidance notes will be revised from time to time, as appropriate, in light of further experience gained.

2.5 Hong Kong Planning Standards and Guidelines

- 2.5.1 The Hong Kong Planning Standards and Guidelines (HKPSG) is a government manual of criteria for determining the scale, location and site requirements of various land uses and facilities. As planning standards and guidelines could affect the allocation of scarce land and financial resources, they should be applied with a degree of flexibility. Trade-offs may be necessary so that the community at large could benefit most from the development. Environmental factors and criteria have to be incorporated into the land use planning process in order to prevent adverse environmental problems. Guidance for environmental planning of both public and private developments was given in these guidelines and the guidelines may be applied at three broad planning levels:

strategic/territorial, sub-regional and district/local planning.

2.6 Guidelines for Cultural Heritage Impact Assessment

- 2.6.1 The Guidelines for Cultural Heritage Impact Assessment (CHIA) is issued by the AMO, which has been updated from time to time in the past decades in responding to the issues generated from the practice of cultural heritage impact assessment. The Guidelines stipulate in detail the basic requirements for CHIA, comprising both Built Heritage Impact Assessment (BHIA) and Archaeological Impact Assessment (AIA). The CHIA shall be carried out generally through a Baseline Study and Impact Assessment Study.

3 BASELINE STUDY

3.1 Geology and Geography

- 3.1.1 The Study Area is a terrace situated between the hillside of Ma On Shan and inner port of Sai Kung sea. It is connected to Tai Mong Tsai Road in the north and adjacent to the Sha Ha beach area in the east. Alluvium (Qa) formed in Holocene composes the superficial deposit of the Study Area. It is comprised of the well-sorted to semi-sorted clay/silt, sand and gravel. The solid geology of this area is characterized by the coarse ash crystal tuff (JTM) of Tai Mo Shan Formation¹. The details of the geological characters are illustrated in **Figure 3.1**. The river terrace and river eroded slopes of Sha Ha area provided suitable conditions for human activities prior to 3300 years ago².
- 3.1.2 The aerial photos show that the Study Area was covered by a far stretching farmland from 1960s to 1980s (**Figure 3.2 & 3.3**). In a later period, the area was disused and covered with vegetations (**Figure 3.4**). Finally, as shown in the aerial photos (**Figure 3.5 & 3.6**), it turned to be an open storage area since 2004 until now.

3.2 Previous Archaeological Works

- 3.2.1 The Study Area is situated in the north part of Sha Ha Site of Archaeological Interest (SAI) (see **Figure 3.7**). Sha Ha SAI was discovered in 1996 and was later investigated in 1998 ("1998 Investigation"). The 1998 investigation demarcated the distribution of archaeological potential and detected cultural layers of Neolithic period, Bronze Age period and Ming-Qing dynasties³. Total 63 test pits of 2mx2m were excavated in hillside, terrace and sand areas. The stratification shows that Layer⑤ of this site contains archeological remains of Neolithic period. Artefacts dated to Bronze Age period were also discovered in Layer④. As shown in **Appendix B**, T19 and T4 were distributed close to the south boundary of the Study Area. They provide a reference for assessing the archaeological potential of the Study Area. According to the report, a cultural layer of Ming-Qing dynasties is widespread in the north part of the investigation area in 1998 where T19 and T4 located. However, this layer is thin and

¹ CEDD. Map HGM 20, Sheet 8 Sai Kung Peninsula : Solid and Superficial Geology (1:20 000 map)(1989), 1 map.

² 袁寶印、黃慰文、曾榮樹.(2005). 香港沙下遺址環境變遷研究.

³ 香港文康廣播局古物古蹟辦、湖南省文物考古研究所. (1998). 香港西貢區(SHA HA)遺址考古調查報告.

less artefacts were yielded⁴. Both T19 contains 3 layers, including an approximate 20cm agricultural soil layer, a 5cm-10cm greyish sandy clay layer which is identified as the cultural layer of Qing dynasty and a sterile layer with gravels and yellow clay. T4 only includes the agricultural soil layer and the sterile layer. The excavation of T19 and T4 did not yield any artefacts.

3.2.2 A large-scale rescue was carried out later between 2001 and 2002 (“2002 Rescue”). It yielded considerable archaeological features and finds dated back to the late Neolithic and the Bronze Age periods as well as cultural remains of Han and Ming dynasties. Archaeological features like groups of postholes, stone tools workshop and burials offer important data on the prehistoric settlement pattern and social structure. A large number of sophisticated lithic tools were also unearthed alongside raw materials and rough-outs⁵. A to E areas were divided in this rescue excavation.

3.2.3 At the same time, an archaeological survey at Sha Ha was conducted at area F in 2002, which is close to the Study Area. 24 test pits of 2mx2m were excavated in area F. Test Pits were divided into 3 groups according to the typology. Certain test pits in F area located near the south boundary of the Study Area, such as 159/151 and 179/141, would shed light on assessing the archaeological potential. Group I test pits were located at the southeast part of a slope, including within the Non-Excavation Area of the adjoining “Comprehensive Development Area” Site (see figure 3.7). The excavation confirmed that archaeological remains of Neolithic period exist inside the Non-Excavation Area. 159/151 located at the northwest of the slope, belongs to group II. *In-situ* cultural layers were not found in group II test pits. Group III, which situated at the northeast of the slope and represented by 179/141, did not reveal any artefacts. It is shown in the survey that cultural layers of Sha Ha area F are generally distributed over the gravel layer and located relatively closer to the coastal area. Besides, a fill layer of 30cm-140cm exists in this area⁶. No archaeological potential was revealed by test pits of Group II and III⁷. Previous archaeological works are shown in **Appendix B**.

⁴ 香港文康廣播局古物古蹟辦、湖南省文物考古研究所. (1998). 香港西貢區(SHA HA)遺址考古調查報告.

⁵ AMO. Rescue Excavation at Sha Ha, Sai Kung. <https://www.amo.gov.hk/en/archaeology/recent-archaeology/sha-ha-sai-kung/index.html>. 2024-7-2.

⁶ 古物古蹟辦事處. (2003). 西貢沙下遺址 2002 年 F 區考古調查報告.

⁷ 古物古蹟辦事處. (2003). 西貢沙下遺址 2002 年 F 區考古調查報告.

3.2.4 An archaeological field survey was carried out in 2003 for a drainage improvement project in Sai Kung, adjacent area of Tai Mong Tsai Road (“2003 Survey”). The Eastern Section of the survey, where T02-T07 were situated at, covers part of this Study Area. One coarse ware geometric sherd was collected during the field scan. The sherd, as an isolated find, is related to previous excavated deposit behind the sandbar. Compared to surface collection, test pit T02-T07 and auger holes provide direct information of archaeological potential of the Study Area. According to the report⁸, a limited number of ceramic sherds dated from Song dynasty to Qing dynasty were yielded, including celadon, blue-and-white porcelain, glazed or unglazed household stoneware and red-coloured tile. However, modern or contemporary remains were found along with the historical ones. As a result, the survey did not identify any original deposit with archaeological significance. Prehistorical and historical relics retrieved from augering and excavation are all from secondary deposits most likely formed during the late historical or even modern period.

3.3 Result of Field Evaluation

3.3.1 A field evaluation in form of site visit was carried out on 29 May, 2024 within the Study Area. The site is now used as an open storage and covered by a concrete surface. No artefact has been found in this site visit. The plan and photos of this site visit are shown in **Appendix C**.

⁸ Hong Kong Institute of Archaeology. (2003). CE 11/2002 (DS), Drainage Improvement in Sai Kung- Design and Construction- Report of Archaeological Field Survey.

4 EVALUATION OF ARCHAEOLOGICAL POTENTIAL

4.1 Review of Previous Archaeological Works

4.1.1 According to the archaeological works previously conducted within and in close proximity to the Study Area, the character of the deposits can be summarized:

- 1) Original and in-situ deposit with archaeological significance were not found within the Study Area in previous archaeological works.
- 2) A fill layer formed in late period or modern time is widespread. Ceramic sherds dated from Song dynasty to Qing dynasty are likely to be yielded in this disturbed layer.
- 3) It is possible for a thin cultural layer of Ming-Qing dynasties to exist in the Study Area.

4.1.2 The archaeological potential assessments concerning the Study Area and vicinity were conducted in the 1998 Investigation, 2002 Rescue and 2003 Survey. In 1998 Investigation, a cultural layer of Ming-Qing dynasties was identified near the south boundary of the Study Area. According to the 2002 Rescue and survey, archaeological potential of Neolithic period was confirmed in this excavation, but inside the Non-Excavation Area to the south of the study area. It should be highlighted that no archaeological potential was revealed in close proximity to the Study Area. While 2003 Survey yielded artefacts from the disturbed layer, it did not identify any original deposit with archaeological significance.

4.1.3 As to the Ming-Qing dynasties cultural layer, according to 1998 survey report, unearthed artefacts include green glaze, white glaze and brown glaze vessels. The report did not provide detailed chronological research of the excavated artefacts, but the assemblage of porcelain shows that the layer lacks of blue-and-white porcelain. Given that the emergence and prevalence of blue-and-white porcelain in Guangdong was mainly after the Jiajing period of the Ming dynasty, the layer is likely to be dated to early to mid-Ming dynasty. However, the 1998 survey revealed that this Ming-Qing cultural layer is thin and with less unearthed.

4.2 Archaeological Potential of Study Area

4.2.1 Results of previous archaeological works indicate that the archaeological deposits with significance do not exist within the Study Area. Artefacts were retrieved a severely disturbed layer formed in late period. Only a thin cultural layer with archaeological

potential dated to Ming-Qing dynasties, likely early to mid-Ming dynasty, was identified in test pits close to the south boundary of the Study Area.

- 4.2.2 Despite the similar geological characteristics between the Study Area and the Non-Excavation Area, the Study Area did not reveal significant cultural layers or artefacts from prehistory. It may result from the considerable distance from the coastal line.
- 4.2.3 In view of the geology, previous archaeological works and result of field evaluation, the archaeological potential of the Study Area is low.

5 IMPACT ASSESSMENT AND MITIGATION MEASURES

5.1 Assessment of Archaeological Impact

- 5.1.1 According to the key development parameters, approval from the TPB is being sought under Section 16 of Cap.131 for the proposed residential development in the Study Area. Residential buildings of max. 10 storeys, a club house, basement carpark and internal roads are proposed and under design.
- 5.1.2 Regardless of the fact that site formation works, building and internal road constructions and utility works involving excavation activities, such as fill/excavation work, open trench digging and piling work, would have potential negative effects on archaeological deposits, if any, the archaeological potential of the Study Area is still low as mentioned in section 4.2.3.
- 5.1.3 It is noted that a large part of the subject site remains archaeologically unsurveyed but within the boundary of Sha Ha SAI.

5.2 Recommendation of Mitigation Measures

- 5.2.1 As reviewed in the previous sections, due to the Study Area, despite being within the SAI site, has certain low-archaeological potential, while adverse impacts would be expected during the construction phase of the project, in particular from the excavation/piling works. In the meantime, a large part of the Subject site remains archaeologically unsurveyed but within the boundary of Sha Ha SAI. As a mitigation measure, further archaeological action is recommended to be taken during the construction phase. Details to be proposed by the licensed archaeologist in an Archaeological Action Plan.
- 5.2.2 Further archaeological action is appropriate to evaluate the archaeological significance of the subject site. A collection of field data by means of archaeological survey for the

archaeological impact assessment should be considered.

- 5.2.3 An Archaeological Action Plan stating the detailed contents of the Archeological Watching Brief including but not limited to methods, scope and schedule of the archaeological work, data recording and archaeological finds handling methods, staffing and contingency plan(s) should be provided as a supporting document to the License Application for the consideration of the Antiquities Authority.

6 REFERENCE

1. CEDD. Map HGM 20, Sheet 8 Sai Kung Peninsula : Solid and Superficial Geology (1:20 000 map)(1989), 1 map.
2. 袁寶印、黃慰文、曾榮樹.(2005). 香港沙下遺址環境變遷研究.
3. 香港文康廣播局古物古蹟辦、湖南省文物考古研究所. (1998). 香港西貢區(SHA HA)遺址考古調查報告.
4. AMO. Rescue Excavation at Sha Ha, Sai Kung.
<https://www.amo.gov.hk/en/archaeology/recent-archaeology/sha-ha-sai-kung/index.html>.
2024-7-2.
5. 古物古蹟辦事處. (2003). 西貢沙下遺址 2002 年 F 區考古調查報告.
6. Hong Kong Institute of Archaeology. (2003). CE 11/2002 (DS), Drainage Improvement in Sai Kung- Design and Construction- Report of Archaeological Field Survey.

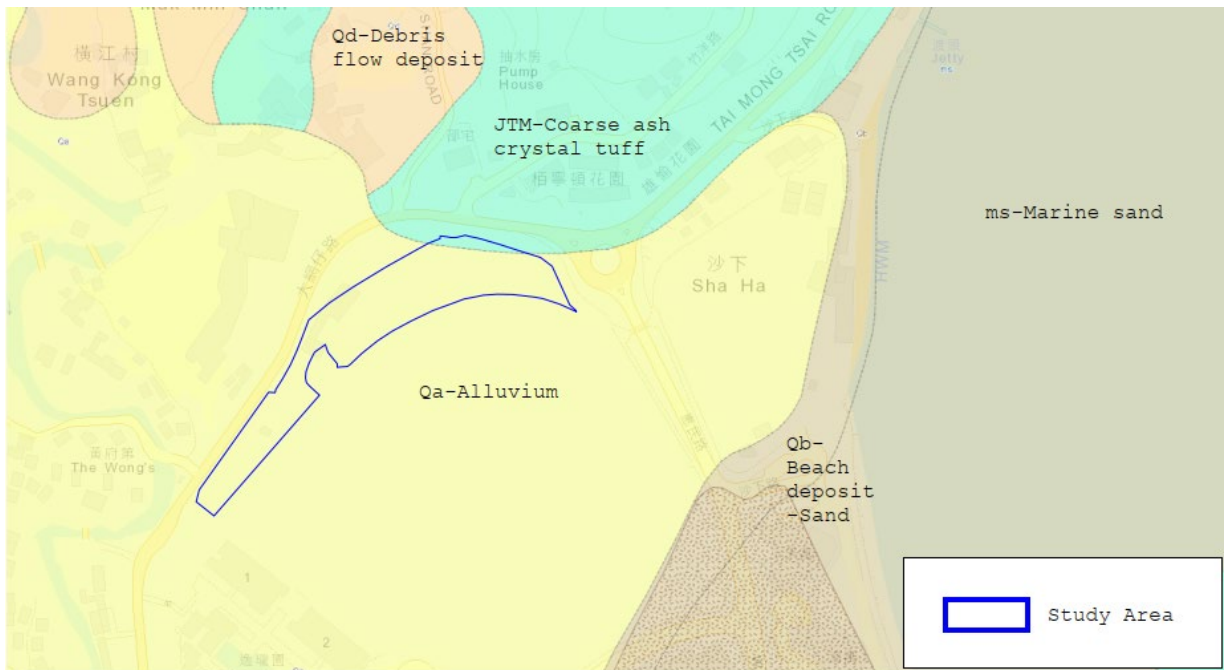


Figure 3.1 Geology of Study Area (indicative)



Figure 3.2 Aerial Photo of Study Area in 1963 (indicative)

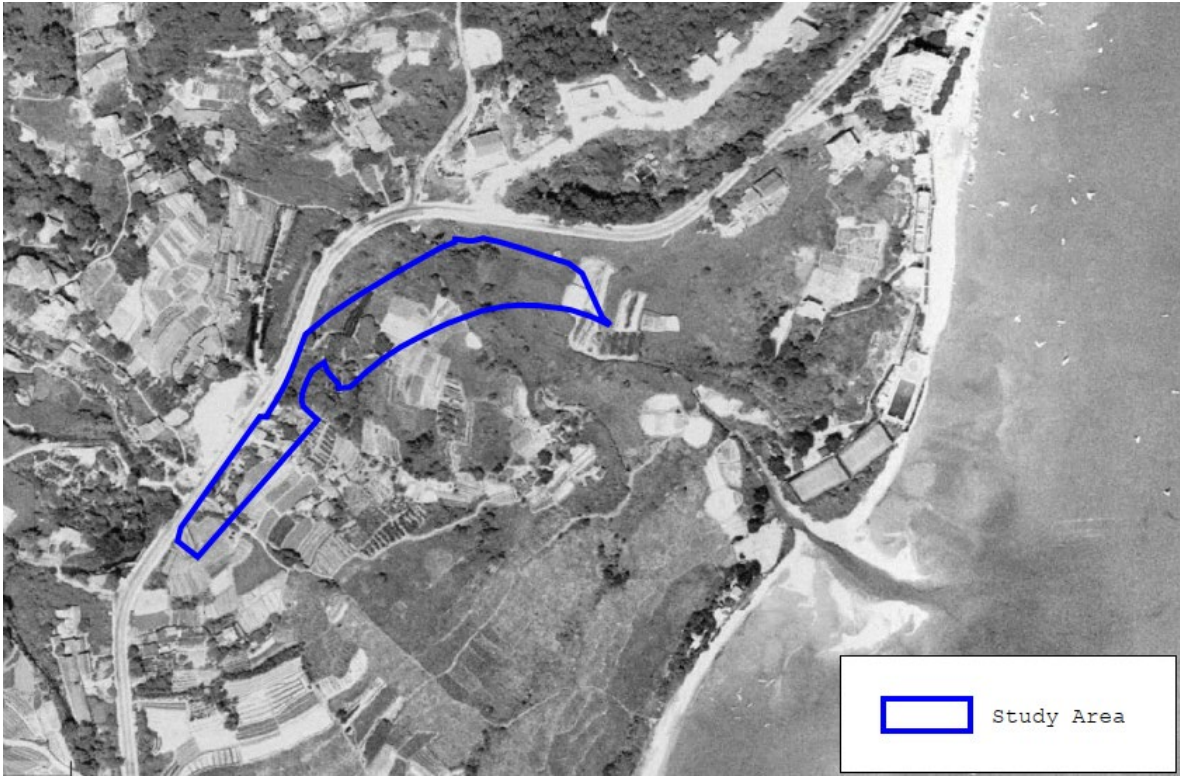


Figure 3.3 Aerial Photo of Study Area in 1982 (indicative)



Figure 3.4 Aerial Photo of Study Area in 1993 (indicative)

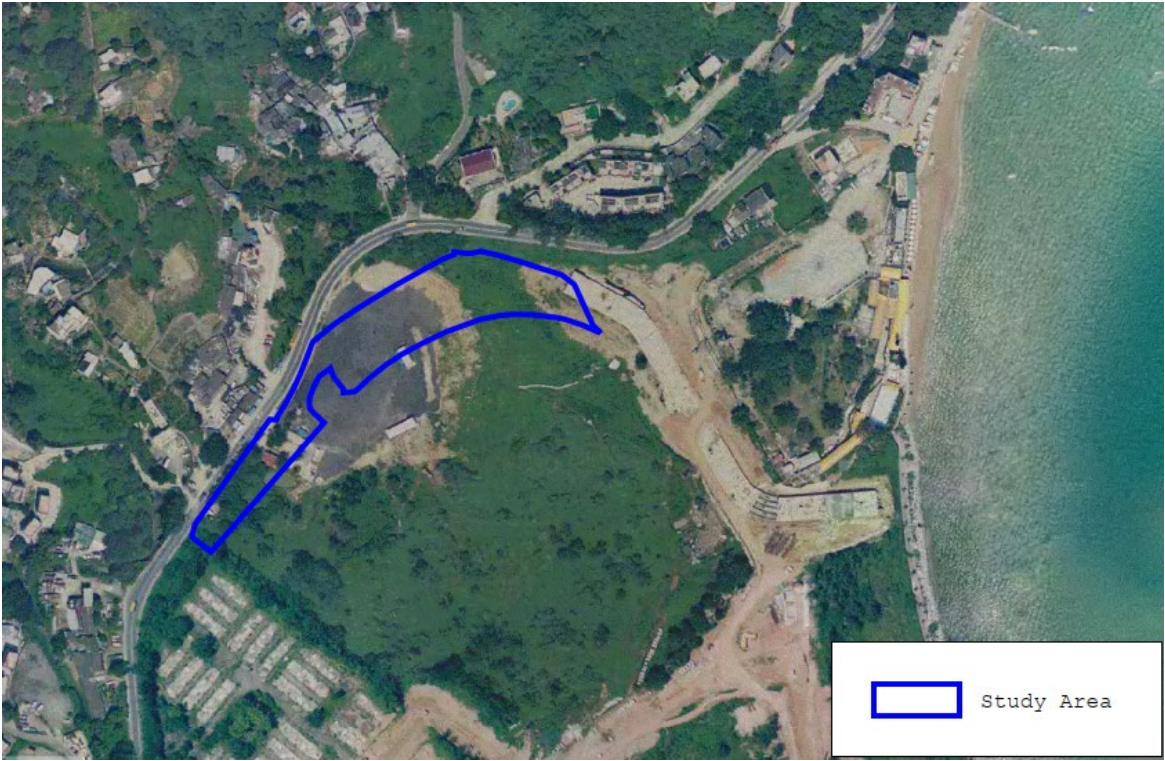


Figure 3.5 Aerial Photo of Study Area in 2004 (indicative)

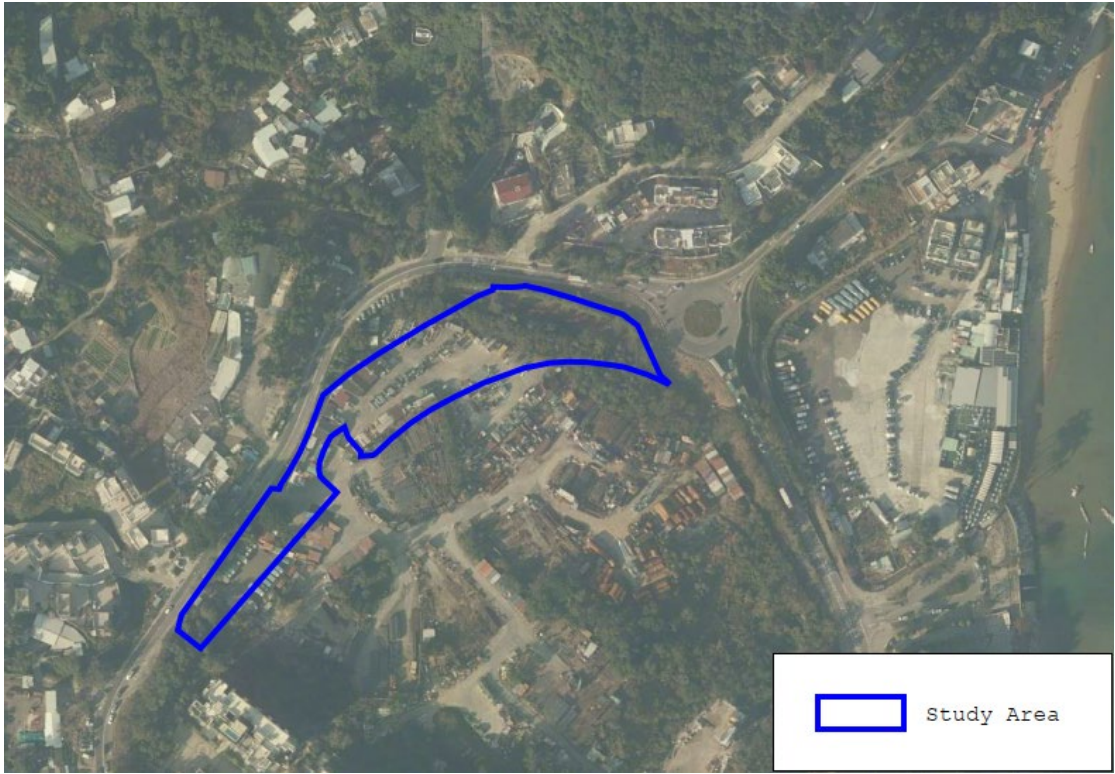


Figure 3.6 Aerial Photo of Study Area in 2021 (indicative)

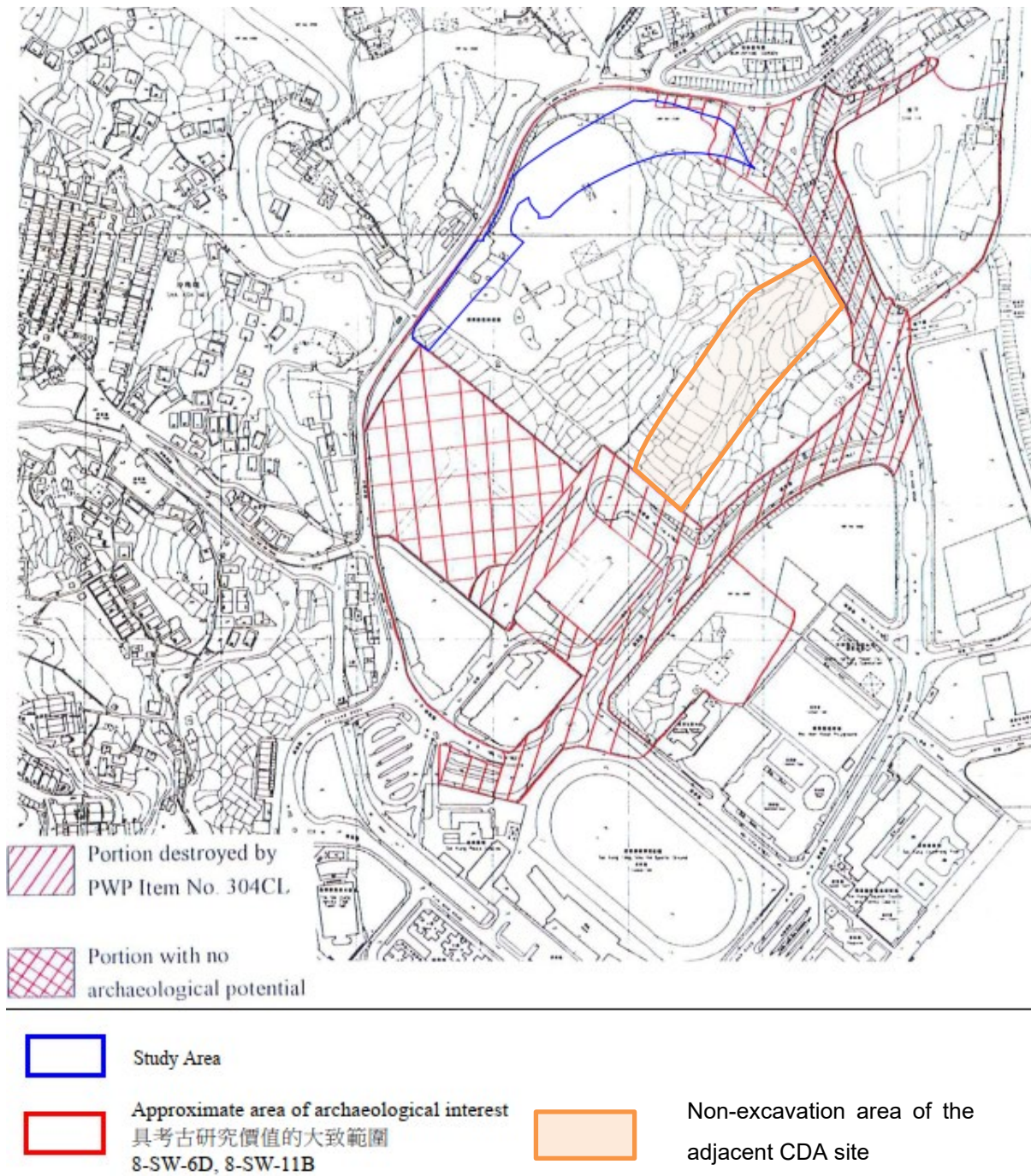
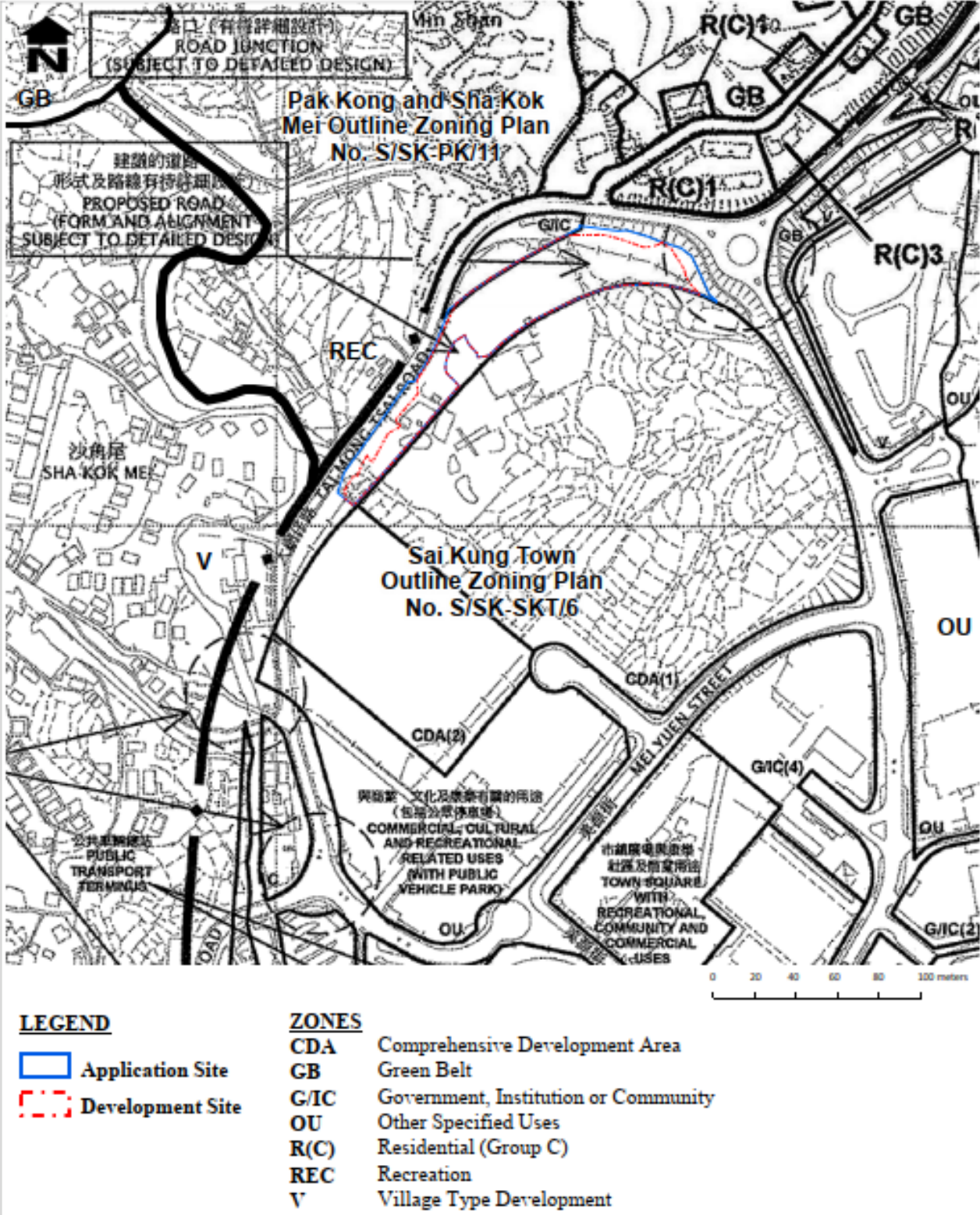


Figure 3.7 Location of Study Area within Sha Ha SAI

APPENDIX A

Location of Study Area

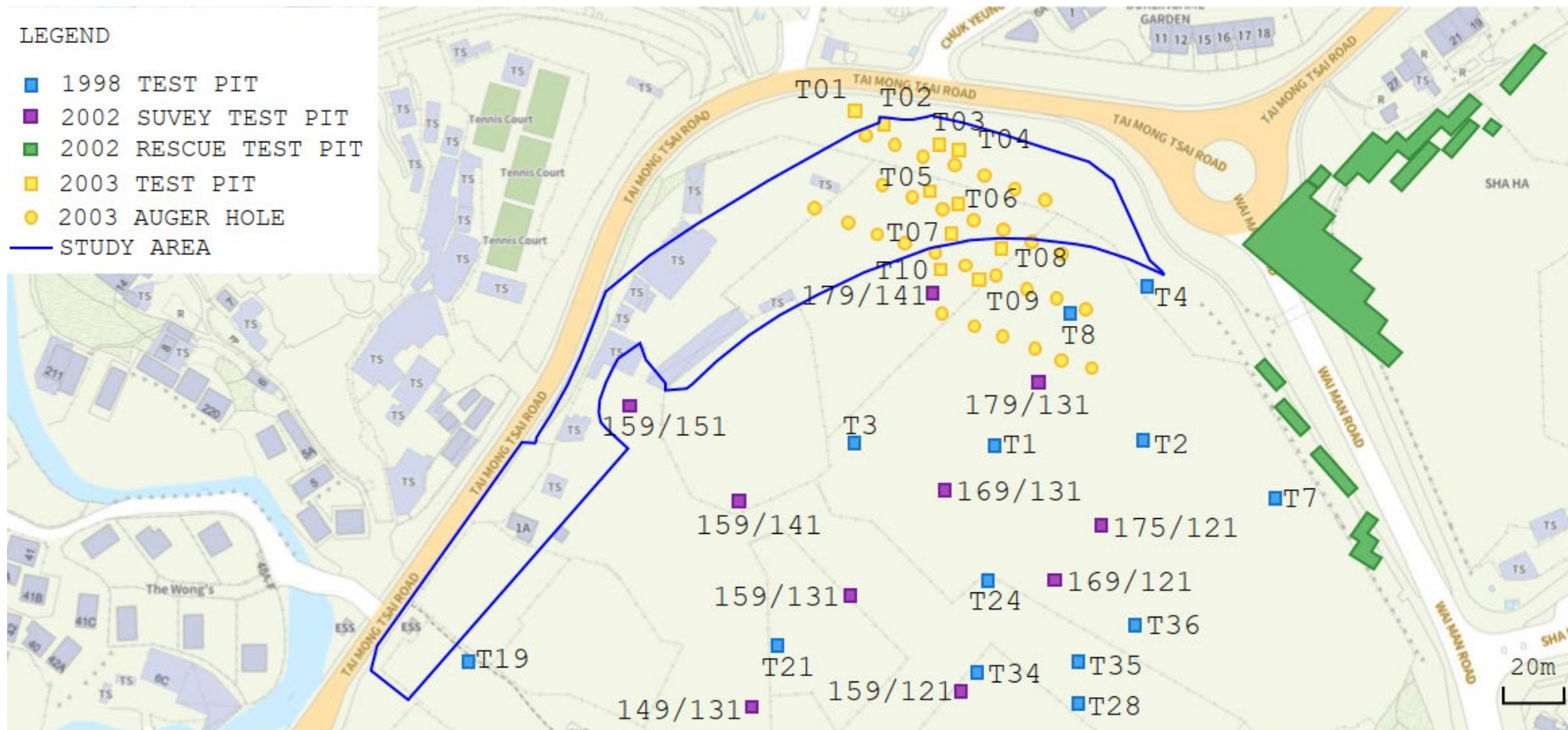


APPENDIX B

Previous Archaeological Works

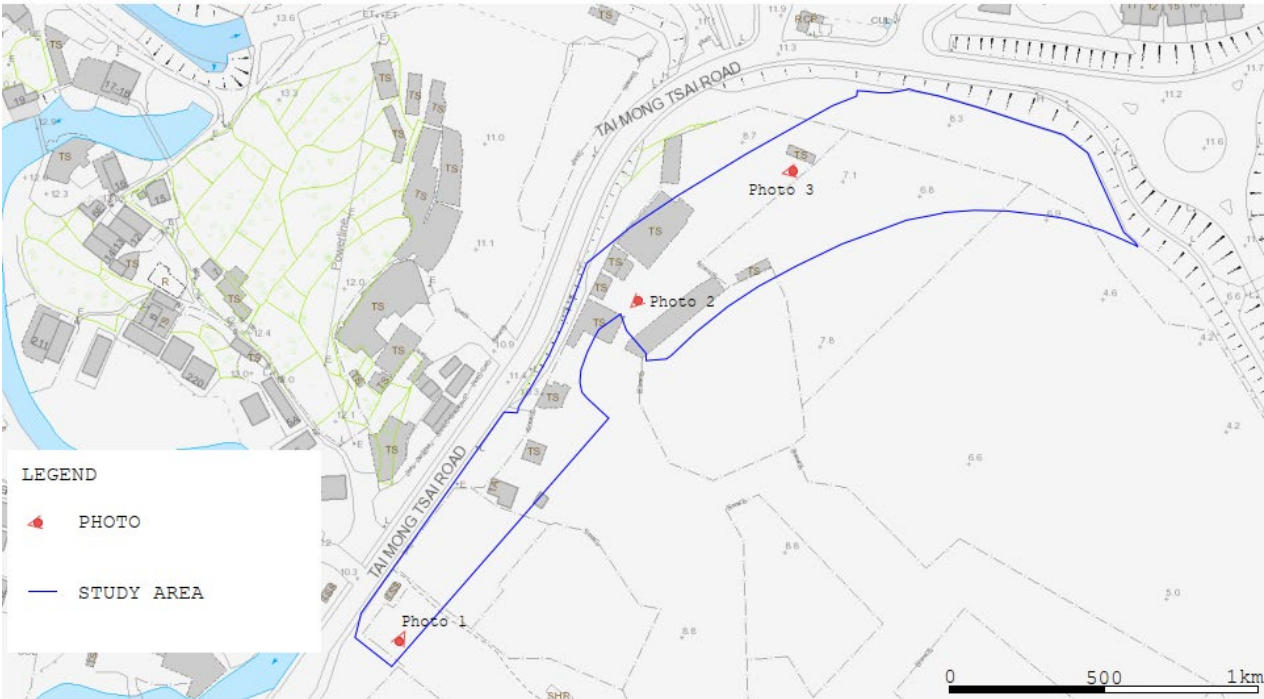
LEGEND

- 1998 TEST PIT
- 2002 SUVEY TEST PIT
- 2002 RESCUE TEST PIT
- 2003 TEST PIT
- 2003 AUGER HOLE
- STUDY AREA



APPENDIX C

Photos of Field Evaluation



Layout Plan of Field Evaluation



Photo 1 South Part of the Study Area (North to South)



Photo 2 Middle Part of the Study Area (South to North)



Photo 3 North Part of the Study Area (West to East)