APPENDIX 13.1

FIELD INVESTIGATION PROPOSAL

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1 FIELD INVESTIGATION PROPOSAL

1.1 Background

1.1.1 The archaeological impact assessment (AIA) for the captioned project which is based on desk-based review of existing information including numerous previous investigations, indicates that an area within the development at San Hing Road and Hong Po Road has the potential for archaeology including deposits, material and features (B&V 2019).

1.1.2 The AIA recommends archaeological field investigation within an area of Project Site which is located within San Hing Site of Archaeological Interest (SAI) and near significant archaeological findings (AMO 1998, 2003) (Figure 1). The findings of the proposed field investigation aim to guide the assessment of this area which may result in mitigation recommendations, if necessary. Mitigation in the form of further survey, rescue excavation or watching brief is possible, although preservation in situ of significant archaeological deposits and features, if present would be the preferred option.

1.2 Objectives of Field Investigation

1.2.1 The objective of the field investigation is to determine if the significant findings dated to Song and Ming dynasties discovered in 1998 extend to the proposed development area and/or if other archaeological findings are present which would affect the implementation of the proposed development.

1.3 Background to the proposed area for further field investigation

1.3.1 The identified area for further investigation within the Project Site (proposed Licence Area) is located on a similar topography (elevations around 12mPD) and geology (Pleistocene terraced alluvium and debris flow) as previous significant findings within San Hing Tsuen SAI which are located at a distance of around 35 metres from the Project Site boundary within the proposed Licence Area.

1.3.2 The area of previous findings included a significant amount of Song and Ming dynasty ceramics, tiles, as well as features such as a ditch and pits (AMO 1998). A tile mould dated to the Song dynasty recovered from a ditch suggest a possible, local tile industry in vicinity. In addition, five auger tests, i.e. A12, A13, A14, A34 and A35 were conducted in 2003 (AMO 2003) within the proposed licence area (Figure 1) and although no cultural remains were discovered in these auger holes except A12 where a piece of Ming/Qing tile fragment was found, nearby test A11 included further evidence for occasional Ming/Qing tile fragments and glazed pot sherds. The cultural features and layers were recorded within the top metre of the excavation and are thus likely to be impacted by any site formation works.

1.3.3 The existing impacts of the area appears minimal and there is no evidence for major disturbance. Five auger hole tests conducted within the proposed licence area indicated a stratigraphy undisturbed by recent activity (Figure 1). Currently it is occupied by light industry warehouses, including storage areas and concrete surface covering. These are superficial impacts and would not have had major adverse effect on any potential archaeology in the upper 1m.

1.4 Proposed Scope and Methodology of field investigation

1.4.1 The following scope and methodology for archaeological works are proposed but shall be reviewed after the detailed design of the development in Area 2 is available and the actual site condition before clearance of structures is known. AMO will provide detailed comment on scope as part of the Archaeological Action Plan (AAP) which shall be submitted by the qualified archaeologist appointed by the project proponent.

Field Scan

1.4.2 Field walking may not be relevant depending on the surface clearing after the structures are removed however, attention should be given to cuts and recently exposed areas.

1.4.3 The scanning of the surface for archaeological material is conducted, under ideal circumstances, in a systematic manner and covers the archaeological potential area identified in the desk-based review within a certain area, in this case the proposed licence area as marked on Figure 1. Particular attention is given to exposed areas such as riverbed cuts, erosion areas, terraces, etc, if applicable.

1.4.4 Material and concentrations of finds are recorded, mapped at 1:1000 scale and collected during the field scanning and form part of the archive. Topography, surface conditions and existing conditions are noted during the field walking.

Auger Survey

1.4.5 Auger survey of the identified untested area should be carried out in order to establish soil sequence, the presence/absence of cultural soils or deposits and their horizontal extent. No less than fifty auger tests are tentatively proposed subject to further confirmation with AMO during the licence application stage. The exact number and locations are subject to area available after resumption and site clearance and to be agreed with AMO in AAP prior to implementation. See **Figure 2** for tentative locations within the proposed licence area.

1.4.6 The auger tool consists of a bucket, pole and handle and is vertically drilled by hand into the surface. When the bucket is filled with soil the auger is extracted and the soil emptied from the bucket. Soils are described and depth changes are measured inside the hole. The depth of any material found is also measured. The auger hole is abandoned when water table, the end of the auger or rock is reached, or the auger bucket fails to hold the soil.

1.4.7 The location of each auger hole test is marked on a 1:1000 scale map. The results of the auger tests provide one of the criteria used to position the test pit excavations.

Test Pit Excavation

1.4.8 Test pit excavations are carried out to verify the archaeological potential identified in the desk-based review within a certain area. The choice for the location of the test pit excavation depends on various factors such as desk-based information, landforms, field scan and auger test results as well as access issues. It is recommended to undertake No less than twenty test pit excavations subject to further confirmation with AMO during the licence application stage as marked on **Figure 2**. The exact number and locations, however, are subject to area available after resumption and site clearance and to be agreed with AMO in AAP prior to implementation. Further test pits or extensions of test pits should be considered if in situ deposits or features are found.

1.4.9 Hand digging of test pits measuring 2 x 2 meters should be carried out in order to determine the presence/absence of archaeological deposits and their stratigraphy. The size, however, may depend on close proximity to large trees, narrow terraces or other external factors. The test pit is hand excavated, contexts, finds and features are recorded, soils described, and relevant depths measured. Artefacts are recorded and collected. Photographs of sections and other relevant information are taken and section and ground plans, if required, are drawn.

1.4.10 Hand excavation will continue until rock or decomposing rock are reached and no potential for archaeological soils or deposits exist. Additionally, the test pit will be abandoned when the water table is reached or when the depth of excavation poses safety problems.

1.4.11 The hand excavated test pit is backfilled after full recording. Field records containing information regarding the physical location of the test pit, weather conditions, size and benchmark, description of the soils and their measured depths, artefact and feature finds are

kept for each pit. Photographs are taken and drawings and plans produced, finds are bagged, labelled and stored for transport. The location of the test pit is mapped on a 1:1000 scale map.

1.4.12 An archaeological report will be prepared by the qualified archaeologist(s) in accordance to the agreed Archaeological Action Plan, to present the findings of the archaeological survey and further mitigation, if any.

1.4.13 The engaged archaeologist shall be required to obtain a licence from the Antiquities Authority before undertaking archaeological field investigation under the provision of the Antiquities and Monuments Ordinance (Cap.53). It is recommended to engage a qualified archaeologist with no less than 5 years of field experience.

1.4.14 The archaeologist shall be required to submit the essential documentation to AMO to apply for a Licence to undertake archaeological field investigation. Within this documentation the archaeologist shall identify the team and approach to field investigation.

1.4.15 The expected timing in undertaking an archaeological investigation includes:

- Upon commissioning, 2 weeks to submit Licence application to AMO;
- Granting of the licence usually requires up to 8 weeks once the application is accepted;
- Field works are expected to be completed within 4 to 6 months tentatively (subject to weather, completion of surface clearance of the site and resources);
- Processing, analysis and draft reporting of findings, within 6 months of completion of field works;
- Final submission of archaeological investigation report, depending on AMO comments; and
- Submission of archives, no more than 12 months after acceptance of final report.

1.5 References and Bibliography

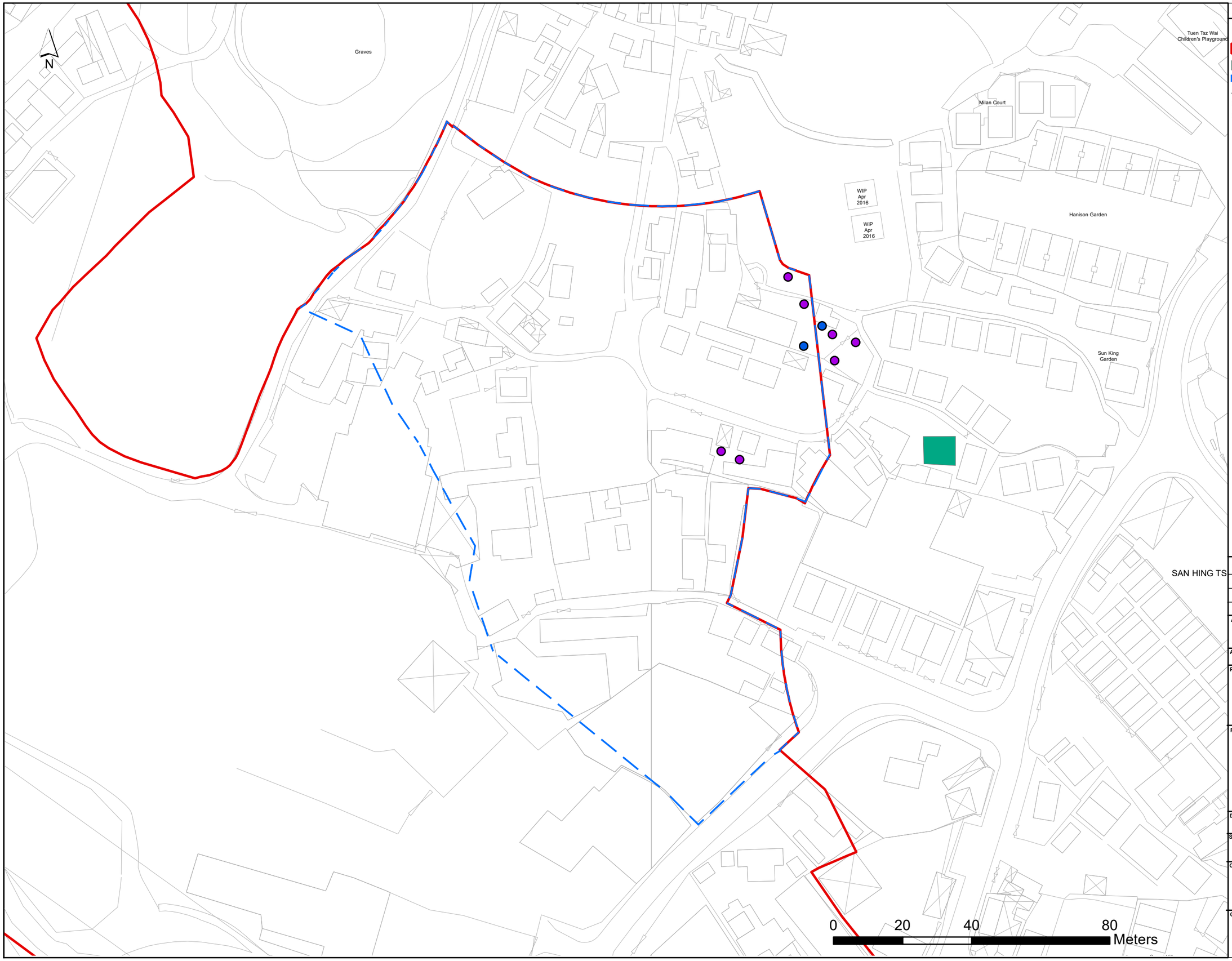
AMO 1998. 古物古蹟辦事處: <第二部份: 1998年屯門新慶村古遺址發掘報告>, <<香港屯門-荃灣地區考古調查、發掘報告 1997-1998>>, 1998年, 頁83-113。(古物古蹟辦事處參考編號) (ID1)

AMO 2003. 古物古蹟辦事處: <<屯門新慶村丈量約份第130約地段452C3及193D號小型屋宇工程考古調查報告>>, 2003年。(古物古蹟辦事處參考編號) (TM26)

B&V 2019. *Agreement No. CE 68/2017 (CE) Site Formation and Infrastructural Works for the Development at San Hing Road and Hong Po Road, Tuen Mun– Feasibility Study. Baseline review and Cultural Heritage Impact Assessment* (undertaken by AAL).

END OF TEXT

FIGURE



Legend

- Proposed Development Area Boundary
- Area of Previous Significant Findings
- Proposed Boundary of Licence

Auger Test

- No Finding
- With Finding

Revision	Description			
	Designed	Reviewed	Drawn	Checked
Initial	AA	ET	Wing	ET
Date	04/20	04/20	04/20	04/20

Approved: -

Agreement No.: CE68/2017 (CE)

Project Title: **Site Formation and Infrastructural Works for the Development at San Hing Road and Hong Po Road, Tuen Mun - Feasibility Study**

Figure Title: **Location of Proposed Licence Area**

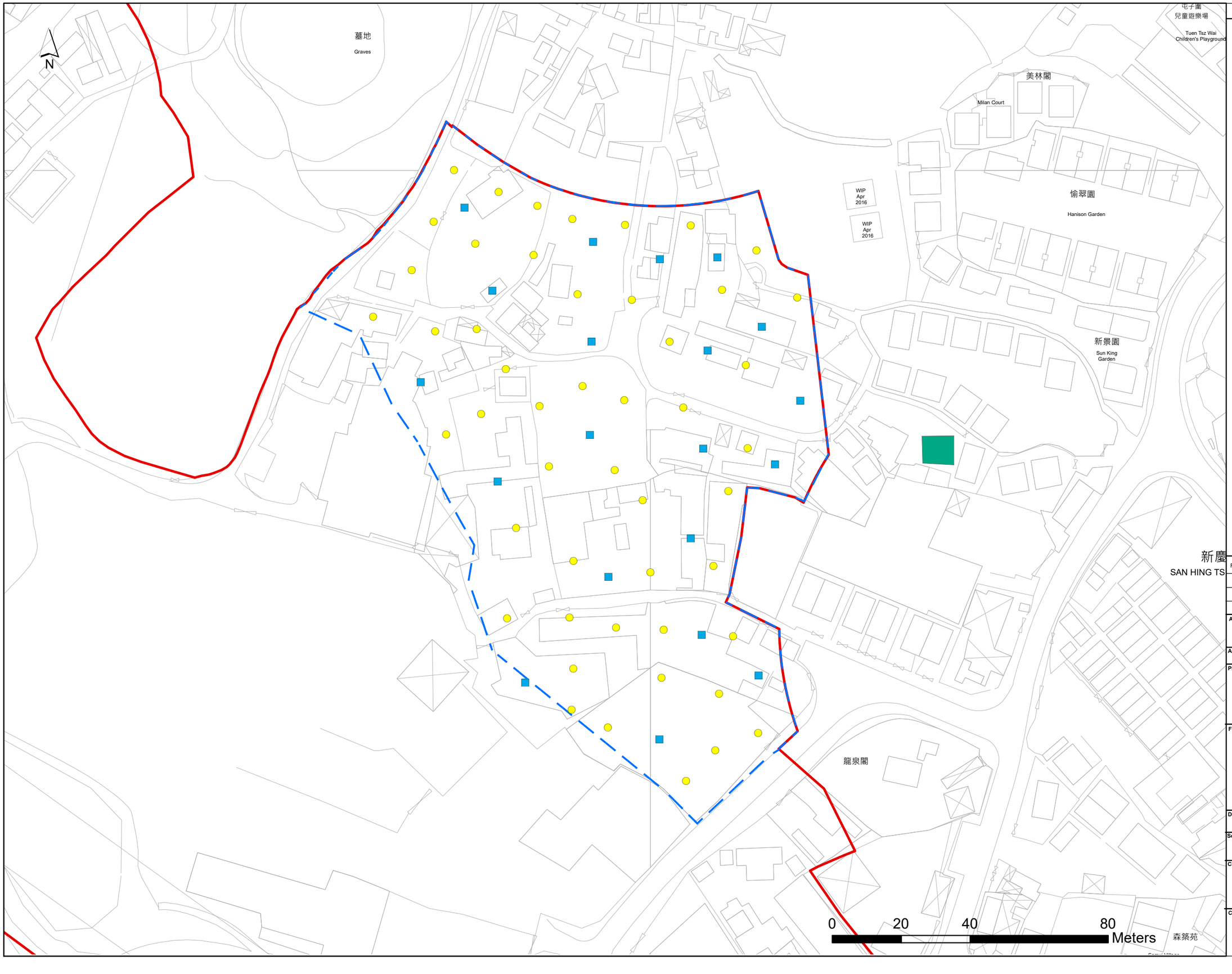
Drawing No.: Figure 1

Revision: -

Scale: A3: 1:1,000

Client: CEDD 土木工程拓展署 Civil Engineering and Development Department

Consultant: BLACK & VEATCH



Legend

- Proposed Development Area Boundary
- Proposed Test Pit
- Proposed Auger Test
- Area of Previous Significant Findings
- Proposed Boundary of Licence Area

Note:
The number and location of proposed test pits and auger tests are tentative and subject to change.

Revision	Description			
	Designed	Reviewed	Drawn	Checked
Initial	AA	ET	Wing	ET
Date	10/19	10/19	10/19	10/19

Approved: -

Agreement No.: CE68/2017 (CE)

Project Title: **Site Formation and Infrastructural Works for the Development at San Hing Road and Hong Po Road, Tuen Mun - Feasibility Study**

Figure Title: **Tentative Locations of Auger Tests and Test Pits**

Drawing No.: Figure 2

Revision: -

Scale: A3: 1:1,000

Client: CEDD 土木工程拓展署 Civil Engineering and Development Department

Consultant: BLACK & VEATCH