

The MTR Corporation

Shatin to Central Link - Tai Wai
and Hung Hom Section:
*Updated Archaeological Action Plan
for Sacred Hill (North)*
Works Contract 1109 - Stations and
Tunnels of Kowloon City Section

September 2013

(Version 0)

Environmental Resources Management

21/F Lincoln House
979 King's Road
Taikoo Place
Island East, Hong Kong
Telephone: (852) 2271 3000
Facsimile: (852) 2723 5660
E-mail: post.hk@erm.com
<http://www.erm.com>

MTR Corporation Limited

**Shatin to Central Link –
Tai Wai to Hung Hom Section**

Archaeological Action Plan for Sacred Hill (North)

Works Contract 1109 – Stations and Tunnels of
Kowloon City Section
(October 2013)

Verified by: Fredrick Leong



Position: Independent Environmental Checker

Date: 8 October 2013

MTR Corporation Limited

**Shatin to Central Link –
Tai Wai to Hung Hom Section**

Archaeological Action Plan for Sacred Hill (North)

Works Contract 1109 - Stations and Tunnels of
Kowloon City Section
(October 2013)



Certified by: Winnie Ko

Position: Environmental Team Leader


Date: 3 October 2013

The MTR Corporation

Shatin to Central Link (SCL) - Tai
Wan and Hung Hom Section:
*Updated Archaeological Action Plan
for Sacred Hill (North)*
Works Contract 1109 - Stations and
Tunnels of Kowloon City Section

September 2013

Reference no: 0171394

For and on behalf of ERM-Hong Kong, Limited	
Approved by:	Frank Wan
Signed:	
Position:	Partner
Date:	18 September 2012

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We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

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1.1

BACKGROUND

The Shatin to Central Link – Tai Wai to Hung Hom Section (hereafter referred to as SCL (TAW-HUH)) (the Project) is an approximately 11 km long extension of the Ma On Shan Line and connects the West Rail Line at Hung Hom forming a strategic east-west rail corridor. It is a Designated Project under the *Environmental Impact Assessment Ordinance* (Cap. 499) (EIAO).

The construction of the SCL (TAW-HUH) has been divided into a series of Civil Construction Works Contracts and Contract 1109 covers the construction of To Kwa Wan (TKW) station and Ma Tau Wai (MTW) station, and the tunnels between TKW and Ho Man Tin (HOM) stations and the associated structures. This construction contract was awarded to Samsung-Hsin Chong JV (SSHCJV) in July 2012.

The Environmental Impact Assessment (EIA) Report of the SCL (TAW-HUH) (Register No. AEIAR-167/2012) was approved by the Environmental Protection Department (EPD) under the EIAO in February 2012. An Environmental Permit (EP-438/2012) has been issued in March 2012. The EP has been varied recently and the latest version was EP (EP-438/2012/D) which approved on 13 September 2013.

As the Project will have impact on the potential archaeological resources survive in the Sacred Hill (North) study area identified in the approved EIA report (Registered No. AEIAR-167/2012), archaeological survey-cum-excavation and additional investigation at the Sacred Hill (North) study area has been recommended in the approved EIA report. This work is covered under the Civil Construction Works Contract 1109 and ERM-Hong Kong Limited (ERM) has been commissioned by the SSHCJV to conduct the archaeological survey-cum-excavation and additional investigation at the Sacred Hill (North) study area.

In accordance with Part 2, Section 2.16 of the EP-438/2012A, an Archaeological Action Plan (AAP) was deposited with the Director of Environmental Protection (DEP) on 10 August 2012 and a Licence to Excavate and Search for Antiquities (with Licence No. 342) under the *Antiquities and Monuments Ordinance* was applied and then granted to Dr Liu Wensuo on 31 October 2012.

In accordance with the approved AAP (see *Annex A*), the archaeological survey-cum-excavation is divided three stages. Stage 1 is an archaeological survey commenced on 12 November 2012 and completed on 11 January 2013; Stage 2 archaeological excavation commenced on 13 November 2012 and completed on 19 January 2013. Stage 3 archaeological excavation commenced on 4 January 2013 and the excavation is still undertaking.

Apart from the archaeological survey-cum-excavation, an additional investigation has also been recommended in the approved AAP. The additional investigation commenced on 5 June 2013 and is still undertaking.

As the archaeological team forecasted that the remaining archaeological excavations may not be completed by the expiry date (28 October 2013) of the current Licence No. 342 due to inclement weather in the summer months and large quantity of artefacts unearthed, a licence renewal is considered necessary. This updated AAP is prepared as part of the supporting documents for licence renewal.

1.2

STRUCTURE OF THE REPORT

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

Section 2 provides an update of the scope of archaeological work;

Section 3 presents an update of the methodology;

Section 4 provides an updated work programme; and

Section 5 provides an update of the archaeological team.

This AAP is supported by the following Annexes:

Annex A Approved AAP; and

Annex B Curriculum Vitae of Dr Liu Wei.

2.1 SCOPE OF WORK

The objectives presented in the approved AAP (see *Annex A*) remain unchanged.

The main scope of the archaeological survey-cum-excavation and additional investigation presented in the AAP remains unchanged except the following refinements:

2.1.1 *Archaeological Survey-cum-Excavation*

As Song to Yuan Dynasties archaeological features are identified in TP82, TP74, TP75, TP76 and TP21 which may extend into the safety slope at their north/northwest, two sections of the safety slope are extended towards north/northwest and areas EA1 and EA2 as shown in *Figure 2.1* require archaeological excavation.

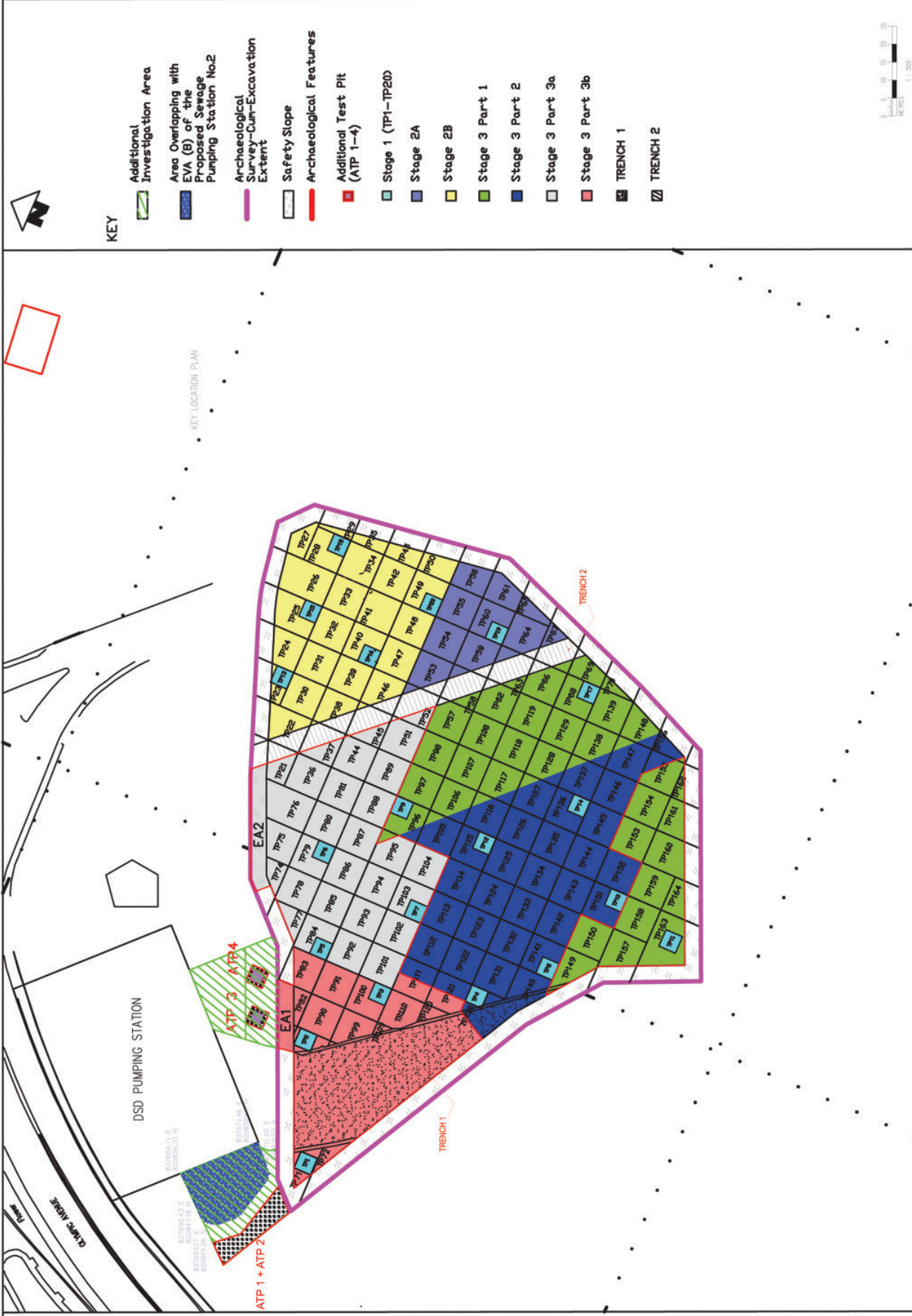
2.1.2 *Additional Investigation*

ATP1 and ATP2 are combined as one irregular shape pit as shown in *Figure 2.1* given the following reasons:

- The actual protection area of the adjacent DSD pumping station is larger than it is shown in the previous drawing and concrete blocks are placed outside the protection area as buffer area that cannot be removed.
- Due to safety consideration, set back of 1.5m to 2m from the concrete blocks are required. As a result, the previously proposed ATP1 and ATP2 locations cannot be conducted since they fall within the safety boundary.

As mentioned in *Section 2.1.1*, due to the excavation extended to the area reserved for safety slope, the location of ATP3 has been revised as shown in *Figure 2.1*.

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Grid System for Archaeological Survey-Cum-Excavation of Sacred Hill (North) Study Area
and
Proposed Test Pits at Additional Investigation Area

Figure 2.1

The methodology of the archaeological survey-cum-excavation and additional investigation presented in the approved AAP has been refined during the course of the excavation to suit site condition. The changes are discussed below.

3.1 EXCAVATION STRATEGY

3.1.1 Archaeological Survey-cum-Excavation

Based on Stage 1 archaeological survey findings, it is found that the fill soil layer is thicker than originally anticipated (ie 1.4m below existing ground level). As a result, at locations where the fill soil is deeper than 1.4m, mechanical excavation has been carried out to approximately 1.9m to 2.2m below existing ground level subject to site condition. The mechanical excavation has been monitored by the archaeological team to ensure that the mechanical excavation does not reach the cultural layer.

In case the identified archaeological features cover more than one grid, the concerned baulks have been excavated in order to expose the whole archaeological features for recording. For areas considered to have no archaeological deposits, baulks were not excavated.

During Stage 1 archaeological survey, Stages 2 and 3 excavation grids have been excavated concurrently under the following circumstances:

- Archaeological deposits or features extended outside the Stage 1 grid into the Stage 2 or Stage 3 grids;
- Inadequate data can be obtained from the Stage 1 grids regarding the presence of archaeological deposits; and
- A larger size grid is required to allow for deeper excavation due to safety consideration.

The alignment of the existing drainage box culvert within the archaeological survey-cum-excavation boundary has been identified after removal of the concrete slab and fill soil. The location of "Trench 2" showing the updated alignment of the box culvert is shown in *Figure 2.1*. Due to such change, some grids originally located in the Stage 2 excavation area (including grids TP21, TP36, TP37, TP44, TP45, TP51, TP52, TP57, TP58, TP62, TP63 and TP66 to TP70) have been partly or fully combined with Stage 3 excavation area.

With reference to the findings of the 2009-2010 archaeological excavation associated with the construction of the DSD Pumping Station (Contract no. DC/2008/12) to the northwest of the Site, an old drainage nullah ran across the DSD Pumping Station site and this Site (see "Trench 1" in *Figure 2.1*). As the construction of the nullah had completely destroyed the archaeological deposits along the alignment of the nullah, it is therefore

considered that archaeological excavation within the nullah is not necessary. The archaeological excavation therefore terminates at the edge of the nullah.

3.1.2 *Additional Investigations*

Please refer to *Section 2.1.2* above for details on the change of size, locations and shape of the proposed test pits.

3.2 *REPORTING*

With the agreement of AMO, the portions of the archaeological survey-cum-excavation area (ie Stage 2 area and part of Stage 3 area) which have been completed were handed over to SSHCJV for the Civil Construction Works. Four portions of the Site have been released for Civil Construction Works. Prior to handover of each portion of the Site, a *Site Assessment Report* summarising the key findings of the archaeological works was submitted to AMO for review and comment. Up to 16 September 2013, four *Site Assessment Reports* have been prepared:

- *Stage 2 Part A Site Assessment Report;*
- *Stage 2 Part B Site Assessment Report;*
- *Stage 3 Part 1 Site Assessment Report; and*
- *Stage 3 Part 2 Site Assessment Report.*

The following *Site Assessment Reports* will be prepared upon completion of remaining parts of the Site:

- *Stage 3 Part 3a Site Assessment Report; and*
- *Work Completion (Stage 3 Part 3b and ATP1 to ATP4) Site Assessment Report.*

The *Archaeological Survey-cum-Excavation and Additional Investigation Report* will present the background information of the excavated area and findings of the excavation in accordance with AMO's *Guidelines for Archaeological Reports*. Due to the large quantity of artefacts and archaeological features identified, a longer time is required for finds process and data analysis. The report will be submitted to the Engineer and AMO for comments five month after completion of the excavation. After resolution of comments, the report will be finalised taking account of the Engineer's and AMO's comments, where appropriate. Up to 5 copies of the *Final Archaeological Survey-cum-Excavation and Additional Investigation Report* will be provided to AMO for retention.

The finds, field archives, drawings, maps, photos and video footage taken during the fieldwork for the Project will be handed over to AMO within two months after acceptance of the *Final Archaeological Survey-cum-Excavation and Additional Investigation Report*.

4.1

UPDATED WORK PROGRAMME

In accordance with the requirements of the Civil Construction Works Contract 1109, the archaeological survey-cum-excavation works shall be completed within nine (9) months from the possession date (ie 14 August 2012) followed by the commencement of the construction works. However, due to prolonged heavy rain during the wet season and the additional investigation required by the AMO, the work programme has been delayed. The updated work programme for this archaeological survey-cum-excavation is presented in Figure 4.1 and outlined in Table 4.1. Should there be any updates on the work programme, the Engineer and AMO will be informed for agreement.

Table 4.1 Updated Work Programme

Task	Work Description	Anticipated Start Date	Anticipated Finish Date	Approximate Duration
1	Setting out excavation boundary	31 Oct 2012	31 Oct 2012	1 working days
2	Removal of concrete slab and fill soil by mechanical excavator at Stages 1 and 2 Areas	1 Nov 2012	21 Dec 2012	7.5 weeks
3a	Stage 1 archaeological survey	12 Nov 2012	11 Jan 2013	8 weeks
3b	Stage 2 archaeological excavation	13 Nov 2012	19 Jan 2013	2 months
3c	Stage 3 Part 1 and Part 2 archaeological excavation	4 Jan 2013	22 Jun 2013	5.5 months
3d	Stage 3 Part 3 archaeological excavation	4 Jan 2013	Nov 2013	10 months
3e	Additional Investigation	5 Jun 2013	Nov 2013	5 months
4a	Stage 2A Handover Assessment Report		19 Jan 2013	
4b	Stage 2A Site Handover		24 Jan 2013	
4c	Stage 2B Handover Assessment Report		26 Jan 2013	
4d	Stage 2B Site Handover		15 Feb 2013	
4e	Stage 3 Part 1 Handover Assessment Report		26 Jan 2013	
4f	Stage 3 Part 1 Site Handover		15 Feb 2013	
4g	Stage 3 Part 2 Handover Assessment Report		8 July 2013	
4h	Stage 3 Part 2 Site Handover		15 July 2013	
4i	Stage 3 Part 3a Handover Assessment Report	Oct 2013	Oct 2013	
4j	Stage 3 Part 3a Site Handover	Oct 2013	Oct 2013	
4k	Work Completion (Stage 3 Part 3b and ATP1 to ATP4) Site Assessment Report	Nov 2013	Nov 2013	
4l	Whole Site Handover	Nov 2013	Nov 2013	
4m	Draft Archaeological Survey-cum-Excavation and Additional Investigation Report (ASE)	Nov 2013	Mar 2014	5 months

Task	Work Description	Anticipated Start Date	Anticipated Finish Date	Approximate Duration
4n	Report) Final Archaeological Survey- cum-Excavation and Additional Investigation Report (ASE Report)		Sep 2014	6 months
4o	Artefacts Handover	-	Oct 2014	Upon submission of Final Reports

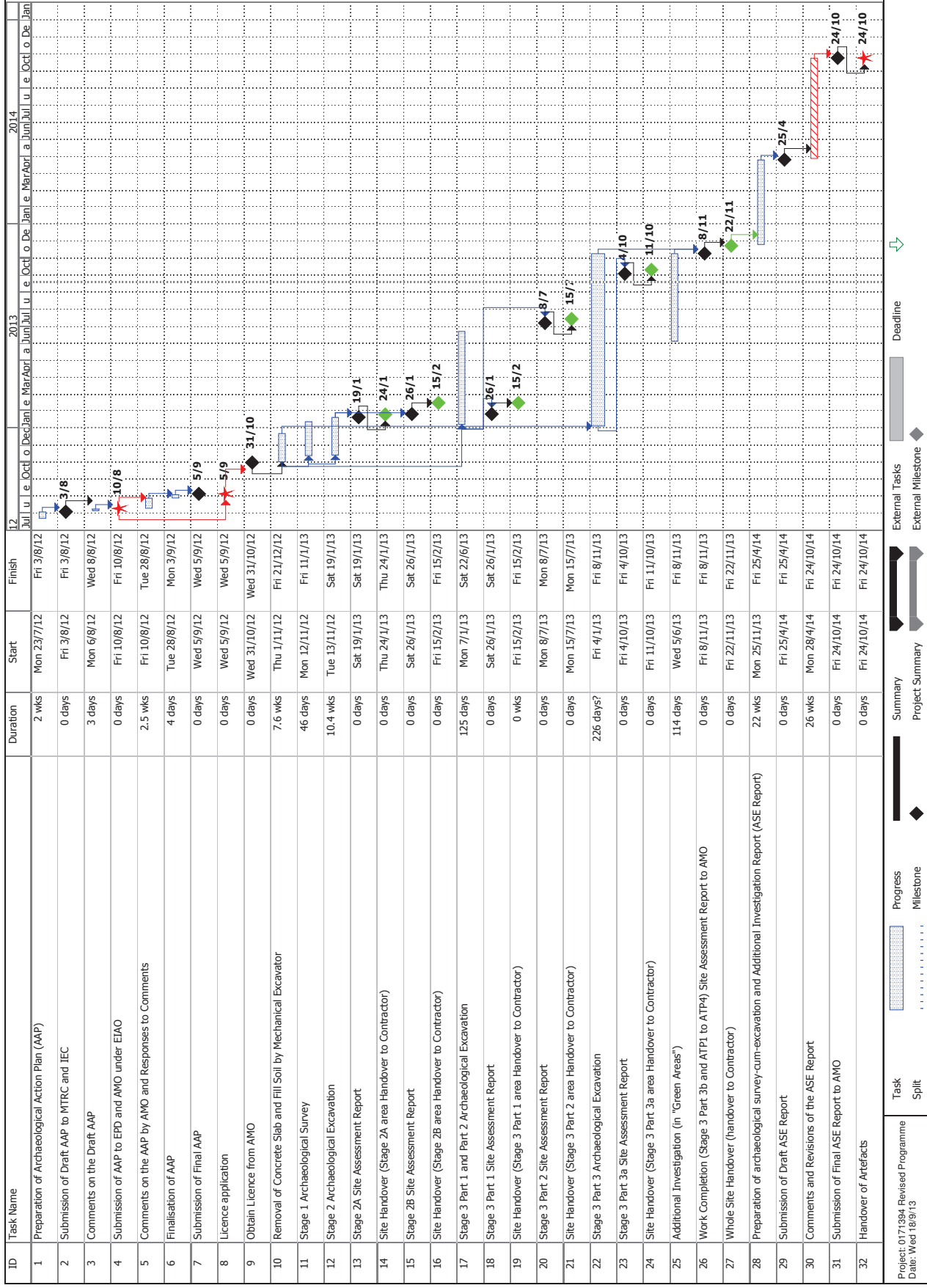


Figure 4.1 - MTR SCL Civil Works Contract 1109
Work Programme for the Archaeological Survey-cum-Excavation and Additional Investigation

5.1

ARCHAEOLOGICAL TEAM

There is no major change to the archaeological team except that another experienced archaeologist and ceramic expert, Dr Liu Wei, has been added to the team. His CV is enclosed in *Annex B*.

Ceramic Experts

Mr Raymond Ng and Dr Liu Wei, who have extensive experience in ceramics from Song to Qing dynasties identified in the coastal area will act as the ceramic experts for the excavation. They will provide specialist inputs on ceramic dating and typology analysis, where necessary.

Annex A

Approved AAP

The MTR Corporation

Shatin to Central Link - Tai Wai
and Hung Hom Section:
*Archaeological Action Plan for Sacred
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Works Contract 1109 - Stations and
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September 2012

(Version 2)

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September 2012

Reference no: 0171394

For and on behalf of ERM-Hong Kong, Limited	
Approved by:	Frank Wan
Signed:	
Position:	Partner
Date:	3 September 2012

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MTR Corporation Limited

**Shatin to Central Link –
Tai Wai to Hung Hom Section**

Archaeological Action Plan for Sacred Hill (North)

Works Contract 1109 – Stations and Tunnels of
Kowloon City Section
(Sep 2012)

Verified by:  Tom Chapman

Position: Independent Environmental Checker

Date: 3 September 2012

MTR Corporation Limited

**Shatin to Central Link –
Tai Wai to Hung Hom Section**

Archaeological Action Plan for Sacred Hill (North)

Works Contract 1109 - Stations and Tunnels of
Kowloon City Section
(September 2012)

Certified by:  Winnie Ko

Position: Environmental Team Leader

Date: 3 September 2012

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1 INTRODUCTION

1.1 BACKGROUND

The Shatin to Central Link – Tai Wai to Hung Hom Section (hereafter referred to as SCL (TAW-HUH)) (the Project) is an approximately 11 km long extension of the Ma On Shan Line and connects the West Rail Line at Hung Hom forming a strategic east-west rail corridor. It is a Designated Project under the *Environmental Impact Assessment Ordinance* (Cap. 499) (EIAO).

The construction of the SCL (TAW-HUH) has been divided into a series of Civil Construction Works Contracts and Contract 1109 covers the construction of To Kwa Wan (TKW) station and Ma Tau Wai (MTW) station, and the tunnels between TKW and Ho Man Tin (HOM) stations and the associated structures. This construction contract was awarded to Samsung-Hsin Chong JV (SHJV) in July 2012.

The Environmental Impact Assessment (EIA) Report of the SCL (TAW-HUH) (Register No. AEIAR-167/2012) was approved by the Environmental Protection Department (EPD) under the EIAO in February 2012. An Environmental Permit (EP-438/2012) has been issued in March 2012. The EP has been varied recently and a varied EP (EP-438/2012/A) was issued in July 2012.

As the Project will have impact on the potential archaeological resources survive in the Sacred Hill (North) study area identified in the approved EIA report (Registered No. AEIAR-167/2012), archaeological survey-cum-excavation and additional investigation at the Sacred Hill (North) study area has been recommended in the approved EIA report.

In accordance with Part 2, Section 2.16 of the EP-438/2012A, an Archaeological Action Plan (AAP) shall be deposited with the Director of Environmental Protection (DEP) no later than two months before the commencement of the further archaeological investigation at the former Tai Hom Village or the Sacred Hill (North) study area. Before submission to the DEP, the AAP shall be certified by the Environmental Team (ET) Leader and verified by the independent Environmental Checker (IEC) as conforming to the information and recommendations contained in the approved SCL (TAW-HUH) EIA Report (Registered No. AEIAR-167/2012). The Archaeological Action Plan(s) shall include:

- (a) a detailed plan for further archaeological investigation and rescue excavation at the former Tai Hom Village site and the Sacred Hill (North) study area;
- (b) a contingency plan to address possible arrangement when significant archaeological findings are unearthed during the further archaeological investigation and rescue excavation.

The tentative areas requiring archaeological survey-cum-excavation and additional investigation are shown in Appendix 4.6 of the approved SCL (TAW-HUH) EIA Report (a copy of which is presented in *Annex D*). In accordance with Section 4.9.1.4 of the approved EIA Report, the AAP should also include a proposal for additional investigation to demarcate the archaeological potential of the two “Green Areas” as shown in Appendix 4.6. Adequate amount of test pits/trenches has been recommended to reflect the archaeological potential of those areas such that mitigation measures could be formulated based on the findings of the investigation.

Archaeological survey-cum-excavation and additional investigation at the Sacred Hill (North) study area are covered under the Civil Construction Works Contract 1109.

This AAP, which is prepared in accordance with the requirements of the AMO’s Guideline for Archaeological Impact Assessment presents a detailed plan for the archaeological survey–cum–excavation at the Sacred Hill (North) study area to be directly impacted by the construction works and the additional investigation to determine the archaeological potential of the two “Green Areas”. The AAP with a contingency plan addresses possible arrangement when significant archaeological findings are unearthed during the archaeological survey-cum-excavation and additional investigation.

ERM-Hong Kong Limited (ERM) has been commissioned by the SHJV to conduct the archaeological survey-cum-excavation and additional investigation.

1.2 *STRUCTURE OF THE REPORT*

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

Section 2 describes the objectives and scope of the AAP;

Section 3 presents the methodology for the AAP;

Section 4 describes the work programme of the AAP;

Section 5 describes the personnel required for the AAP;

This AAP is supported by the following Annexes:

Annex A Samples of Field Recording Sheets;

Annex B Relevant Requirements and Guidelines;

Annex C Curriculum Vitae of Key Staff; and

Annex D Appendix 4.6 of the approved SCL (TAW-HUH) EIA Report.

2 OBJECTIVES & SCOPE

2.1 OBJECTIVES

The objectives of the archaeological survey-cum-excavation is to conduct full scale archaeological excavation to salvage impacted archaeological materials in the Sacred Hill (North) study area and preserve them by record prior to construction commencement of the TKW station of the SCL (TAW-HUH) and the associated structures in the area.

The objectives of the additional investigation is to demarcate the archaeological potential of the two “Green Areas” in Appendix 4.6 such that mitigation measures could be formulated based on the findings of the investigation prior to construction commencement of the TKW station of the SCL (TAW-HUH) and the associated structures in the area.

During the EIA stage of the Project, detailed archaeological, geological and topographic background of the site has been addressed and detailed in the SCL (TAW-HUH) EIA Report. The sampling strategy as presented in *Section 3.3* below has taken into account the detailed information presented in the SCL (TAW-HUH) EIA Report and the allocation of the archaeological survey grids as presented in *Figure 2.1*.

2.2 SCOPE OF ARCHAEOLOGICAL SURVEY-CUM-EXCAVATION AND ADDITIONAL INVESTIGATION

The scope of the archaeological survey-cum-excavation and additional investigation is defined in *Figure 2.1* as “archaeological survey-cum-excavation and additional investigation extent” (hereafter referred to as “the Site Boundary”).

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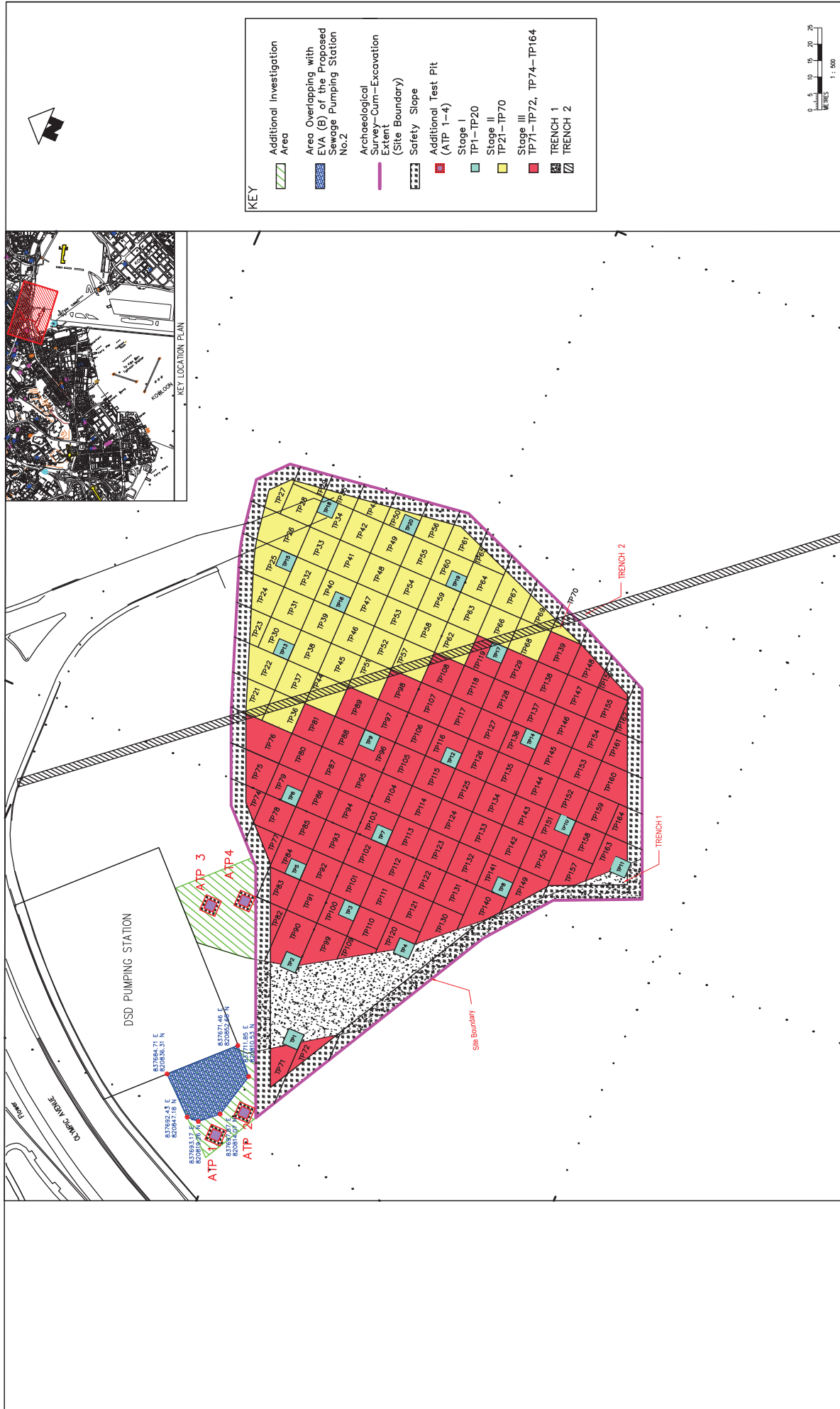


Figure 2.1 Grid System for Archaeological Survey-Cum-Excavation of Sacred Hill (North) Study Area and Proposed Test Pits at Additional Investigation Area

The tasks required to achieve the objectives as described in *Section 2* are detailed in this section. Upon receipt of the *Licence to Excavate and Search for Antiquities* for the archaeological survey-cum excavation and additional investigation under the *Antiquities and Monuments Ordinance* by the qualified archaeologist and the approval of this AAP by the Antiquities Monuments Office (AMO), the following tasks will be conducted.

3.1 TASK 1 – SETTING OUT ARCHAEOLOGICAL SURVEY-CUM-EXCAVATION AND ADDITIONAL INVESTIGATION BOUNDARIES

Qualified land surveyor(s) will mark on site the Site Boundary and proposed test pits in the “Green Areas”. The based point and reference line will be clearly defined and certified by the land surveyor(s).

3.2 TASK 2 – MECHANICAL EXCAVATION OF TOPSOIL

Based on findings of previous archaeological excavation to the immediate north of the Site Boundary and the “Green Areas” (including Contract No. DC/2008/12 Sewage Interception Scheme in Kowloon City – Pumping Station, Raising Mains and Truck Sewers; and the Kai Tak Development – Infrastructure at Former Runway and Remaining Areas of North Apron & Improvement of Adjacent Waterways – D&C Contract), the cultural layer is located approximately between 1.5m and 4.4m below the existing ground level (bgl). The topsoil/fill soil (approximately 1.4m thick subject to site condition) within the Site Boundary and the proposed four 5m x 5m test pits in the “Green Areas” (consisting of the concrete slab and fill soil) will be excavated using hydraulic breakers and backhoe(s) with nominal weight of not exceeding 4 tonnes. The mechanical excavation process will be monitored by the archaeological team to ensure the mechanical excavation work will not over excavate. If archaeological deposits are identified, mechanical excavation in the areas where the artefacts are found will be stopped and manual excavation will be carried out to record and recover artefacts.

As the excavation may reach over 4.4m bgl, a 4.5m horizontal width area from the Site Boundary will be reserved for establishment of a safety slope for the open excavation at the archaeological survey-cum-excavation area.

For the test pits excavation in the “Green Areas”, the benching excavation method will be adopted due to safety consideration.

Upon completion of the concrete slab and fill soil removal and establishment of the proper safety slope, qualified land surveyor(s) will be mobilised again to establish excavation grids as indicated in *Figure 2.1*. The archaeological survey-cum-excavation will be conducted manually from approximately 1.4m down to approximately 4.4m bgl (the depth of the excavation will be about 3m) or the sterile layer. In case deeper excavation is considered required, on site meeting will be arranged with the Engineer and AMO to discuss the detailed requirements. Any identified archaeological deposits will be collected and recorded.

Due care will be exercised to prevent any damages to the artefacts and archaeological features found within the Site Boundary.

The excavated soil will be properly handled by SHJV, who will submit a separate method statement to the Engineer for approval.

This archaeological survey-cum-excavation will be divided into 3 stages taking account of the construction programme of the TKW station and the associated structures within the Site Boundary. Due to tight construction programme, it is proposed that once the archaeological survey-cum-excavation at the Stage 2 area is completed and with the agreement of AMO, the area will be released to the SHJV for the civil engineering construction works. Safety measures will be implemented by SHJV between Stages 2 and 3 areas where appropriate to ensure safety of the excavation works.

3.3.1

Stage 1 Excavation: Archaeological Survey of TP1 to TP20

Stage 1 will excavate twenty (20) 5m x 5m grids (TP1 to TP20) (see *Figure 2.1*) to identify the depth of cultural layer, if present, in different locations within the Site Boundary; determine the excavation strategies/sequence for Stages 2 and 3 excavations; identify the original coastline and to identify the extent of an old nullah which should have destroyed any surviving archaeological deposits when it was constructed ⁽¹⁾. Based on the available information, the approximate alignment of the nullah is shown in *Figure 2.1*.

After setting out of the grids for the archaeological survey by land surveyor(s), the grids will be excavated by manual labours using hand tools under strict supervision by the archaeological team. The archaeological team comprises the licensed archaeologist and three field assistants. It is proposed that about four grids (5m x 5m) will be excavated concurrently. Two archaeological teams will be deployed to conduct Stage 1 Excavation and the additional investigation in the “Green Areas”. Three manual labours will be deployed for each grid.

(1) Based on Contract Drawing no. 1109/TSUW/SHJ/C06/124, the maximum depth of the nullah running through the Site Boundary is about 8m bgl, which is well below the anticipated cultural layer within the Site Boundary. Any artefact in nullah area would be destroyed during the construction of the nullah.

During the grid excavation, approximately 1m wide baulks (vertical cross-sections of the standing side of the excavation unit) will be allowed for observation and control of stratigraphy and for recording purpose. The baulks will be excavated after recording if considered to contain archaeological remains.

Upon completion of Stage 1 archaeological survey, on site discussion will be arranged with AMO and the Engineer to agree on the excavation strategies/ sequence for Stages 2 and 3 excavations. Written record will be prepared for record purpose after the site meeting.

3.3.2

Stage 2 Excavation: TP 21 – TP 70 and Trenches 1 and 2

Stage 2 area comprises fifty (50) 10m x 10m grids (with some variation in size subject to site condition and shape of the Site Boundary) (TP21 to TP70) and Trenches 1 and 2 as shown in *Figure 2.1*. *Table 3.1* provides a summary of grid/trench size for Stage 2 excavation.

Should archaeological deposits be identified in TP13, TP15, TP16, TP18 from the archaeological survey (ie Stage 1 excavation), grids around these grids will first be excavated and radiate out. Should no deposits be identified, excavation will commence at selective grids in adjacent areas to confirm the extent of area without archaeological deposits that may be scoped out from the full scale excavation for agreement with AMO. All the grids with archaeological deposits will be fully excavated to ensure that the archaeological deposits are properly recorded and completely recovered.

Concurrently, it is anticipated that the results from TP1, TP2, TP4 and TP11 will assist in defining the boundary of the old nullah considered to have no archaeological deposits. The edge of Trench 1 will be excavated manually and assisted by the use of hydraulic backhoe(s) under the supervision of the archaeological team. For area without archaeological potential, mechanical excavation will be adopted if excavation of such area is considered necessary.

A number of grids (TP19, TP20) have been allocated south or southeast in the Site Boundary to identify the original coastline based on the existing information from geological map. Should onshore and coastal deposits/seabed sediments such as coarse sand or natural shells be identified, the present of the original coastline can be defined. Subject to site condition, the south or southeast area from the original coastline was likely the sea or low flat intertidal areas where archaeological potential will be low, limited to secondary deposits or random deposits. Upon AMO agreement, the area will be excavated using mechanical equipment under the supervision of the archaeological team should excavation in the area be required.

A desktop review also indicates that an existing box culvert locates in the Stage 2 area (see Trench 2 in *Figure 2.1*). The construction of the box culvert would have destroyed the artefacts, if any along the alignment of the culvert. Upon agreement with AMO, Trench 2 will be excavated by hydraulic backhoe(s) with nominal weight of not exceeding 4 tonnes under the supervision of the archaeological team.

The grids will be excavated by manual labours using hand tools under strict supervision of the archaeological team. The archaeological team will comprise the licensed archaeologist and three field assistants. Subject to site condition and work progress, it is anticipated that approximately 2.5 grids of 10m x 10m will be excavated concurrently by one archaeological team. Subject to site condition and work progress, a maximum of three archaeological teams will be deployed. Each team will comprise one qualified /experienced archaeologist and three field assistants. Eight to twelve manual labours will be deployed for each grid.

During the grid excavation, approximately 1m wide baulks (vertical cross-sections of the standing side of the excavation unit) will be allowed between grids for observation and control of stratigraphy and for recording purpose. They would be excavated after recording if considered to contain archaeological remains.

Table 3.1 **Excavation Grid Size of Stage 2 Grids**

Grid Number	Approximate Grid Size (m ²)	Grid Number	Approximate Grid Size (m ²)
TP28, 31, 32, 33, 36, 37, 38, 39, 41, 42,44,45,46,47,48,49,51,52,53,54,55, 57, 58, 59, 62, 63, 64, 66, 68	100 m ² (10m X10m)	TP34	75
		TP35	77
		TP40	75
		TP43	92
TP21	122	TP50	81
TP22	159	TP56	119
TP23	96	TP60	75
TP24	132	TP61	119
TP25	141	TP65	83
TP26	189	TP67	115
TP27	128	TP69	107
TP29	63	TP70	70
TP30	75		

3.3.3 **Stage 3 Excavation: TP71, TP72, TP74 -TP164**

Stage 3 excavation area comprises ninety - four (93) 10m x 10m grids (with some variation in size subject to site condition and the shape of the Site Boundary) (TP71, TP72, TP74 to TP164) as shown in *Figure 2.1*. *Table 3.2* provides a summary of grid size for Stage 3 excavation.

Stage 3 excavation will commence after Stage 2 excavation completion. Should archaeological deposits be identified in TP3, TP5 to TP9 and TP12 from the archaeological survey (ie Stage 1 excavation), grids around these grids will first be excavated and radiate out. Should no deposits be identified, excavation will commence at selective grids in adjacent areas to confirm the extent of area without archaeological deposits that may be scoped out from the full scale excavation for agreement with AMO. All the grids with

archaeological deposits will be fully excavated to ensure that the archaeological deposits are properly recorded and completely recovered.

A number of grids (TP10, TP14, TP17) have been allocated south or southeast in the Site Boundary to identify the original coastline based on the existing information from geological map. Should seabed sediments be identified, the present of the original coastline can be defined. Subject to site condition, the south or southeast area from the original coastline was likely the sea or low flat intertidal areas where archaeological potential will be low, limited to secondary deposits or random deposits. Upon AMO agreement, the area will be excavated using mechanical equipment under the supervision of the archaeological team should excavation in the area be required.

Table 3.2 **Excavation Grid Size of Stage 3**

Grid Number	Approximate Grid Size (m ²)	Grid Number	Approximate Grid Size (m ²)
TP78, 80, 81, 83, 85- 89, 91-95, 97, 98, 101-102, 104-108, 110-115, 117, 118, 121-129,131-135, 137-139,142-147, 150, 152, 153-155, 158, 159	100 (10m X10m)	TP 103	75
TP 71	169	TP 109	44
TP 72	173	TP 116	75
TP 74	108	TP 119	75
TP 75	137	TP 120	68
TP 76	180	TP 130	94
TP 77	115	TP 136	75
TP 79	75	TP 140	101
TP 82	111	TP 141	75
TP 84	75	TP 148	128
TP 90	140	TP 149	105
TP 96	75	TP 151	75
TP 99	109	TP 156	84
TP 100	75	TP 157	105
		TP 160	156
		TP161	112
		TP162	88
		TP163	104
		TP 164	99

Note: TP73 deleted as it is located on the safety slope.

3.4

TASK 3B – ADDITIONAL INVESTIGATION

Upon completion of the concrete slab and fill soil removal, four 5m x 5m test pits will be conducted (ATP1 to ATP4) as shown in *Figure 2.1*. They are located as close to the north portion as possible while allowing sufficient set back from existing structures to avoid or minimise potential impact to existing structures due to the investigation works. The benching excavation method will be adopted due to safety consideration. *Figure 3.1* illustrates the section view of benched test pit.

The investigation will be conducted manually from approximately 1.2 m down to the anticipated maximum depth (3.6m bgl) of the cultural layer or the sterile layer. Should deeper excavation be considered required, an auger hole will be bored from the bottom of the pit to obtain the field data or timber

planks shoring will be adopted where appropriate. Any identified archaeological deposits will be collected and recorded.

Due care will be exercised to prevent any damages to the artefacts and archaeological features unearthed.

This additional investigation will be conducted concurrently during Stage 1 archaeological survey-cum-excavation.

3.5

FIELD RECORDING

Prior to excavation commencement, the Central Archaeological Repository (CAR) of AMO will be consulted for allocation of a standardised site code for the work.

The archaeological team will record the field archives during the course of the excavation using the recording sheets as presented in *Annex A*. All field archives will follow AMO's *Guidelines for Handling of Archaeological Finds and Archives*.

The artefacts (if discovered) will be processed and analysed in accordance with AMO's *Guidelines for Handling of Archaeological Finds* (see *Annex B*). Archaeological features will be recorded and samples will be collected, if considered necessary. Video will be taken to record the digging process and important finds unearthed.

The levels of the excavated area will be surveyed and certified by a qualified land surveyor to be provided by SHJV.

Representative artefacts with archaeological or historical significance will be dated (by relative dating), photographed, drawn and assessed, if identified. The degree of significance of the artefacts will be assessed in the period, rarity, and diversity and survival condition and also with reference to the context of Hong Kong and the findings will be presented in the *Archaeological Survey-cum-Excavation Report*. Upon completion of the archaeological works, the finds unearthed will be handed over to AMO.

All unearthed archaeological remains will be collected, recorded, dated and sorted, and representative archaeological remains will be photographed and drawn. All photographs to be taken will be in colour with the date, time, crew identification contained and a minimum of 4 Mega pixels in resolution in JPEG format. The relics and field records will be processed and analysed in accordance with the *Guidelines for Handling of Archaeological Finds and Archives (as at Oct 2006)* established by the AMO.

According to Section 10 of *Antiquities and Monuments Ordinance*⁽¹⁾, the archaeological relics ownership vest in the Hong Kong SAR Government.

(1) Under Section 10 (1) of the *Antiquities and Monuments Ordinance*, 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.

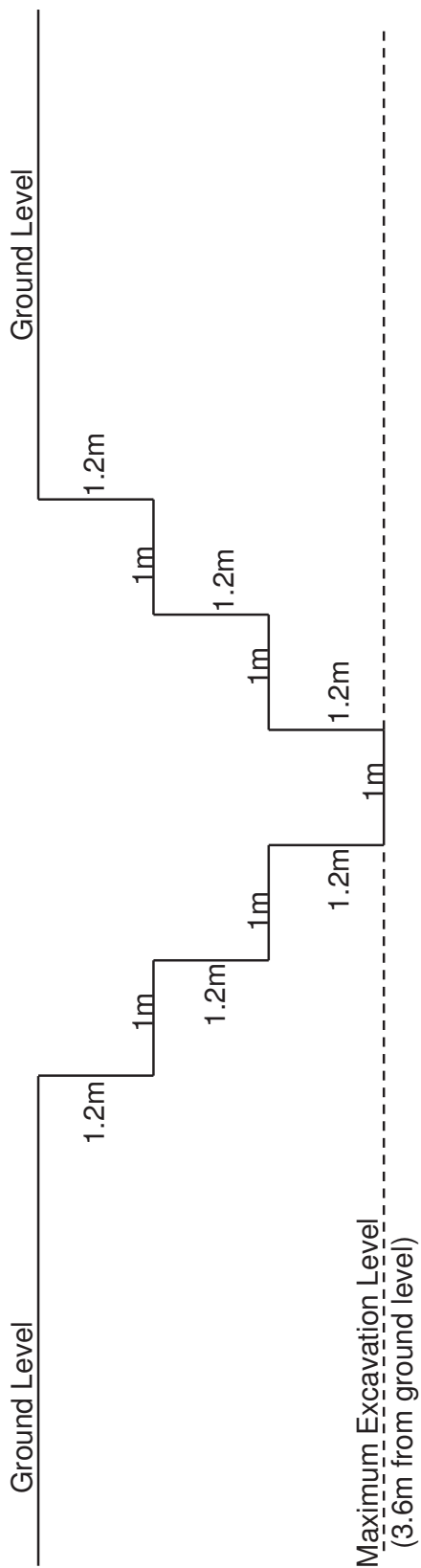


Figure 3.1

Section View of Benched Test Pits

Upon submission of the final *Archaeological Survey-cum-Excavation Report* to the Engineer and AMO, the finds, artefacts and archives arising from the Contract will be handed over to AMO in accordance with the conditions of the licence under the *Antiquities and Monuments Ordinance* or as instructed by the Engineer.

3.6 CONTINGENCY PLAN

In case significant and unexpected discovery is identified, AMO will be informed immediately by the archaeological team for on-site discussion meeting with AMO, the Engineer and SHJV to discuss and agree on the way forward with reference to actions applied to the two archaeological excavations undertaken in the adjacent area. Adequate time and resources will also be allowed for the qualified archaeologists and field assistants to carry out the supervision and recording works.

Based on the findings of the archaeological-survey-cum excavation for the *Contract No. DC/2008/12 Sewage Interception Scheme in Kowloon City – Pumping Station, Raising Mains and Truck Sewers and Kai Tak Development – Infrastructure at Former Runway and Remaining Areas of North Apron & Improvement of Adjacent Waterways – D&C Final Archaeological Investigation and Rescue Excavation Report* next to the Site Boundary and the “Green Areas”, movable artefacts identified include a large quantity of ceramic shards, and archaeological features such as post holes, building foundation structures and some burials.

3.7 TASK 4 - REPORTING

The *Archaeological Survey-cum-Excavation and Additional Investigation Report* will present the background information of the excavated area and findings of the excavation in accordance with AMO’s *Guidelines for Archaeological Reports* (see *Annex B*). The report will be submitted to the Engineer and AMO for comments one month after completion of the excavation. After resolution of comments, the report will be finalised taking account of the Engineer’s and AMO’s comments, where appropriate. Up to 5 copies of the *Final Archaeological Survey-cum-Excavation and Additional Investigation Report* will be provided to AMO for retention.

The finds, field archives, drawings, maps, photos and video footage taken during the fieldwork for the Project will be handed over to AMO within two months after acceptance of the *Final Archaeological Survey-cum-Excavation and Additional Investigation Report*.

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4.1

WORK PROGRAMME

In accordance with the requirements of the Civil Construction Works Contract 1109, the archaeological survey-cum-excavation works shall be completed within nine (9) months from the possession date (ie 14 August 2012) followed by the commencement of the construction works. The tentative work programme for this archaeological survey-cum-excavation is presented in Figure 4.1 and outlined in Table 4.1. Should there be any updates on the work programme, the Engineer and AMO will be informed for agreement.

Table 4.1 *Tentative Work Programme*

Task	Work Description	Anticipated Start Date	Anticipated Finish Date	Approximate Duration
1	Setting out excavation boundary	8 Oct 2012	9 Oct 2012	2 working days
2	Removal of concrete slab and fill soil by mechanical excavator	10 Oct 2012	30 Oct 2012	3 weeks
3a(i)	Stage 1 Excavation: Archaeological Survey (20 nos. of 5m x 5m grids)	22 Oct 2012	28 Nov 2012	28 working days
3a(ii)	Stage 2 Excavation: 50 nos. of 10m x 10m grids and Trenches 1 & 2	12 Nov 2012	11 Jan 2013 ^(a)	2 months
3a(iii)	Stage 3 Excavation: 93 nos. of 10m x 10m grids	12 Jan 2013	13 May 2013	4 months
3b	Additional Investigation (4 nos. of 5m x 5m test pits)	22 Oct 2012	9 Nov 2012	16 working days
4a	Preparation of Archaeological Survey-cum-Excavation and Additional Investigation Report	29 Apr 2013	14 Jun 2013	7 weeks upon completion of fieldwork
4b	Artefacts Handover	-	Sep 2013	Upon submission of Final Reports
Note:				
(a) After completion of Stage 2 Excavation and upon agreement with AMO, Stage 2 area will be handed over to SHJV to commence construction work.				

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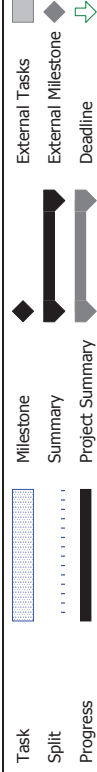
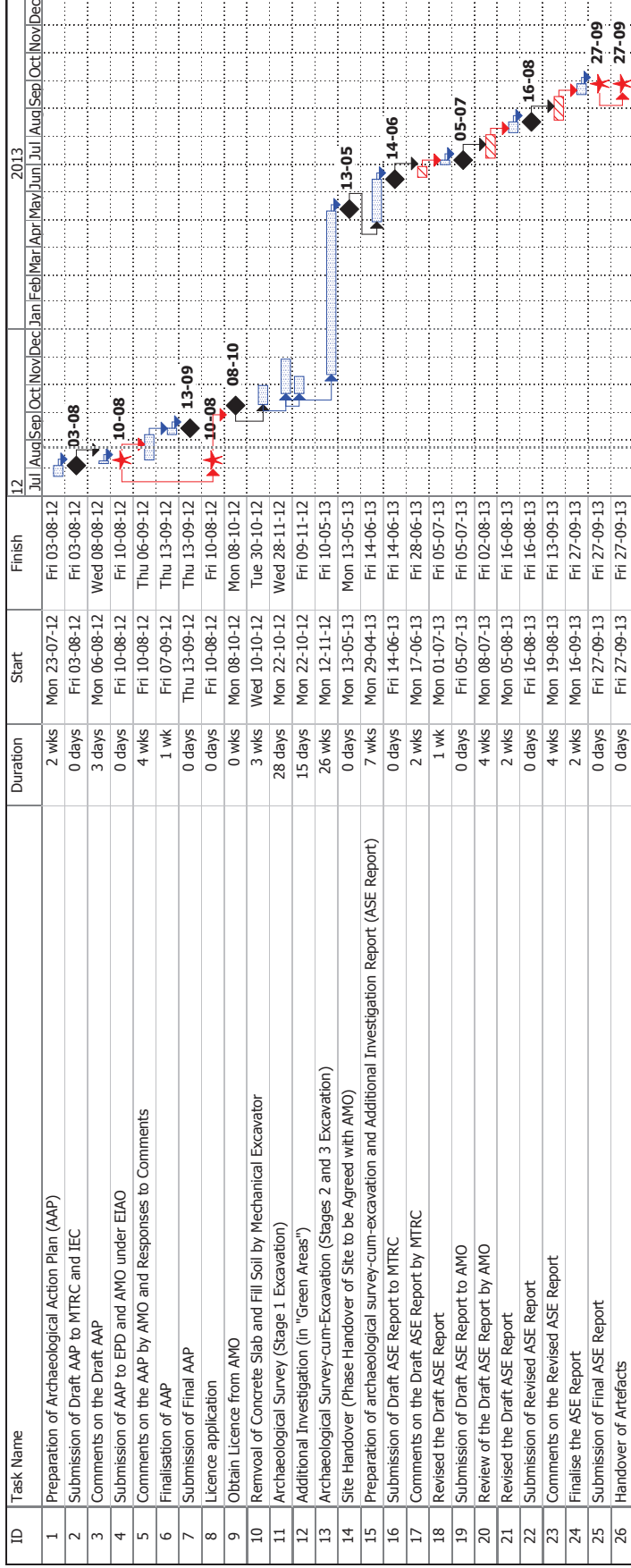


Figure 4.1 - MTR SCL Civil Works Contract 1109
Work Programme for the Archaeological Survey-cum-Excavation and Additional Investigation

5.1

ARCHAEOLOGICAL TEAM

Key team members for the archaeological survey-cum-excavation works will include the following members. Their CVs are included in *Annex C*.

Project Manager

Ms Peggy Wong, who will be the point of contact between AMO, the Engineer and SHJV and manage the archaeological survey-cum-excavation works.

Qualified Archaeologist

Professor Liu Wensuo, who will apply the licence for this survey-cum-excavation and direct the excavation.

Experienced Archaeologists

Professor Liu will be supported by a team of experienced archaeologists which will include: Professors Wang Hong, Professor Zheng Junlei, Dr Jin Zhiwei, Dr Guo Lixin, Dr Yao Chongxin and Raymond Ng. They will assist Professor Liu in supervision of the excavation and direct the field assistants and manual labours, conduct field recording and manage the site record archives.

Field Assistants

Each archaeological team will be led by one qualified/experienced archaeologist and supported by three field assistants to supervise the excavation work and provide day-to-day administrative support to the team, photographic recording and video recording, manage the site record archives and preparation of backup records. Up to three archaeological teams will be deployed for the excavation. Therefore, up to nine field assistants will be deployed for the archaeological excavation.

Land Surveyors

Qualified land surveyor(s) will be provided by SHJV who will undertake the land surveying for the archaeological survey-cum-excavation works.

In addition to the above staff, at least 3 manual labours for each 5m x 5m grid during the Stage 1 archaeological survey, 8-12 manual labours for each 10m x 10m grid for the Stages 2 and 3 archaeological survey-cum excavation and adequate excavation tools and equipment will be provided by SHJV. For area determined to have no artefacts, hand-held mechanical tools and hydraulic backhoe(s) with nominal weight of not exceeding 4 tonnes will be used to assist the excavation.

SHJV will conduct utilities check within the Site Boundary prior to commencement of excavation; erect appropriate temporary support system (if required) for the excavation; dewatering of the excavation grids (if required) and provision of the necessary safety measures. SHJV will submit a separate method statement to the Engineer for approval prior to excavation commencement.

Annex A

Sample of Field Recording Sheets

探方記錄表		
地理座標 (西南角): N	E	發掘牌照編號:
探方方向 (西壁延伸線與磁北之方位角):		遺址編號:
發掘面積 (長/闊) (L/W) (m):		探方編號:
地表高程 (mPD):		發掘期間:
發掘深度 (距地表) (m):		(高程) (mPD):
紀錄日期: 20 ____ 年 ____ 月 ____ 日		
探方週邊環境及土地用途:		
發掘經過:		1. 人員 2. 用工人數 3. 發掘方法 4. 重要發現 5. 其他 (左面填上編號及內容)
堆積情況概要 (*地層堆積及遺跡列表見後頁)		層序示意圖
與鄰近探方 / 探孔關係 / 地層對應		
備注:		
攝影: <input type="checkbox"/> 四壁; <input type="checkbox"/> 平面; <input type="checkbox"/> 其他		
繪圖: <input type="checkbox"/> 平面; <input type="checkbox"/> 剖面, 共 ____ 壁, ____; <input type="checkbox"/> 其他, ____		
記錄者:		覆檢者:

[illegible][illegible]

田野攝影記錄

頁:
遺址編號:

相機號: _____ 記憶卡號/菲林卷號: _____
日期: 由 _____ 至 _____

[illegible]

田野錄像記錄

頁:
遺址編號:

錄像機型號: _____ 儲存媒體: _____
容量/帶長: _____ 檔案類型: _____
日期: 由 _____ 至 _____

[illegible]

田野繪圖登記表

頁:
遺址編號:

[illegible]

重要器物登記表

遺址編號：
探方編號：
堆積單元號：
頁碼：

重要器物編號 (SF#)	描述 (名稱, 質料* 等)	日期	座標 (距探方西南角及水平基準) (cm)	圖號	照相號	數量 (pcs)	重量 (g)	簽名
註: * 質料應為：陶、瓷、石類、金屬、骨、磚、瓦、貝類、玻璃、木質、纖維、皮革或未能確認。								

磚石構建築 記錄表		遺址號	探方號	探方內分區號	堆積單元編號
1. 物料 2. 物料大小 (磚/石塊的長/闊/高) (cm) 3. 石構表面的潤飾 4. 排列/黏砌樣式 (Coursing / bond) 5. 所屬類別 6. 面向 7. 黏合物料 8. 發現的磚石構建築大小 (長/闊/高) (cm) 9. 其他意見					
*示意圖於背頁					
層序關係					
解釋: 內部 / 外部					
攝影: <input type="checkbox"/> 平面; <input type="checkbox"/> 其他,					
繪圖: <input type="checkbox"/> 平面; <input type="checkbox"/> 剖面, 共 個; <input type="checkbox"/> 其他,					
標本:					
岩石學的:			4 件普通磚:		
灰泥:			特殊磚塊:		
水準測量 (mPD) 最高:			最低:		
估計年代	分組/分期	結構編號		記錄者及日期	

繪示意圖（用以輔助解釋，不能取代測繪圖）

日期：

繪圖者：

環境樣本登記表

頁:
遺址編號:

[illegible]

Annex B

Relevant Requirements and Guidelines

Guidelines for Archaeological Impact Assessment

(as at April 2011)

Introduction

The purpose of the guidelines is to assist the understanding of the requirements in assessing impact on sites of archaeological interest and sites with archaeological potential. The guidelines which will be revised by the Antiquities and Monuments Office (AMO) of the Leisure and Cultural Services Department from time to time, where appropriate, and when required should be followed in the interest of professional practice.

A comprehensive Archaeological Impact Assessment (AIA) includes a baseline study, and an impact assessment study associated with the appropriate mitigation measures proposed and to be implemented by the project proponents.

(1) Baseline Study

1.1 A baseline study shall be conducted:

- a. to compile a comprehensive inventory of all sites of archaeological interest (both terrestrial and marine) within the proposed project area.
- b. to identify the direct and indirect impacts on sites of archaeological interest at the planning stage in order to avoid causing any negative effects. The impacts include the direct loss, destruction or disturbance of an element of archaeological potential, impact on its settings or impinging on its character through inappropriate siting or design, potential damage to the physical fabric of archaeological remains through air pollution, change of ground water level, vibration, ecological damage, new recreation or other daily needs to be caused by the new development. The impacts listed are merely to illustrate the range of potential impacts and not intended to be exhaustive.

1.2 The baseline study shall also include a desk-top research and a field evaluation.

1.3. Desk-top Research

1.3.1 Desk-top research should be conducted to analyse, collect and collate the best available information. It shall include (if applicable) but not limited to:

- a. List of declared monuments protected by the Antiquities and Monuments Ordinance (Chapter 53).

- b. Lists and archives kept in the Reference Library of AMO, including sites of archaeological interest, declared monuments, etc.
- c. Publications on local historical, architectural, anthropological, archaeological and other cultural studies, such as, Journals of the Royal Asiatic Society (Hong Kong Branch), Journals of the Hong Kong Archaeological Society, AMO Monograph Series and so forth.
- d. Other unpublished papers, records, archival and historical documents through public libraries, archives, and the tertiary institutions, such as the Hong Kong Collection and libraries of the Department of Architecture of the University of Hong Kong and the Chinese University of Hong Kong, Public Records Office, photographic library of the Information Services Department and so forth.
- e. Any other unpublished archaeological investigation and excavation reports kept by the AMO.
- f. Relevant information from AMO's website.
- g. Historical documents in the Public Records Office, the Land Registry, District Lands Office, District Office and the Hong Kong Museum of History and so forth.
- h. Cartographic and pictorial documents. Old and recent maps and aerial photos searched in the Maps and Aerial Photo Library of the Lands Department.
- i. Existing geological and topographic information (for archaeological desk-top research).
- j. Discussion with local informants.

1.4 Field Evaluation

1.4.1 General

The potential value of the project area with regard the sites of archaeological interest could be established easily where the area is well-documented. However, it does not mean that the area is devoid of archaeological interest or potential if it lacks information. In cases where information is inadequate, an archaeological survey should be carried out to assess the archaeological potential of the proposed project area.

1.4.2 Archaeological Survey

- a. Appropriate methods for pricing and valuation of the archaeological survey, including by means of a Bill of Quantities or a Schedule of Rates should be adopted when appropriate in preparing specifications and relevant documents for calling tenders to carry out the archaeological survey. The specifications and relevant documents should be sent to the AMO for agreement prior to calling

tenders to conduct the archaeological survey.

- b. For archaeologists involved in contract archaeological works, they should adhere to recognized standards for professional practice and ethical conduct in undertaking commissioned archaeological works under contracts. They should make themselves fully understand recognized principles and guidelines regarding contract archaeological works, such as those of the Institute for Archaeologists, European Associations of Archaeologists and in Mainland China.
- c. A licence shall be obtained from the Antiquities Authority for conducting an archaeological fieldwork. It takes at least two months to process the application.
- d. An archaeological brief/proposal, as an outline framework of the proposed archaeological works, should be prepared. The brief/proposal should clearly state the project and archaeological background, address necessary archaeological works required, elaborate the strategy and methodology adopted, including what particular research question(s) will be resolved, how the archaeological data will be collected and recorded, how the evidence will be analysed and interpreted and how the archaeological finds and results will be organized and made available. Effective field techniques including method and sampling details are required to be demonstrated clearly in the brief/proposal. Monitoring arrangement, reporting, contingency plan for field and post-excavation works and archive deposition (including finds, field and laboratory records, etc.) should also be addressed in the brief/proposal. The brief/proposal should be submitted to AMO for agreement prior to applying for a licence. Prior site visit to the project site before the submission of the brief/proposal is required so as to ascertain the feasibility of the proposed strategy and methodology as well as the availability of the proposed locations for auger survey and test pitting.
- e. The following methods of archaeological survey (but not limited to) should be applied to assess the archaeological potential of the project area:
 - (i) Definition of areas of natural land undisturbed in the recent past.
 - (ii) 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 artifacts.
 - (iii) Conduct systematic auger survey and test pitting. The data collected from auger survey and test pitting should be able to establish the horizontal spread of cultural materials deposits.
 - (iv) Excavation of test pits to establish the vertical sequence of cultural materials.

The hand digging of 1 x 1 m or 1.5 x 1.5 m test pits to determine the presence or absence of deeper archaeological deposits and their cultural history.

- (v) The quantity and location of auger holes and test pits should be agreed with AMO prior to applying for a licence. Additional auger holes and test pits may be required to ascertain and demarcate the extent of archaeological deposits and remains.
- (vi) A qualified land surveyor should be engaged to record reduced levels and coordinates as well as setting base points and reference lines in the course of the field survey.
- (vii) All archaeological works should be properly completed and recorded to agreed standards.

f. Archaeologists should adhere to all the agreed professional and ethical standards for archaeological works, such as the standards and guidelines of the Institute for Archaeologists, English Heritage, European Associations of Archaeologists, Society for American Archaeology and in Mainland China.

g. A Marine Archaeological Investigation (MAI) following *Guidelines for MAI* may be required for projects involving disturbance of seabed.

1.4.3 If the field evaluation identifies any additional sites of archaeological interest within the study area which are of potential archaeological importance/interest and not recorded by AMO, the findings should be reported to AMO as soon as possible.

1.5 The Report of Baseline Study

1.5.1 The process and findings of the above desk-top research and field evaluation should be properly documented in the report. The following, but not limited to, should be included:

- a. A map showing the boundary of each site of archaeological interest as supported and delineated by field walking, augering and test-pitting;
- b. Drawing of stratigraphic section of test-pits excavated which shows the cultural sequence of a site.
- c. Reduced levels, coordinates, base points and reference lines should be clearly defined and certified by a qualified land surveyor.
- d. *Guidelines for Archaeological Reports* should be followed (Annex 1).

1.5.2 A full bibliography and the source of information consulted should be provided to assist the evaluation of the quality of the evidence, including the title of the relevant

material, its author(s), publisher, publication place and date. To facilitate verification of the accuracy, AMO will reserve the right to examine the full details of the research materials collected under the baseline study.

1.6 Finds and Archives

1.6.1 Archaeological finds and archives should be handled following *Guidelines for Handling of Archaeological Finds and Archives* (Annex 2).

1.7 Safety Issue

1.7.1 During the course of the AIA Study, all participants shall comply with all Ordinances, Regulations and By-laws which may be relevant or applicable in safety aspect in connection with the carrying out of the AIA Study, such as site safety, insurance for personal injuries, death and property damage as well as personal safety apparatuses, etc.

1.7.2 A Risk Assessment for the fieldwork shall be carried out with full consideration to all relevant Ordinances, Regulations and By-laws.

1.8 Information Disclosure

1.8.1 For releasing any information on the AIA Study, the archaeologist/expert involved should strictly comply with the terms and conditions set in the contract/agreement and avoid conflict of interest.

(2) Impact Assessment Study

2.1 Identification of impact on sites of archaeological interest

2.1.1 The archaeological impact assessment study must be undertaken to identify the impacts on sites of archaeological interest and sites with archaeological potential which will be affected by the proposed development subject to the result of desk-top research and field evaluation. The prediction of impacts and an evaluation of their significance must be undertaken by expert(s) in both local heritage and archaeology.

2.1.2 During the assessment, both the direct impacts such as loss or damage of important features as well as indirect impacts should be clearly stated, such as adverse visual impact, landscape change to the associated landscape features, temporary change of access during the work period, change of ground level or water level which may affect

the preservation of the site of archaeological interest *in-situ* during the implementation stage of the project. A detailed description and plans should be provided to elaborate to what extent the sites of archaeological interest will be affected.

- 2.1.3 Preservation in totality must be taken as the first priority as it will be a beneficial impact and will enhance the cultural and socio-economical environment if suitable measures to integrate the site of archaeological interest into the proposed project are carried out.
- 2.1.4 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.
- 2.1.5 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 local archaeology as against that of the community as a whole. Assessment of impacts on sites of archaeological interest shall also take full account of, and follow where appropriate, 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 Technical Memorandum on Environmental Impact Assessment Process.
- 2.1.6 All the assessments should be conducted by an expert in archaeology and further evaluated and endorsed by the AMO.

2.2 Mitigation Measures

- 2.2.1 It is always a good practice to recognize the sites of archaeological interest 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 with full justifications demonstrating the best practice of heritage conservation.
- 2.2.2 Mitigation is not only concerned with minimizing adverse impact on the sites of archaeological interest but also give consideration of sites with archaeological potential.
- 2.2.3 Mitigation measures shall not be recommended or taken as *de facto* means to avoid preservation of sites of archaeological interest. They must be proved beyond all possibilities to be the only practical course of action. Sites of archaeological interest are to be in favour of preservation unless it can be demonstrated that there is a need for a particular development which is of paramount importance and outweighs the

significance of a site of archaeological interest.

- 2.2.4 If avoidance of the site of archaeological interest is not possible, amelioration can be achieved by minimizing the potential impacts such as revision of the detailed design of the development to lessen the impacts.
- 2.2.5 A rescue programme, when required, may involve preservation of the sites of archaeological interest “by record”, i.e. through excavation to extract the maximum data as the very last resort.

2.3 The Report of Archaeological Impact Assessment

- 2.3.1 A detailed description and plans should be provided to elaborate on the sites of archaeological interest to be affected. Besides, please also refer to paragraph 4.3.1(d), items 2.10 to 2.14 of Annex 19 and other relevant parts of the Technical Memorandum, other appropriate presentation methods for mitigation proposals like elevation, landscape plan and photomontage shall be used in the report extensively for illustrating the effectiveness of the measures.
- 2.3.2 To illustrate the landscape and visual impacts on sites of archaeological interest, as well as effects of the mitigation measures, choice of appropriate presentation methods is important. These methods include perspective drawings, plans and section/ elevation diagrams, photographs on scaled physical models, photo-retouching and photomontage. These methods shall be used extensively to facilitate communication among the concerned parties.
- 2.3.3 The implementation programme for the agreed mitigation measures should be able to be executed and should be clearly set out in the report together with the funding proposal. These shall form an integral part of the overall redevelopment project programme and financing of the proposed redevelopment project. Competent professionals must be engaged to design and carry out the mitigation measures.
- 2.3.4 For contents of the implementation programme, reference can be made to Annex 20 of the Technical Memorandum on Environmental Impact Assessment Process. In particular, item 6.7 of Annex 20 requires to define and 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 preserved site of archaeological interest, if any, during the planning and design stage of the proposed project must be addressed in details.

2.3.5 Supplementary information to facilitate the verification of the findings shall be provided in the report including but not limited to:

- a. layout plan(s) in a proper scale illustrating the location of all sites of archaeological interest within the study area, the extent of the work area together with brief description of the proposed works;
- b. all the sites of archaeological interest within the study area should be properly numbered, cross-reference to the relevant drawings and plans.
- c. an impact assessment cross-referenced checklist of all the sites of archaeological interest within the study area including reference of the site of archaeological interest, distance between the site of archaeological interest and work area, summary of the possible impact(s), impact level, summary of the proposed mitigation measure(s), as well as references of the relevant plans, drawings and photos; and
- d. a full implementation programme of the mitigation measures for all affected sites of archaeological interest to be implemented with details, such as by whom, when, where, to what requirements and the various implementation responsibilities of individual parties.

Guidelines for Archaeological Reports

(As at April 2011)

I. General

1. All reports should be written in a clear, concise and logical style.
2. All the constituent parts (text, figures, photos and specialist reports (if any)) should provide full cross-reference. Readers should be able to find their way around the report without difficulty.
3. The reports should be submitted in A4 size and accompanying drawings of convenient sizes.
4. Draft reports should be submitted to the Antiquities and Monuments Office (AMO) for comments within two months after completion of archaeological work unless otherwise approved by AMO.
5. The draft reports should be revised as required by AMO and relevant parties. The revised reports should be submitted to AMO within three weeks after receiving comments from AMO and relevant parties.
6. At least 5 hard copies of the final reports should be submitted to AMO for record purpose.
7. At least 2 digital copies of the final reports in both Microsoft Word format and Acrobat (.PDF) format without loss of data and change of appearance compared with the corresponding hard copy should be submitted to AMO. The digital copies should be saved in a convenient medium, such as compact discs with clear label on the surface and kept in protective pockets.
8. Errors are the responsibilities of the author(s) and should so far as possible be identified and rectified before submission to AMO.
9. The guidelines which will be revised by the AMO of the Leisure and Cultural Services Department from time to time, where appropriate, and when required should be followed in the interest of professional practice.

II. Suggested Format of Reports

1. Front page:
 - Project/Site name
 - Nature of the report
 - e.g. (Draft/Final)
 - Archaeological Investigation/Survey Report
 - Archaeological Impact Assessment Report
 - Watching Brief Report
 - Rescue Excavation Report
 - Post-excavation Report
 - Organization
 - Date of report
2. Contents list

Page number of each section should be given.
3. Non-technical summary (both in English and Chinese with approximate 150 - 300 words each)

This should outline in plain, non-technical language, the principal reasons for the archaeological work, its aims and main results, and should include reference to authorship and commissioning body.

4. Introduction

This should set out background leading to the commission of the reports. The location, area, scope and date of conducting the archaeological work must be given. The location of archaeological work should be shown on maps in appropriate scales and with proper legends.

5. Aims of archaeological work

These should reflect the aims set in the project design.

6. Archaeological, historical, geological and topographical background of the site

Supporting aerial photos and maps (both old and present) in appropriate scales, with proper legends and with the site locations clearly marked on should be provided.

7. Methodology

The methods used including any variation to the agreed project design should be set out clearly and explained as appropriate.

8. Results

- The results should outline the findings, known and potential archaeological interests by period and/or type. Their significance and value with reference/inclusion of supporting evidence should be indicated. If more than one interpretation is possible, the alternatives should also be presented, at least in summary.
- The results should be amplified by the use of drawings and photographs.
- Tables summarizing features and artifacts by trench/grid/test pit together with their interpretation should be included.
- The method, sampling details, results and interpretation as well as appropriate supporting data of the analysis for the environmental materials, e.g. ecofacts identified and/or collected during the fieldwork should be included.
- For impact assessment, the likely effect of the proposed development on the known or potential archaeological resource should be outlined.

9. Conclusion

This should include summarization and interpretation of the result.

10. Recommendation

Recommendations on further work and the responsible party as well as a brief planning framework should be outlined.

11. Reference and bibliography

A list of all primary and secondary sources including electronic sources used should be given in full detail, including the title of the relevant material, its author(s), publisher, publication place and date.

12. Archaeological team

The director and members of the archaeological team and the author(s) of the report should be clearly specified.

13. Copyright and dissemination

The copyright of the report should be clearly identified. To facilitate future research studies, please specify that the report can be made available to the public in the Reference Library of the Heritage Discovery Centre.

14. Supporting illustrations

They should be clearly numbered and easily referenced to the text. They should be scanned and saved in TIFF or JPEG formats.

A. Maps

A location plan of the project site should be included. Archaeological work locations, such as auger hole and test pit locations (with relevant coordinates certified by a qualified land surveyor), should be clearly shown on maps in appropriate scales, with proper legends, grid references (in 8 digits) and captions.

B. Drawings of test pits, archaeological features, special finds¹, selected representative samples from general finds

Drawings of all excavated test pits (at least one cross section of each test pit), all excavated archaeological features (both plan and cross section of each archaeological feature), all special finds identified in the excavation and selected representative samples from general finds (at least front view and section of each finds) should be included. All drawings should be clearly numbered and easily referenced to the text. The drawing scales stipulated below should be followed:

Cross section and profile drawings of test pits	1:20
Archaeological feature drawings	1:10
Finds drawings	1:1

If drawings of the above stated scales are not appropriate to be incorporated into the report under certain occasions, reduced copy of the drawings with the same scales are acceptable. Proper captions, legends and indication of reduced size should be given.

C. Photos of project site and the surrounding area, test pits, archaeological features, special finds, selected representative samples from general finds

Photos of project site and the surrounding area, all excavated test pits (at least one cross section of each test pit), all excavated archaeological features (both plan and cross section of each archaeological feature), all special finds identified in the excavation and selected representative samples from general finds (at least front view of each of the finds) should be included. All photos should be at least in 3R size with proper captions and scales. They should be clearly numbered and easily referenced to the text. They should be scanned and saved in TIFF or JPEG formats.

15. Supporting data in appendices

These should consist of essential technical details to support the result. These may include stratigraphic record of test pits and auger holes, records of general and special

¹ Special finds are sometimes known as small finds (小件) in Chinese or registered finds. Drawings and photos of the special/small/registered finds should be included in the archaeological report.

finds as well as ecofacts discovered with description, quantity and context number/stratigraphic sequence, result of laboratory testing, index of field archives.

16. Other professional views/comments
This can reflect any issues/difficulties regarding the archaeological project observed/encountered by the archaeological team.
17. Comment and response
All comments and responses from AMO and relevant parties should be attached in full.

III. Green Measures

1. All reports should be of single line spacing and printed on both sides of the paper.
2. Excessive page margins should be avoided. A top/bottom margin of 2 cm and left/right margin of 2.5 cm are sufficient.
3. Use of blank paper should be avoided as far as possible.
4. Suitable font type of font size 12 should be used generally in balancing legibility and waste reduction objective.

Guidelines for Handling of Archaeological Finds and Archives

(As at 28 November 2011)

I. General Remark

1. The guidelines which will be revised by the Antiquities and Monuments Office (AMO) of the Leisure and Cultural Services Department from time to time, where appropriate, and when required should be followed in the interest of professional practice.
2. Please use the site code (_____)** for the archaeological project, namely _____. Licensee must use this unique site code for the whole project.

** If an archaeological project covers more than one archaeological site/location, licensee should contact the Central Archaeological Repository (CAR) at 2384 5446 or aciamoar@lcsd.gov.hk to obtain relevant site codes.

3. Licensee should contact the CAR at 2384 5446 or aciamoar@lcsd.gov.hk regarding the handover of archaeological finds and archives when post-excavation research and excavation report have been completed and accepted by the AMO.
4. If a huge quantity of similar general finds was discovered from a single archaeological project, licensee is advised to consult the AMO regarding the collecting strategy as early as possible.
5. For the preparation of archaeological finds and archives for long-term curation by the CAR, the guidelines as set out below should be followed.
6. If the licensee does not handle the finds and archives in accordance with this guidelines, the AMO may inform the project proponent to revise the relevant data. The arrangement of handover may subsequently be deferred.

II. Archaeological Finds

7. Cleaning

The excavated finds should be properly cleaned with water, except: (i) the finds are identified for scientific analysis; (ii) metal & organic objects (e.g. bone, wood, leather, textile objects and etc.) should not be cleaned with water. Licensee is advised to consult the AMO if in doubt.

8. Marking

- The excavated finds should be cleaned before marking object number.
- “Sandwich” technique¹ should be adopted for marking permanent object number.

¹ Steps for “Sandwich” technique

1. First of all, the find number should be marked in appropriate area and size that does not impact important diagnostic or aesthetic parts of the find.
2. Clean the area to be marked.
3. Apply a thin coat of clear reversible lacquer on the area. Use white lacquer if the object is dark in colour. Let the base coat dry completely.
4. Use a permanent water-based ink to write the find number on top of the base coat. Let ink dry completely.
5. Apply a top coat of clear varnish.
6. Let the clear varnish dry completely before packing.

- Each special find should be marked with site code, context number and SF number, etc.
- Any representative samples selected from the general finds for discussion on the excavation report should be marked with site code, context number, sample number and bagged separately.
- The general finds should be marked with site code and context number.
- For the finds which are too small, organic objects (e.g. bone, wood, leather, textile objects and etc.) or have unstable surface, object number should not be marked on the object directly. These finds should be bagged separately and attached with a label containing information about the site code, context number, find number and description of find.

9. Labeling and bagging

- Two labels should be provided for each bag which contains finds, one is adhered on the surface of the bag while the other is kept inside the bag for easy reference.
- The label inside the bag should be kept separately with a smaller plastic bag so that the label can be kept much longer.
- Information about the site code, context number, test-pit number, object number (or bag number) and description of finds should be written clearly on the label.
- Finds under the same context should be bagged together. If those finds, however, have been categorized according to their typology, materials or characteristics, separate bagging is required.

10. Conservation

- To refit and reconstruct pottery vessels with appropriate adhesive. A heat and waterproof adhesive, e.g. product of H. Marcel Guest Ltd., is recommended.
- Any adhesives which are not reversible or would damage the finds should not be applied on the finds. Archaeologist is advised to consult the AMO if in doubt.

11. Finds register

A standard finds register, for both special finds and general finds, with information about the find's number, name, description, quantity, type, weight, dimensions and field data should be duly filled in. Licensee should contact the CAR at 2384 5446 or aciamoar@lcsd.gov.hk to obtain the standard finds register (in Excel format). Special finds and general finds should be inputted in individual register. Both hard & soft copies (in Excel format) of the duly completed register should be handed over.

12. Sample register of eco-facts

A clear sample register with information about the description of the sample, quantity, type and weight should be prepared for handover.

III. Field Records and Finds Processing Records

13. Field records include field diary, site record for individual test pit/trench/square, context recording sheet, special finds recording sheet, soil sample & eco-facts sample recording sheet, map, survey sheet, photograph/ audio-visual records, etc.

14. Finds processing records include conservation record, measured drawings and photographs, laboratory reports, etc.

15. Measured drawing, both hard & soft copies (in pdf format), and photograph (in jpg format) of each special find should be handed over.
16. All the aforesaid records stated in paragraphs 12 to 14 should be handed over to the CAR when post-excavation research and excavation report have been completed. Please note:
- all the field records should be submitted together with indexes.
 - the video footage should be submitted together with index describing the content of the video footage.
 - all the slides, colour/ black & white negatives or digital photographs should be submitted together with photo register.

IV. Handover of Finds

17. Packing

- Each special find should be packed and protected with tissue paper, bubble sheet or P.E. foam to avoid shocking when transporting to the repository. No packing material other than the aforesaid items should be used.
- The general finds should be protected with bubble sheet or P.E. foam and packed in heavy duty plastic container.
- The heavy duty plastic container, e.g. product of the Star Industrial Co., Ltd. (No. 1849 or 1852), is recommended.
- For oversized finds, prior advice on packing method should be sought from the AMO.

18. Handover procedure

- The licensee should make an appointment with the CAR for the handover and arrange to transport the finds and archives to the repository.
- Prior to handover, licensee is required to supply with the aforesaid finds register, field records register and associated records to the CAR for checking at least three working days in advance. Exact date of handover will be arranged subsequently.
- Handover forms for finds and archives should be signed by the representatives of the licensee and the AMO.

Annex C

Curriculum Vitae of Key Staff

Peggy Wong 王珮琪

Project Manager

Ms Wong has over 14 years experience in the cultural heritage impact assessment, management, planning and conservation. She has been responsible for managing numerous cultural heritage impact assessments, built heritage conservation, historical buildings and features survey, condition surveys, cultural tourism and cultural heritage impact assessments, archaeological investigations, rescue excavations, monitoring and marine archaeological investigations in Hong Kong.

Being responsible for a number of cultural heritage impact assessments, Ms Wong has established an excellent reputation with Antiquities & Monuments Office of Leisure & Cultural Services Department and is fully aware of government legislation, guidelines and requirements for cultural heritage conservation and impact assessment.

As part of her experience, Ms Wong was placed on short term secondment to the Museum of London Archaeology Services (MOLAS) and undertook intensive training in the management of archaeological assessments and has participated in the UNESCO 2001 conference in providing input to models in managing issues on cultural heritage management and tourism on World Heritage Sites in the Asia Pacific region.

Ms Wong has recent obtained the Nautical Archaeology Society (NAS) Part II intermediate certificate in Foreshore and Underwater Archaeology and obtained the Lord Wilson Heritage Trust grant to undertake a project on maritime archaeology for Hong Kong with the Underwater Heritage Group lead by Dr Bill Jeffery, a qualified marine archaeologist.

Fields of Competence

- Cultural Heritage Impact Assessment and Management
- Built Heritage Survey
- Archaeological Investigation, Rescue Excavation, Impact Assessment and Management.
- Marine Archaeological Investigation Review and Management.
- Cultural Heritage Conservation
- Regulatory agency liaison
- Project Management

Education

- MSc (Conservation), the University of Hong Kong
- BSocSc (Hons) Anthropology, the Chinese University of Hong Kong
- Post-Graduate Diploma in Applied Geoinformatics, the Chinese University of Hong Kong
- NAS Part II Intermediate certificate in Foreshore and Underwater Archaeology

Languages

- English
- Chinese
- Japanese (fair)

Thesis/ Paper

Wong, P.K. 2002 *Area Based Conservation in Hong Kong – A Case Study of Tai O Fishing Village*, Thesis. Hong Kong University

Siu, P Y & Wong, P K 2002 *Measuring Tourism Potential and Impacts on Tai O*, Course Assignment. Hong Kong University.

Wong, P.K. 2009 *Statement of Cultural Significance for Blue House Cluster for Heritage Hong Kong* Foundation (Unpublished)

Key Projects

Ms Wong has been involved in numerous cultural heritage projects including archaeological investigations, archaeological survey-cum-excavation, rescue excavation, archaeological watching brief, cultural heritage impact assessment, built heritage surveys, cultural tourism and conservation planning and management in Hong Kong. Selected relevant experiences include:

- Archaeological Survey-cum-Excavation for the Sewage Interception Scheme in Kowloon City – Pumping Stations, Rising Mains and Trunk Sewers, for DSD via Penta-Ocean – Concentric Joint Venture, 2009 – 2010.
- Shatin to Central Link-Fouth Harbour Crossing and Central West Extension (Southern Section) Preliminary Project Feasibility Study, KCRC, 2001.
- Archaeological Survey Cum Rescue Excavation for Ma On Shan Development – Roads, Drainage and Sewerage Works at Whitehead and Lok Wo Sha Phase 1, for CEDD via China Road and Bridge Corporation (Hong Kong) Ltd., 2009 - 2010.
- Archaeological Investigation on North Apron at Kai Tak Airport, TDD, 2003.
- Archaeological Rescue Excavation for Small House Development at Yung Shue Wan, Lamma Island, for AMO, 2004.
- Archaeological watching brief and rescue excavation for the Transformation of the Former Police Married Quarters Site on Hollywood Road into a Creative Industries Landmark, for ArchD, 2012 – on going.
- Archaeological watching brief and rescue excavation for Central Police Station Compound Conservation and Revitalisation, Hong Kong Jockey Club, 2012- ongoing.
- Archaeological Impact Assessment for the Transformation of the Former Police Married Quarters Site on Hollywood Road into a Creative Industries Landmark, for ArchD, 2010 – 2011.
- Survey-cum-Excavation at Small houses of Lung Kwu Tan, Tuen Mun, AMO, 2003.
- Archaeological Field Evaluation for West Rail – Environmental Support Service, KCRC, 2001.
- Cultural Heritage Consultancy Services for Sharp Island, Confidential Client, 2004-2005
- Survey-cum-Excavation at Ham Tin, Sai Kung, New Territories, AMO, 2002.
- Archaeological Investigation at Cheung Lek, Sheung Shui, New Territories, AMO, 2002.
- Archaeological Investigation at Hang Tau Road, Sheung Shui, New Territories, AMO, 2002.
- Rescue Excavation at *Wan Tuk* in the former Cheoy Lee Shipyard at Penny Bay, Lantau Island, AMO, 2002.
- Archaeological Survey and Rescue Excavation for Additional Transmission System from Lamma Island to Cyberport, for Hongkong Electric Co (HEC) Ltd, 2001-2002.
- Formation, Roads and Drains in Area 54, Tuen Mun - Phases 1 and 2 Review of Traffic, Environmental, Drainage and Sewerage Impact Assessment, - Investigation for CEDD via BV, 2011- ongoing.
- Liantang/Heung Yuen Wai Boundary Control Point and Associated Works, for CEDD via Mott MacDonald (Hong Kong) Ltd., 2009 - 2010.
- Shenzhen River Regulation Stage IV EIA Study, for ERM(HK) Ltd., 2009 – 2010.
- Cycle Tracks Connecting North West New Territories and North East New Territories, for CEDD via Mott Connell Ltd., 2008
- Pilot Project for Public-Private Partnership Conservation Scheme, Sha Lo Tung Valley, for Confidential Client, 2009 – 2010.
- Feasibility Study of Proposed Hosing Sites at Tuen Mun East Areas, for CEDD, 2008.
- Mountain Bike Trail Networks in South Lantau – Feasibility Study, for CEDD via Scott Wilson Ltd., 2009 - 2011.
- Yuen Long & Kam Tin Sewerage and Sewage Disposal Stage 1 Sewers, Rising Mains and Ancillary Pumping Stations EIA and TIA studies, DSD, 1999-2002.
- North East New Territories New Development Areas Planning and Engineering Study- Investigation, CEDD and PlanD, 2008- ongoing.
- Planning and Development Study of Potential Housing Site near San Wai Court, Tuen Mun, for TDD, 1998-2001.
- Planning and Development Study on North East New Territories, TDD and PlanD, 1998 – 2003.
- Drainage Improvement for Northern NT- Package B, DSD via Mott Connell Ltd, 2003- 2006.
- Northshore Lantau Development Feasibility Study and Theme Park Development, CED, 1998 –2000.
- Tolo Harbour Sewerage of Unsewered Areas, for DSD via Aktins China Limited , 2008.
- Planning and Development Study on Potential Housing Site in Tuen Mun Area 54, CED, 1998.
- Liquefied Natural Gas Receiving Terminal and Associated Facilities, CLP Power & ExxonMobil, 2004 - 2007.
- EIA for A Commercial Scale Wind Turbine Pilot Demonstration at Hei Ling Chau, CLP Power, 2006.

- 132 kV Supply Circuit from Pui O via Chi Ma Wan Peninsula via Sea Crossing towards Cheung Chau Island, China Light Power, 2000.
- East Rail Extension, Tai Wai to Ma On Shan for detailed EIA, KCRC, 1999.
- Reclamation of Sai Wan Typhoon Shelter and Associated Engineering Works at Cheung Chau Investigation EIA, TDD, 2001-2002.
- Shatin to Central Link-Fouth Harbour Crossing and Central West Extension (Southern Section) Preliminary Project Feasibility Study for the KCRC, 2001.
- Cultural Heritage Impact Assessment at She Shan Tsuen, Ha Tin Liu Ha and Sheung Tin Liu Ha at the Lam Tsuen Valley, for AMO 2003.
- Archaeological Impact Assessment for Central Police Station Compound Conservation and Revitalisation, Hong Kong Jockey Club, 2009 - 2010.
- Chu Hai College Development at East Tuen Mun Archaeological Review, Chu Hai College Higher Education, 2010 to 2011.
- Archaeological Watching Brief for Upgrading of Central and East Kowloon Sewerage, Sum Kee Construction Limited, ongoing.
- Archaeological Watching Brief for Replacement and Rehabilitation of Water Mains Stage 4 Phase 1(Mains in Tuen Mun, Yuen Long, North district and Tai Po), in Lung Kwu Tan, Tuen Mun North and Sha Tau Kok, Tsun Yip, 2011- ongoing.
- Archaeological Watching Brief for the Upgrading of Central and East Kowloon Sewerage – Phase 1, for DSD via Penta-Ocean – Concentric Joint Venture, 2009 – 2012.
- Archaeological Watching Brief for the Replacement & Rehabilitation of Water Mains Stage 3 – Mains in West Kowloon (Package A), for WSD via Noble Crown Development Limited, 2009 – ongoing.
- Condition Survey of Built Heritages for Replacement and Rehabilitation of Water Mains at Sha Tin and Sai Kung, Kwan On, ongoing.
- Condition Survey of Built Heritages for Tuen Mun Village Sewerage and Trunk Sewers at Pillar Point, China Road and Bridge Corporation, 2011-2012.
- Condition Survey of Built Heritages for Replacement and Rehabilitation of Water Mains Stage 4 Phase 1 (Mains in Tuen Mun, Yuen Long, North district and Tai Po), at Lung Kwu Tan, Tuen Mun North and Sha Tau Kok, Tsun Yip, 2011-2012.
- Condition Survey, Monitoring Measures and Protective Measures for historic buildings at Chek Keng, Tai Long and Ham Tin falling within 5m from the proposed water mains in Sai Kung, Hing & Cheong, 2002-2004.
- Built Heritage Survey for Tuen Mun Sewerage Investigation, Design and Construction, for AECOM, 2010.
- Condition Survey of Built Heritages for Replacement and Rehabilitation of Water Mains at Tai O and Cheung Chau, Hing & Cheung Construction Ltd, 2008.
- Built Heritage Survey for Lamma Village Sewerage Phase 2, for DSD via Metcalf & Eddy Ltd, 2009.
- Built Heritage Survey for Upgrading of Mui Wo Sewerage Phase 2 and Mui Wo Sewage Treatment Works, DSD via Metcalf & Eddy Ltd, 2008
- Built Heritage Survey for Upgrading of Central and Western Kowloon Sewerage, DSD via Aktins China Limited, 2008.
- Preliminary Project Feasibility Study for Western Expansion to the Main Campus, HKU via Percy Thomas, 2003.
- Condition Survey of Built Heritages for Replacement and Rehabilitation of Water Mains at Tai O and Cheung Chau, Hing & Cheung Construction Ltd, 2008.
- Built Heritage Investigation and Impact Assessment for The Feasibility Study of Proposed Hosing Sites at Tuen Mun East Areas, for CEDD, 2008.
- Built Heritage Survey and Conservation Guidelines for Three Villages at Sha Lo Tung, Tai Po, for Sha Lo Tung Development Co, 2007-2008.
- Survey on Features with Cultural Heritage Value in the Sha Tau Kok Ta Kwu Ling and Ma Tso Lung Areas, PlanD, 2007.
- Shatin Central Link EIA, KCRC, 2004.
- Tuen Mun Western Bypass – Investigation Built Heritage Survey, for AECOM, 2011-2012.
- Survey on Features with Cultural Heritage Value in the Sha Tau Kok Ta Kwu Ling and Ma Tso Lung Areas, PlanD, 2007.
- Feasibility Study of Conservation and Development of the Wun Yiu Pottery Kiln Site, AMO, 2003-2004.
- Study on Village Improvement and Upgrading of Lei Yue Mun, PlanD, 1999.
- Study on Revitalisation of Tai O, PlanD, 1998-1999.

Dr Liu Wensuo (劉文鎖)

Qualified Archaeologist

Dr Liu is an associated archaeologist with ERM and has over 20 years of archaeology investigation and excavation experience in Hong Kong and Mainland China.

Apart from archaeological fieldwork experience, Dr Liu is also a Professor in the Department of Anthropology of the Sun Yat-sen University, teaching and conducting research in Archaeology.

In 2003, Dr Liu obtained the qualification as an Archaeological Excavation Team Leader under the State Administration of Cultural Heritage in China and had led a number of archaeological excavations in China.

Dr Liu is also a qualified archaeologist to apply for a *Licence to Excavate and Search for Antiquities* under the *Antiquities and Monuments Ordinance* in Hong Kong. He has successfully obtained the *Licence* to conduct a number of archaeological projects in Hong Kong.

Fields of Competence

- Archaeological Research
- Archaeological Rescue Excavation
- Archaeological Investigation
- Archaeological Watching Brief
- Archaeological Impact Assessment
- Anthropological Research and Field Survey

Education

- PhD in History, Pre-history Research Centre of the Institute of Archaeology of Chinese Academy of Social Sciences, China, 2000
- Bachelor in History (Specialising in Archaeology), Peking University, 1988

Qualification

- Certificate of Archaeological Excavation Team Leader, State Administration of Cultural Heritage, China, 2003 to present

Languages

- Chinese
- English

Academic/Teaching Experience

- Expert, Guangzhou City Heritage Committee, 2012 to present
- Professor, Department of Anthropology, Sun Yat-sen University, China, 2011 to present
- Expert, Guangdong Province Intangible Cultural Heritage Research Centre, 2011 to present
- Member, Chinese Society of Archaeology, 2011 to present
- Member, Chinese Society for Historians of China's Foreign Relations, 2010 to present
- Researcher, Centre of Historical Anthropology, Sun Yat-sen University, China, 2004 to present
- Postdoctoral Researcher in the Department of History, Sun Yat-sen University, China, 2000-2002
- Visiting Scholar of the Centre National de la Recherche Scientifique (CNRS), France, 1994 to 1995
- Assistant Curator, Curator of the Xinjiang Institute of Cultural Relics and Archaeology, China, 1988 to 1997

Key Projects

Dr Liu has conducted numerous archaeological surveys and excavations projects in Hong Kong and in Mainland China. Key project Dr Liu has led or participated include:

Hong Kong Projects:

- Archaeological Survey cum Excavation for Sacred Hill (North) Works Contract 1109 - Stations and Tunnels of Kowloon City Section of Shatin to Central Link - Tai Wai and Hung Hom Section, Samsung Hsin Chong Joint Venture, 2012-2013. Dr Liu is the Licenced Archaeologist to lead the excavation.
- Archaeological Survey for a resort development on Lamma, confidential client, 2013. Dr Liu was the Licenced Archaeologist to lead the survey.
- Regulation of Shenzhen River Stage IV EIA Study Archaeological Impact Assessment, Drainage Services Department, 2010 – 2011. Dr Liu was the Licenced Archaeologist to lead the survey.
- Liantang/Heung Yuen Wai Boundary Crossing Point and Associated Works EIA Study Archaeological Impact Assessment, CEDD, 2010 – 2011. Dr Liu was the Licenced Archaeologist to lead the survey.
- Archaeological Watching Brief in Lung Kwu Tan, Tuen Mun North and Sha Tau Kok for Replacement and Rehabilitation of Water Mains Stage 4 Phase 1 – Mains in Tuen Mun, Yuen Long, North District and Tai Po, for WSD via Tsun Yip Civil Construction Limited, 2011 – 2012. Dr Liu was a qualified archaeologist involved in the archaeological watching brief.
- Archaeological Survey-cum-Excavation for Sewage Interception Scheme in Kowloon City – Pumping Station, Rising Mains and Trunk Sewers, for DSD via Penta-Ocean – Concentric Joint Venture, 2009– 2011. Dr Liu was a qualified archaeologist involved in the excavation.
- Archaeological Impact Assessment for Central Police Station Compound Conservation and Revitalisation EIA Study, for Hong Kong Jockey Club, 2011. Dr Liu was a qualified archaeologist involved in the archaeological investigation.
- Archaeological Impact Assessment for the Transformation of the Former Police Married Quarters Site on Hollywood Road into a Creative Industries Landmark, for ArchD, 2010 – 2011. Dr Liu was a qualified archaeologist involved in the archaeological investigation.
- Archaeological Watching Brief for the Replacement & Rehabilitation of Water Mains Stage 3 – Mains in

West Kowloon (Package A), for WSD via Noble Crown Development Limited, 2009 – 2012. Dr Liu was the Licenced Archaeologist to lead the archaeological watching brief.

- Archaeological Watching Brief for Upgrading of Central and East Kowloon Sewerage – Phase 1, for DSD via Penta Ocean – Concentric Joint Venture, 2010 -2012. Dr Liu was a qualified archaeologist involved in the archaeological watching brief.

Mainland China Projects:

As the qualified Archaeological Excavation Team Leader in Mainland China, Dr Liu has led a number of archaeological excavations in China:

- Archaeological Excavation of the Qishu Jiao archaeological site and Pantang Kiln in Baishi Town, Tianzu County, Guizhou Province (貴州省天柱縣白市鎮漆樹腳遺址、盤塘窯址發掘), 2011.
- Archaeological Excavation of Warring States Period Graveyard in Maidehang, Nanshan District, Shenzhen City (深圳市南山區麥地巷戰國墓地) from September to December 2009.
- Survey of “Cave-burial” of the Miao in Gaopo Township, Huaxi District, Guiyang City, Guizhou Province (貴州省貴陽市花溪區高坡鄉苗族“岩洞葬”調查) from July to August 2009.
- Archaeological Excavation of the Maidi Lane archaeological site/ Graveyard in Nanshan District, Shenzhen (深圳市南山區麥地巷遺址/墓地發掘), 2009.
- Archaeological Excavation of Xiaohekou Site in Fuxing Village, Heping Town, Yanhe County, Guizhou Province (貴州省沿河縣和平鎮復興村小河口遺址) from August to October 2008.
- Archaeological Excavation of Han Brick-tile Kiln Site of Dabatian in Hongdu Town, Yanhe County, Guizhou Province (貴州省沿河縣洪渡鎮大壩田漢代磚瓦窯遺址) from October 2005 to January 2006.
- Archaeological Excavation of Sanzuodian Reservoir in Chutoulang Town, Songshan District, Chifeng City, Inner Mongolia (內蒙古赤峰市松山區鋤頭朗鎮三座店水庫) from July to October 2005.
- Archaeological Excavation of Shi Xiazi Grave of Zhong County, Chongqing City (重慶市忠縣石匣子墓地) from March to May 2004.

Dr Liu has also participated in numerous archaeological excavations and investigations:

- Archaeological Excavation of Shang City Site at Shixianggou in Dazhuang, Yanshi City, Henan Province (河南省偃師市塔莊屍鄉溝商代都城遺址) from March to July 1998.
- Sino-Japanese Joint Archaeological Survey and Excavation of West Graveyard at Ancient Jiaohe City of Tulufan (吐魯番交河故城溝西墓地) from 1995 to 1996.
- Archaeological Survey and Excavation of Kaladun Archaeological Site (喀拉墩遺址) of Keriya River, and Ruins of Yuansha City (圓沙古城遺址) from 1993 to 1995.
- Survey of Nomadic Civilization in Tianshan to Altay Mountain Range (天山至阿爾泰山地帶) from May to July 1992.
- Instructed students of the Department of History, Xinjiang University, in the Archaeological Excavation of Sangeqiao Graveyard in Shan County, Tulufan (吐魯番鄯善縣三個橋墓地), from 1991 to 1992.
- Sino-French Joint Archaeological Survey of Keriya River Valley (克裏雅河流域) from September to November 1991.
- Survey of Loulan Ruins (樓蘭故城) from April to May 1991.
- Sino-Japanese Joint Archaeological Survey of Niya Ruins (尼雅遺址) from October to November 1990 and from September to November 1991.
- Archaeological Survey and Trial Excavation of Luntai Region (輪台地區) from May to June 1990.
- Archaeological Survey of Circle of Talimu Basin (環塔里木盆地) from October to December 1989.
- Archaeological Survey of North Road of Talimu Basin (Kuerle to Akesu section) (塔里木盆地北道, 庫爾勒至阿克蘇段) from June to July 1989.
- Archaeological Excavation of the Yanghai Graveyard in Shanshan County, Turpan (吐魯番鄯善縣洋海墓地) in December 1988.
- Survey of Cultural Relics Hami Prefecture (哈密地區文物普查) from August to December 1988.

Publications

Books:

- *Silk Road – Inner Eurasia Archaeology and History* (絲綢之路——內陸歐亞考古與歷史). Lanzhou University Press, 2009.

- *Frontier Ethnic Archaeology & Ethnoarchaeological Studies – Vol.1* (邊疆民族考古與民族考古學集刊·第一輯). Cultural Relics Publishing House, 2009.

Journals:

- “Tangai, Shice Zhidu (唐哀、謚冊制度)” in *Wenshi* (文史), 2008 (4).
- “Nanhan ‘Gaozu Tianhuang Dadi Aice Wen’ Kaoshi - Jianshui Liushi Xianzu Xietong Wenti (南漢高祖天皇大帝哀冊文考釋——兼說劉氏先祖血統問題)” in *Hanxue Yanjiu* (漢學研究), 26 (2).

Other Publications (listed in Chinese):

Books:

- 《沙海古卷釋稿》，中華書局，2007 年。
- 《交河溝西——1994~1996 田野發掘報告》（合著），新疆文物考古研究所編著，王炳華主編，新疆人民出版社，2001 年。
- 《新疆歷史文物》，新疆美術攝影出版社，1999 年。

Journals:

- 《于闐文占卜文書》，《紀念向達先生誕辰 110 周年國際學術研討會論文集》，中華書局，2011 年。
- 《關於馬奶酒的歷史考證》，《人民論壇》2011 年 2 月（中），194-196 頁。
- 《穹廬小考》，《人民論壇》2010 年 12 月（下），124-125 頁。
- 《“國立中山大學語言歷史學研究所”往事》，《邊疆民族考古與民族考古學集刊》第一集，文物出版社，2009 年，189-199 頁。
- 《苗疆“牯驢節”：祖先、祭祀、牛牲》，王紅光、劉文鎖，《邊疆民族考古與民族考古學集刊》第一集，247-269 頁。
- 《夏鼎與李濟》，《古今論衡》（台灣）第 20 期，2009 年 12 月，61-74 頁。
- 《一次歷史之航——〈南海一號浮沉記〉讀後》，《中國文物報》2009 年 10 月 30 日。
- 《敖包的祭祀》，《歷史人類學學刊》第七卷第一期，2009 年 4 月，1-42 頁。
- 《突厥的墓上祭祀》，《傳統中國研究集刊》編委會編《傳統中國研究集刊》第四輯，上海人民出版社，2008 年，36—59 頁。
- 《佉廬文 565 號文書考釋——兼說十二生肖起源與傳播途徑》，《文史》2007 年第 4 輯。
- 《唐代“胡人”圖像初探》，《歐亞學刊》第六輯，中華書局，2007 年 6 月。

- 《中古時代絲綢之路貿易中的貨幣問題——“絲綢之路古國錢幣暨絲路文化國際學術研討會”述評》，《西域研究》2007年第2期。
 - 《伏羲女媧圖考》，《藝術史研究》第8輯，中山大學出版社，2006年12月第一版。
 - 《中山大學西域研究的傳統》，《西域文史論叢》第一輯，科學出版社，2006年12月第一版。
 - 《〈漸中語類〉補白》，《東南文化》2006年第5期。
 - 《敕包祭祀的起源》，《西域研究》2006年第2期。
 - 《漢代“胡人”圖像補說》，《漢代考古與漢文化國際學術研討會論文集》編委會編《漢代考古與漢文化國際學術研討會論文集》，齊魯書社，2006年2月第一版。
 - 《重讀“中國考古學之父”》，《光明日報》2006年1月19日9版。
 - 《尼雅考古一百年》，《考古》2005年11期。
 - 《漸中語類——俞偉超先生晚年思想隨錄》，劉文鎖等整理，《東南文化》2005年4期。
 - 《巴蜀“胡人”圖像札記》，《四川文物》2005年4期。
 - 《說一件佉盧文離婚契》，《西域研究》2005年3期。
 - 《論李濟》，《考古》2005年第3期。
 - 《敦煌“放妻書”研究》，《中山大學學報》社會科學版，2005年第1期。
 - 《學記二章》，《西域研究》2004年第3期。
 - 《樓蘭的簡紙並用時代與造紙技術之傳播》，吉林大學邊疆考古研究中心編《邊疆考古研究》第2輯，科學出版社，2004年5月第一版。
 - 《論絲綢技術的傳播》，余太山主編《歐亞學刊》第四輯，中華書局，2004年6月第一版。
 - 《佉盧文書分類及其他》，季羨林、饒宗頤主編《敦煌吐魯番研究》第七卷，中華書局，2004年1月第一版。
 - 《中亞的印章藝術》，《藝術史研究》四，中山大學出版社，2003年。
 - 《尼雅遺址行政區劃復原》，《華夏考古》2003年第4期。
 - 《佉盧文契約文書之特徵》，《西域研究》2003年第3期。
 - 《尼雅遺址古代動物誌》，《農業考古》2003年第3期。
 - 《〈安伽墓誌〉與“關中本位政策”》，《中山大學學報》社會科學版，2003年第1期。
 - 《論尼雅遺址的時代》，《考古與文物》2002年增刊。
 - 《山普拉基地的埋葬製度》，《西域研究》2002年第3期。
 - 《論尼雅遺址遺物和簡牘與建築遺跡的關係》，余太山主編《歐亞學刊》第三輯，中華書局，2002年4月第一版。
 - 《尼雅遺址歷史地理考略》，《中山大學學報》社會科學版2002年第1期。
 - 《尼雅遺址古代植物誌》，《農業考古》，2002年第1期。
 - 《尼雅浴佛會及浴佛齋禱文》，《敦煌研究》2001年第3期。
 - 《吐魯番盆地古墓葬的幾種形製》，《吐魯番學研究》2001年第1期。
 - 《1996年新疆吐魯番交河故城溝西墓地漢晉墓葬發掘簡報》，《考古》1997年第9期。
 - 《新疆吐魯番交河故城溝西墓地麴氏高昌一唐西州時期墓葬1996年發掘簡報》，同上。
 - 《漢文化與古代新疆》，《西北民族研究》1997年第2期。
 - 《安迪爾遺址考察》，《新疆文物考古新收穫(續)》，新疆美術攝影出版社，1997年。
 - 《墨玉縣扎瓦遺址》，同上。
 - 《若羌縣古代文化遺存考察》，同上。
 - 《新疆出土簡牘的考古學研究》，《西北史地》1996年第3期。
 - 《1990年考察記實》，中日共同尼雅遺跡學術考察隊編著《中日共同尼雅遺跡學術調查報告書》第一卷，株式會社，法藏館，京都，1996年4月。
 - 《1991年考察記實》，同上。
 - 《塔剌瑪乾沙漠歷史時期人類活動與環境變遷的關係》，同上。
 - 《尼雅考古研究綜述》，《樓蘭文化研究論集》，新疆人民出版社，1995年，烏魯木齊。
 - 《佉盧文遺物在新疆的考古發現》，《西北史地》1993年第4期。
 - 《古代于闐國的貨幣》，《中國錢幣》1993年第4期。
 - 《哈密地區文物普查資料》，《新疆文物》1991年第4期。
 - 《安迪爾新出漢佉二體錢考》，《中國錢幣》1991年第3期。
 - 《阿爾金山細石器》，《新疆文物》1990年第4期。
 - 《跋廣州漢墓出土陶俑座燈》，《華南考古2》2008年10月。
- Translated Works:
- 《理論考古學》(合譯)，K.R.Dark 原著，岳麓書社，2005年。
 - 《西域考古圖記》(主譯)，M.A. 斯坦因原著，廣西師範大學出版社，1998年。

Dr Yao Chongxin (姚崇新)

Experience Archaeologist

Dr Yao is an associated archaeologist with ERM and has over 15 years of experience in archaeological investigation and excavation in Mainland China.

Apart from archaeological fieldwork experience, Dr Yao is also a Professor in the Department of Anthropology of the Sun Yat-sen University, teaching and conducting research in Archaeology.

In 2011, Dr Yao obtained the qualification as an Archaeological Excavation Team Leader under the State Administration of Cultural Heritage in China and had led a number of archaeological excavations in China.

Fields of Competence

- Archaeological Research
- Archaeological Rescue Excavation
- Archaeological Investigation
- Archaeological Watching Brief
- Archaeological Impact Assessment
- Anthropological Research
- Anthropological Field Survey

Education

- PhD in Archaeology, Peking University, China, 2002
- Master in History, Peking University, China, 1997
- Bachelor in History, Xinjiang Normal University, 1990

Qualification

- Certificate of Archaeological Excavation Team Leader, State Administration of Cultural Heritage, China, 2011 to present

Languages

- Chinese
- English

Academic/Teaching Experience

- Professor, Department of Anthropology, Sun Yat-sen University, China, 2011 to present
- Visiting Scholar, National Heritage Board (NHB) of Singapore, Singapore, 2011 to 2012
- Associate Professor, Department of Anthropology, Sun Yat-sen University, China, 2004 to 2011
- Visiting Scholar, Columbia University in the City of New York, the United States of America, 2006
- Lecturer, Department of Anthropology, Sun Yat-sen University, China, 2001 to 2004

Key Projects

Dr Yao has led a number of archaeological excavations in China:

- Archaeological Excavation of Tabuaobao Neolithic archaeological site in Balinyouqi, Inner Mongolia (內蒙古巴林右旗塔布敖包新石器時代遺址) in 2009.
- Archaeological Excavation of Grave Yard at Shi Xia Zi in Zhong County of Chongqing City (重慶市忠縣石匣子墓群) in 2004.
- Archaeological Excavation of the Nanyue Kingdom Palace in Guangzhou City (廣州市南越國宮署遺址) in 2003
- Archaeological Excavation of Kongbao Burial Ground in Badong County, Hubei Province (湖北巴東孔包墓群) from 2002 to 2003.

Dr Yao has also participated in numerous archaeological excavations and investigations:

- Archaeological Excavation of Warring States Period Graveyard in Maidehang, Nanshan District, Shenzhen City (深圳市南山區麥地巷戰國墓地) in 2009.
- Archaeological Excavation of Menhuo archaeological site in Xichuan County, Henan Province (河南淅川門火遺址) in 2007.
- Archaeological Excavation of Heshupai archaeological site in Longchuan County, Guangdong Province (廣東龍川荷樹排遺址) from 2003 to 2004.
- Archaeological Excavation of Wazhadi archaeological site and Banbianjie Burial Ground in Zhong County, Chongqing Province (重慶忠縣瓦渣地遺址和半邊街墓葬群) from 1998 to 2000.

Publications

Books:

- 巴蜀佛教石窟造像初步研究：以川北地區為中心》，北京：中華書局，2011 年。
- 《中古藝術宗教與西域歷史論稿》，北京：商務印書館，2011 年。
- 《新獲吐魯番出土文獻》，合編，北京：中華書局，2008 年。
- 《吐魯番文書總目》（歐美收藏卷），合編，武漢大學出版社，2007 年。
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Archaeological Reports:

- 《蒙古巴林右旗塔布敖包新石器時代遺址 2009 年發掘簡報》，執筆，《考古》2011 年第 5 期，3—15 頁。
- 《2004 重慶市忠縣石匣墓地發掘簡報》，執筆，《南方文物》2005 年第 2 期，1—7 頁。

Journals:

- 《四川安岳西禪寺窟僧伽三十二化變相及相關問題》，合著，《藝術史研究》第十三輯，廣州：中山大學出版社，2011 年。
- 《唐代僧尼授田問題新探——以新獲吐魯番文書為中心》，載《敦煌文獻·考古·藝術綜合研究：紀念向達先生誕辰 110 週年學術研討會論文集》，北京：中華書局，2011 年，404—422 頁。
- 《中古時期巴蜀地區的火祇教遺痕》，載朱鳳玉、汪娟編《張廣達先生八十華誕祝壽論文集》，台北：新文豐出版公司，2010 年，997—1028 頁。
- 《唐代西州的醫學教育與醫療實踐》，《文史》2010 年第 4 輯，147—174 頁。
- 《中山大學圖書館藏北齊盧舍那法界人中像及相關問題》，合著，《藝術史研究》第十一輯，2009 年，161—208 頁。
- 《中古時期西南地區的粟特、波斯人踪跡》，《邊疆民族考古與民族考古學集刊》第一集，北京：文物出版社，2009 年，104—125 頁。
- 《“火神廟”非祇廟辨》，《世界宗教研究》2009 年第 3 期，125—135 頁（中國人民大學書報資料中心《宗教》2009 年第 6 期全文轉載，93—99 頁）
- 《中外醫藥文化交流視域下的西州藥材市場》，《文史》2009 年第 4 輯，87—106 頁。
- 《觀音與地藏：唐代佛教造像中的一種特殊組合》，合著，《藝術史研究》第十輯，2008 年，467—508 頁。
- 《在宗教與世俗之間：從新出吐魯番文書看高昌國僧尼的社會角色》，《西域研究》2008 年第 1 期，45—60 頁（中國人民大學書報資料中心《宗教》2008 年第 3 期全文轉載，19—31 頁）。
- 《〈中國歷史文獻課〉教學札記》，載《教學研究與實踐》，廣州：中山大學出版社，2008 年，249—260 頁。
- 《2008 年和田考察行程日誌》，合著，《西域文史》第三輯，2008 年，127—152 頁。
- 《廣元唐代佛教窟龕與造像的分期與研究》，《考古學報》2007 年第 4 期，423—468 頁。

- 《中古時期巴蜀地區的粟特人踪跡》，《西域文史》第二輯，北京：科學出版社，2007年，169—182頁。
- 《對大足北山晚唐五代千手千眼觀音造像的初步考察》，載《2005年重慶大足石刻國際學術研討會論文集》，北京：文物出版社，2007年，449—468頁。
- 《廣元石窟龕形制初步研究》，載《漢代考古與漢文化國際學術研討會論文集》，濟南：齊魯書社，2006年，558—571頁。
- 《對部分廣元密教造像題材的再考察——兼析某些密教造型藝術的淵源》，《敦煌研究》2006年第2期，1—5頁。
- 《青州北齊石造像再考察》，《藝術史研究》第七輯，2005年，309—342頁。
- 《廣元唐代石窟造像題材二題》，《四川文物》2005年第3期，56—63頁。
- 《唐代西州的私學與教材——唐代西州的教育之二》，《西域研究》2005年第1期，1—8頁。
- 《廣元唐以前佛教窟龕與造像的分期與年代》，《藝術史研究》第六輯，2004年，256—278頁。
- 《唐代西州的官學——唐代西州的教育之一》，《新疆師範大學學報》2004年第1期，65—76頁。
- 《試論廣元、巴中兩地石窟造像的關係——兼論巴中與敦煌之間的古代交通》，《四川文物》2004年第4期，63—70頁。
- 《廣元的地藏造像及其組合》，《藝術史研究》第四輯，2002年，305—323頁。
- 《吐谷渾佛教論考》，《敦煌研究》2001年第1期，53—63頁。
- 《太史文和他的中古中國宗教研究》，《文史知識》2001年第1期，47—50頁（中國人民大學書報資料中心《宗教》2001年第4期全文轉載）。
- 《成都地區出土南朝造像中的外來風格淵源再探》，《華林》第1卷，北京：中華書局，2001年，245—258頁。
- 《試論高昌國的佛教與佛教教團》，《敦煌吐魯番研究》第四卷，北京：北京大學出版社，1999年，39—80頁。
- 《從考古材料看麴氏高昌國的僧官制度》，《青年考古學家》第11期，1999年，41—46頁。
- 《北涼王族與高昌佛教》，《新疆師範大學學報》1996年第1期，68—77頁。31.《從“義和政變”到“延壽改制”——麴氏高昌王國晚期政治史探微》，合著，《敦煌吐魯番研究》第二卷，1996年，163—188頁。
- 《麴氏高昌王國官府授田制初探》，載《中國吐魯番學學會第一次國際學術研討會論文集》，烏魯木齊，1992年，131—147頁。

Book Critics:

- 評 Zhiru, *The Making of a Savior Budhisattva : Dizang in Medieval China*, 《唐研究》第十七卷，北京：北京大學出版社，2011年，579—590頁。
- 評張總《地藏信仰研究》，《藝術史研究》第八輯，2006年，507—512頁。
- 評 Angela F. Howard, *The Summit of Treasures* , 《藝術史研究》第七輯，2005年，494—503頁。
- 評 Chun-fang Yu, *Kuan-yin : The Chinese Transformation of Avalokitesvara* , 《藝術史研究》第六輯，2004年，476—482頁。
- 《〈吐魯番新出摩尼教文獻研究〉評介》，《書品》2001年第3期，37—40頁。
- 6. 評杜斗城《北涼佛教研究》，《敦煌吐魯番研究》第五卷，北京：北京大學出版社，2000年，353—360頁。

Translated Works:

- 《民族考古學實踐》，合譯，長沙：岳麓書社，2009年。
- 《觀音：菩薩中國化的演變》，合譯，台灣：法鼓文化事業有限公司，2009年。
- 《犍陀羅語與佛教在中亞的傳播》，《西域研究》1996年第4期，61—66頁。

Dr Wang Hong (王宏)

Experience Archaeologist

Dr Wang is an associated archaeologist with ERM and has over 25 years of experience in archaeological investigation and excavation in Hong Kong and Mainland China.

Apart from archaeological fieldwork experience, Dr Wang is also a Associate Professor in the Department of Anthropology of the Sun Yat-sen University, teaching and conducting research in Archaeology.

Dr Wang was involved in the Territory Wide Archaeological Survey in Hong Kong between 1997 and 1998 covering the Tuen Mun and Tsuen Wan areas for the Antiquities and Monuments Office (AMO), as well as to assist in the rescue excavation for the Neolithic archaeological site at Sai Kung Ho Chung (1999 to 2001) where fruitful archaeological deposits were unearthed.

In addition, Dr Wang had assisted Hong Kong Archaeological Society (HKAS) to conduct archaeological excavations at Sham Chung Wong Tei Tung, Sai Kung, between 2004 and 2006.

With Dr Wang's involvement in Hong Kong's archaeological projects, he is very familiar with the archaeological field practice, standards and requirements in Hong Kong.

In 1995, Dr Wang obtained the qualification as an Archaeological Excavation Team Leader under the State Administration of Cultural Heritage in China and had led a number of archaeological excavations in China.

Fields of Competence

- Archaeological Research
- Archaeological Rescue Excavation
- Archaeological Investigation
- Archaeological Watching Brief
- Archaeological Impact Assessment

Education

- BA in Archaeology, Wuhan University, 1982

Qualification

- Certificate of Archaeological Excavation Team Leader from the State Administration of Cultural Heritage, 1995 to present

Languages

- Chinese
- English

Working Experience

- Associate Professor, Department of Anthropology, Sun Yat-sen University, China, 2003 to present
- Vice-Chairperson, Department of Anthropology, Sun Yat-sen University, China, 1999 to 2000
- Chairperson of the Archaeology Section, Department of Anthropology, Sun Yat-sen University, China, 1997 to 2002
- Chairperson of the Archaeology Section, Jingzhou Museum, China, 1982 to 1997

Key Projects

Dr Wang has conducted numerous archaeological surveys and excavations projects in Hong Kong and in Mainland China. Key project Dr Wang led or participated include:

Hong Kong and Macau Projects:

- Archaeological watching brief and rescue excavation for Central Police Station Compound Conservation and Revitalisation EIA Study, for Hong Kong Jockey Club, 2012 – on going. Dr Wang is a professional archaeologist to lead the excavation.
- Archaeological Excavation at Wong Tei Tung Archaeological Site in Shum Chung, Sai Kung, for HKAS, 2004 – 2006. Dr Wang was a field archaeologist to assist in conducting the excavation.
- Archaeological Excavation at Lung Kwu Tan Archaeological Site in Tuen Mun, for AMO, 2001. Dr Wang was a field archaeologist to assist in conducting the excavation.
- Archaeological Excavation at Ho Chung Archaeological Site in Sai Kung, for AMO, 1999 and 2001. Dr Wang was a field archaeologist to assist in conducting the excavation.
- Tuen Mun and Tsuen Wan District Archaeological Investigation as part of the Territory Wide Archaeological Survey, for AMO, 1997 - 1998. Dr Wang was a field archaeologist to assist in conducting the investigation.
- Archaeological Survey of Coloane, Macau, for the Macao Museum of Art, 2006 – 2007. Dr Wang was a field archaeologist to assist in conducting the survey.

Mainland China Projects:

Dr Wang has led numerous archaeological excavations in China:

- Archaeological Investigation of the downstream area of Tao River, tributaries of Dan River (丹江支流滔河下游區域) in September, 2011.
- Archaeological Excavation of a Cliff Grave Yard at Thermal Power Plant in Zhong County of Chongqing City (重慶市忠縣火電廠崖墓群) in August, 2008.
- Archaeological Excavation of a Grave Yard at Liuchakou in Xichuan County of Henan Province (河南省淅川縣六岔口墓群) in May, 2008.
- Archaeological Excavation of Dachang Ancient City Archaeological Site in Wushan County of Chongqing City (重慶市巫山縣大昌古城遺址) in December, 2005.

- Archaeological Excavation of Dongba Archaeological Site in Wushan County of Chongqing City (重慶市巫山縣東壩遺址) from 2003 – 2004.
- Archaeological Excavation of Tujiaba Archaeological Site in Wushan County of Chongqing City (重慶市巫山縣涂家壩考古遺址) from 2000 - 2002.
- Archaeological Excavation of Linjia Pier Archaeological Site in Wushan County of Chongqing City (重慶市巫山縣林家碼頭遺址) in 2001.
- Archaeological Excavation of Lijiatuo Archaeological Site in Badong County of Hubei Province (湖北省巴東縣黎家沱考古遺址) in 2000.
- Archaeological Excavation of Shilaodun Archaeological Site in Yingde County of Guangdong Province (廣東省英德縣史老墩考古遺址) in 1998.
- Archaeological Excavation of Bagutai Shang Archaeological Site in Jiangling County of Hubei Province (湖北省江陵縣八姑臺商代考古遺址) in 1996.
- Archaeological Excavation and Reporting of Jinnan Temple archaeological site in Jiangling County of Hubei Province (湖北江陵荆南寺遺址) 1984 to 1992.
- Archaeological Excavation of Meihuaiqiao Shang-Zhou Archaeological Site in Jiangling County of Hubei Province (湖北省江陵縣梅槐橋商周考古遺址) in 1987.
- Archaeological Excavation of Xiaojiawuji Archaeological Site of Shijiahe Archaeological Site Group in Tianmen County of Hubei Province (湖北省天門縣石家河遺址群肖家屋脊遺址) in 1987.
- Archaeological Excavation of Shizi Mountain Archaeological Site in Jianli County of Hubei Province (湖北省監利縣獅子山遺址) in 1987.
- Second national survey on cultural relics in Shishou City of Hubei Province in (湖北省石首市第二次全國文物普查) in 1984.
- Second national survey on cultural relics in Jianli County of Hubei Province (湖北省監利縣第二次全國文物普查) in 1983.

Dr Wang has also participated in numerous archaeological excavations and investigations:

- Archaeological Excavation B of Liupenyao Archaeological Site in Xichuan County of Henan Province (河南省淅川縣六盆窯考古遺址) in March, 2011.
- Archaeological Excavation of Liupenyao Archaeological Site in Xichuan County of Henan Province (河南省淅川縣六盆窯考古遺址) in January, 2010.

- Environmental-Archaeology collaborative research in Youshui River Basin of Chongqing City (重慶市西河流域環境考古合作研究) in May, 2009.
- Environmental-Archaeology collaborative research in the downstream region of Fujiang of Chongqing City (重慶市涪江下游地區環境考古合作研究) in May, 2009.
- Environmental-Archaeology collaborative research in the downstream region of A Pengjiang River and Wujiang River of Chongqing City (重慶市阿蓬江流域、烏江下游地區環境考古合作研究) in June, 2008.
- Joint Archaeological Excavation of flooded area of the construction project of Xiangziyan Hyperpower Station in Qianjiang District of Chongqing City (重慶市黔江區箱子岩水電站建設工程淹沒區聯合考古發掘) in February, 2008.
- Archaeological Excavation of Naman Paleolithic Archaeological Site in Tianyang County, Baise City of Guangxi Province (廣西省百色市田陽縣那滿舊石器時代遺址) from July to August, 2005.
- Archaeological Excavation of Palace Site of Nanyue King in Guangzhou City of Guangdong Province (廣東省廣州市南越王宮署遺址) in 2003.
- Archaeological Excavation of Yangxihe Archaeological Site in Wushan County of Chongqing City (重慶市巫山縣洋溪河考古遺址) in 2003.
- Archaeological Excavation of Baishuihe Archaeological Site in Wushan County of Chongqing City (重慶市巫山縣白水河考古遺址) in 2001.
- Archaeological Excavation of Palace Site of Nanyue King in Guangzhou City of Guangdong Province (廣東省廣州市南越王宮署遺址) in 1997.
- Archaeological Excavation of Xishan Archaeological Site in Zhengzhou City of Henan Province (河南省鄭州市西山考古遺址) from 1994–1995.
- Archaeological Excavation of Zhongshibao Chu Grave in Zhongxiang City of Hubei Province (湖北省鍾祥市冢十包楚墓) in 1994.
- Archaeological Excavation Sandouping, Yangjiawan and Baimiaozi Archaeological Site in Three Gorges Dam Region of Yichang City of Hubei Province (湖北省宜昌市三峽壩區三斗坪、楊家灣、白廟子考古遺址) in 1993.
- Archaeological Excavation of Bianfan Archaeological Site in Zhongxiang City of Hubei Province (湖北省鍾祥市邊畝考古遺址) in 1984.
- Archaeological Excavation of Liuhe Archaeological Site in Zhongxiang City of Hubei Province (湖北省鍾祥市六合考古遺址) in 1983.
- Archaeological Investigation of Ancient Graves and Ruins of all brick factory in Jiangling County of Hubei Province (湖北省江陵縣全縣磚瓦廠古墓葬古遺址考古調查) in 1982.
- Archaeological Excavation of Feijiahe Shang Archaeological Site and Kilns in Yueyang City, Hunan Province (湖南省岳陽市費家河商代遺址和窯址) in 1982.
- Archaeological Excavation of Guanmiaoshan Archaeological Site in Zhijiang City of Hubei Province (湖北省枝江市關廟山考古遺址) in 1980.

Publications

Books:

- 《忠縣翠屏山崖墓》(主編), 科學出版社, 2011 年。
- 《英德史前考古報告》(合著, 史老墩遺址主持與主編), 廣東人民出版社, 1999 年。

Journals:

- 《巫山大昌古城遺址發掘報告》, 重慶市文物局、重慶市移民局編:《重慶庫區考古報告集·2002 卷》, 科學出版社, 2010 年 11 月。
- 《巫山塗家壩遺址發掘報告》, 重慶市文物局、重慶市移民局編:《重慶庫區考古報告集·2002 卷》, 科學出版社, 2010 年 11 月。
- 《搶救性考古發掘的課題研究》, 廣東省珠江文化研究會嶺南考古專業委員會編:《嶺南考古研究》第 8 期, 中國評論學術出版社 2009 年 8 月。
- 《忠縣翠屏山東漢至兩晉崖墓群》, 中國考古學會編:《中國考古學年鑑》2008, 文物出版社 2009 年 7 月。
- 《荊南寺遺址的發現》, 荊州博物館編:《荊州重要考古發現》, 文物出版社, 2009 年 1 月。
- 《巫山林家碼頭遺址 2001 年度發掘報告》, 重慶市文物局、重慶市移民局編:《重慶庫區考古報告集·2001 卷》, 科學出版社, 2007 年 12 月。
- 《巫山大昌古城遺址第二次發掘報告》, 重慶市文物局、重慶市移民局編:《重慶庫區考古報告集·2001 卷》, 科學出版社, 2007 年 12 月。
- 《巫山塗家壩遺址發掘報告》, 重慶市文物局、重慶市移民局編:《重慶庫區考古報告集·2000 卷》, 科學出版社, 2007 年 11 月。
- 《巫山大昌古城遺址發掘報告》, 重慶市文物局、重慶市移民局編:《重慶庫區考古報告集·2000 卷》, 科學出版社, 2007 年 11 月。
- 《論考古學文化的變遷》, 廣東省珠江文化研究會:《嶺南考古研究》(6), 中國評論學術出版社, 2007 年 10 月(香港)。

- 《香港西貢黃地峒石器製造場發掘簡報》，中國科學院古脊椎動物與古人類研究所編輯:《人類學學報》，2006年第1期。第二作者。
- 《論長江中游地區夏商周時期的文化與文化變遷》，北京大學考古文博學院編:《考古學研究》(五)，科學出版社，2003年7月。
- 《廣東英德史老墩遺址的石器分類與農業生產——兼論廣東地區新石器時代的農業發展》，《農業考古》2003年第1期。
- 《中國內地與香港兩地田野考古方法的比較》，中山大學嶺南考古研究中心編:《嶺南考古研究》(2)，嶺南美術出版社，2002年10月。
- 《試論長江中游地區夏商周時期的文化與族屬》，湖北省考古學會論文選集(三)，《江漢考古增刊》1998年11月
- 《監利獅子山遺址調查與試掘》，《江漢考古》1997年第2期。
- 《巴蜀文化源流粗疏》，《江漢考古》1997年第3期。
- 《論鄂西南、湘西北地區的夏商時期文化》，王光鎬主編:《文物考古文集》，武漢大學出版社，1997年。
- 《論周梁玉橋文化》，《江漢考古》1996年第3期。
- 《論江漢流域西周時期的文化分區》，湖北省考古學會論文選集(二)，《江漢考古增刊》1991年7月，重載於荊州博物館編:《荊州博物館建館50週年紀念論文集》，文物出版社2008年10月。
- 《湖北江陵荆南寺遺址第一、二次發掘簡報》，《考古》1989年第9期。
- 《荆南寺商代陶器試析》，湖北省考古學會論文選集(一) 武漢大學學報編輯部，1987年
- 《鍾祥六合遺址》(西周部分執筆)，《江漢考古》1987年第2期。
- 《湖北江陵荆南寺遺址調查》第10輯, 文物編輯委員會:《文物資料叢刊》，文物出版社，1987年。
- 《湖南湘鄉岱子坪新石器時代遺址》，《湖南考古輯刊》第2輯，岳麓書社，1984年。

Dr Guo Lixin (郭立新)

Experience Archaeologist

Dr Guo is an associated archaeologist with ERM and has over 17 years of experience in archaeological investigation and excavation in Mainland China.

Apart from archaeological fieldwork experience, Dr Guo is also a Professor in the Department of Anthropology of the Sun Yat-sen University, teaching and conducting research in Archaeology.

In 2009, Dr Guo obtained the qualification as an Archaeological Excavation Team Leader under the State Administration of Cultural Heritage in China and had led a number of archaeological excavations in China.

Fields of Competence

- Archaeological Research
- Archaeological Rescue Excavation
- Archaeological Investigation
- Archaeological Watching Brief
- Archaeological Impact Assessment
- Anthropological Research
- Anthropological Field Survey

Education

- PhD in Archaeology, Nanjing University, China, 2001
- Master in Archaeology, Nanjing University, China, 1995

Qualification

- Certificate of Archaeological Excavation Team Leader, State Administration of Cultural Heritage, China, 2009 to present

Languages

- Chinese
- English

Working Experience

- Professor, Department of Anthropology, Sun Yat-sen University, China, 2010 to present
- Associate Professor, Department of Anthropology, Sun Yat-sen University, China, 2002 to 2009
- Associate Professor, Lecturer, Guangxi University for Nationalities, China, 1996 - 2002

Key Projects

Dr Guo has participated in an archaeological project in Hong Kong:

- Archaeological Watching Brief in Lung Kwu Tan, Tuen Mun North and Sha Tau Kok for Replacement and Rehabilitation of Water Mains Stage 4 Phase 1 – Mains in Tuen Mun, Yuen Long, North District and Tai Po, for WSD via Tsun Yip Civil Construction Limited, 2011 – ongoing. Dr Zheng is the Licenced Archaeologist to lead the archaeological watching brief.

Apart from Hong Kong experience, Dr Guo has led numerous archaeological excavations in China:

- Archaeological Excavation of Xiapeng Archaeological Site in Yunxian County, Hubei Province (湖北鄖縣下棚遺址), from 2010 to 2011.
- Pilot Study for the Utilization of Cultural Heritage Resources in the Old City of Guangzhou in 2008.
- Archaeological Excavation of Qiligou Burial Ground in Danjiangkou City, Hubei Province (湖北丹江口市七里溝墓群), from August to November 2008.
- Cultural Relics Ground Survey and Evaluation for the Tianhe District, Guangzhou (廣州市天河區地面文物普查與評價), from July to September 2005.
- Archaeological Excavation of Wangjiawan Burial Ground in Badong County, Hubei Province (湖北巴東王家灣墓群), from 2004 to 2005.
- Archaeological Excavation of Shangjing Longquanfu Imperial Garden of Ancient Bohai State in Ningan City, Heilongjiang Province (黑龍江省寧安市古渤海國上京龍泉府御花園), from July to October 2004.
- Archaeological Excavation of Kongbao Burial Ground (Han Dynasty) in Badong County, Hubei Province (湖北巴東孔包墓群), from 2003 to 2004.

Dr Guo has also participated in numerous archaeological excavations and investigations:

- Archaeological Excavation of Jiaojiayuan Burial Ground in Hubei Province (湖北焦家院墓群), from July to September 2009.
- First and Second Archaeological Excavations of Jiangdongzui Archaeological Site (Shang to Zhou Dynasties) in Wushan County, Chongqing (重慶巫山縣江東嘴遺址), in 2001.
- Second Archaeological Excavation of Zhangjiawan Archaeological Site (Warring States Period to Han Dynasty) in Wushan County, Chongqing (重慶巫山縣張家灣遺址), in 2000.

- Archaeological Excavation of Maqiao Archaeological Site in Shanghai, from October to December 1996.
- Sub-surface Cultural Relics Survey, Trial Excavation and Conservation Planning for the Inundation Zone and Resettlement Zone of the Three Gorges Reservoir (Original Tiancheng and Wujiao District of Wanxian City) (長江三峽水庫淹沒區與移民安置區地下文物的普查、試掘與保護規劃 (原萬縣市天城區與五橋區段)), in April to June 1994.

Publications

- 《天上人間：廣西龍脊龍脊壯族文化考察札記》，南寧：廣西人民出版社，2006年1月。
- 《長江中游地區初期社會複雜化研究（4300BC—2000BC）》，上海古籍出版社，2005年2月。
- 《考古人類學》，主編及主要撰稿人，南寧：廣西民族出版社，1998年4月。
- 《榮耀的背後：廣西龍脊壯族喪葬儀式分析》，《中南民族大學學報（人文社科版）》2005年第1期，第57-61頁。
- 《打造生命：龍脊壯族豎房活動分析》，《廣西民族研究》2004年第1期，36-42頁。
- 《界限與共享：龍脊壯族社會空間模式分析》，《首屆中國與東南亞民族論壇論文集》，北京：民族出版社，2005年2月，第75-85頁。
- 《墓葬情境分析與身份標識：以博羅橫嶺山墓地為例》，《中山大學學報（哲社版）》2006年第5期，87-93頁。
- 《論長江中游地區新石器時代晚期的生計經濟與人口壓力》，《華夏考古》2006年第3期，第33-39，53頁。
- 《論漢江東部地區史前時期的手工業專業化生產》，《東南文化》2003年9期，22-28頁。
- 《長江中游地區新石器時代自然環境變遷研究》，《中國歷史地理論叢》2004年第2輯，5-16頁。
- 《衝突與戰爭：從大溪到石家河》，《長江三峽湖北庫區文物保護與考古學研究論文集》，北京：科學出版社，2003年7月，137-156頁。
- 《探索與論爭：長江中游新石器時代晚期的文化譜系》，《江漢考古》2004年第3期，69-74頁。《屈家嶺文化的聚落形態與社會結構分析》，《中原文物》2004年第6期，9-14頁。
- 《石家河文化晚期的甕棺葬研究》，《四川文物》2005年第3期，第22-26頁，考古類中文核心期刊。《湖北省巴東縣孔包漢墓發掘報告》（執筆），《四川文物》2003年6期。
- 《巫山張家灣遺址第二次發掘報告》（第一執筆人），重慶市文物局、重慶市移民局編：《重慶庫區考古報告集（1999卷長江三峽工程文物保護項目報告

甲種第 6 號)，北京：科學出版社 2006 年 1 月，頁 26-58。

- 《巴東陳向坪王家灣墓群 2004 年發掘報告》（第一執筆人），國務院三峽工程建設委員會辦公室、國家文物局編著，《長江三峽工程文物保護項目報告·湖北庫區考古報告集》（第四卷），北京：科學出版社，2007 年 1 月。
- 《考古對像對考古學研究的影響－考古學反思之一》，《華夏考古》2000 年第 2 期。
- 《民族考古學三題－關於名實問題、理論基礎與研究方法的探討》，《南方文物》1997 年第 4 期。
- 《論冷水沖型、北流型與靈山型銅鼓的關係》，《廣西民族學院學報》（哲社版）1997 年第 3 期。
- 《論冷水沖型銅鼓的三個地方類型》，《廣西民族學院學報》（哲社版）1997 年。
- 《東周玉器的分期》，《中原文物》1998 年第 3 期，考古類中文核心期刊。

Dr Zheng Junlei (鄭君雷)

Experience Archaeologist

Dr Zheng is an associated archaeologist with ERM and has over 20 years of archaeological investigation and excavation experience in Hong Kong and Mainland China.

Apart from archaeological fieldwork experience, Dr Zheng is also a Professor in the Department of Anthropology of the Sun Yat-sen University, teaching and conducting research in Archaeology.

In 2003, Dr Zheng obtained the qualification as an Archaeological Excavation Team Leader under the State Administration of Cultural Heritage in China and had led a number of archaeological excavations in China.

Dr Zheng is also a qualified archaeologist to apply for a *Licence to Excavate and Search for Antiquities* under the *Antiquities and Monuments Ordinance* in Hong Kong. He has successfully obtained the *Licence* to conduct archaeological watching brief in Hong Kong.

Fields of Competence

- Archaeological Research
- Archaeological Rescue Excavation
- Archaeological Investigation
- Archaeological Watching Brief
- Archaeological Impact Assessment
- Anthropological Research
- Anthropological Field Survey

Education

- PhD in Archaeology, Graduate School, Jilin University, 1997
- Master in Archaeology, Graduate School, Jilin University, 1992
- Bachelor in History (Specializing in Archaeology), Jilin University, 1990

Qualification

- Certificate of Archaeological Excavation Team Leader, State Administration of Cultural Heritage, China, 2003 to present

Languages

- Chinese
- English

Academic/Teaching Experience

- Professor, Department of Anthropology, Sun Yat-sen University, China, 2007 - present
- Vice-Chairperson, Department of Anthropology, Sun Yat-sen University, China, 2002 - present
- Tutor, Lecturer, Associate Professor and Vice-Chairperson, Department of Archaeology, Jilin University, China, 1993 - 2002

Key Projects

Dr Zheng has conducted numerous archaeological surveys and excavations projects in Hong Kong and in Mainland China. Key project Dr Zheng led or participated include:

Hong Kong Projects:

Archaeological Survey

- Liantang/Heung Yuen Wai Boundary Crossing Point and Associated Works EIA Study Archaeological Impact Assessment, CEDD, 2010 – on going. Dr Zheng a qualified archaeologist to lead the survey.
- Archaeological Impact Assessment for the Transformation of the Former Police Married Quarters Site on Hollywood Road into a Creative Industries Landmark, for ArchD, 2010 – on going. Dr Zheng is a qualified archaeologist to lead the investigation.

Archaeological Excavation

- Archaeological Survey-cum-Excavation for Sewage Interception Scheme in Kowloon City – Pumping Station, Rising Mains and Trunk Sewers, for DSD via Penta-Ocean – Concentric Joint Venture, 2009– on going. Dr Zheng is a qualified archaeologist to lead the excavation.
- Archaeological watching brief and excavation for the Transformation of the Former Police Married Quarters Site on Hollywood Road into a Creative Industries Landmark, for ArchD, 2012 – on going. Dr Zheng is a qualified archaeologist to lead the watching brief and excavation

Archaeological Watching Brief

- Archaeological Watching Brief in Lung Kwu Tan, Tuen Mun North and Sha Tau Kok for Replacement and Rehabilitation of Water Mains Stage 4 Phase 1 – Mains in Tuen Mun, Yuen Long, North District and Tai Po, for WSD via Tsun Yip Civil Construction Limited, 2011 – ongoing. Dr Zheng is the Licenced Archaeologist to lead the archaeological watching brief.
- Archaeological Watching Brief for Upgrading of Central and East Kowloon Sewerage – Phase 2, for DSD via Sum Kee, 2011 - on going. Dr Zheng is the Licenced Archaeologist to lead the archaeological watching brief.
- Archaeological Watching Brief for Upgrading of Central and East Kowloon Sewerage – Phase 1, for

DSD via Penta Ocean – Concentric Joint Venture, 2010 - on going. Dr Zheng is a qualified archaeologist to lead the archaeological watching brief.

- Archaeological Watching Brief for the Replacement & Rehabilitation of Water Mains Stage 3 – Mains in West Kowloon (Package A), for WSD via Noble Crown Development Limited, 2009 – ongoing. Dr Zheng is a qualified archaeologist to lead the archaeological watching brief.

Mainland China Projects:

- Archaeological Excavation at Pinganpu Archaeological Site (平安堡遺址) in Zhangwu County, Liao Ning Province, Undergraduate Internship, 1988.
- Archaeological Excavation at Miaoshan Archaeological (廟山遺址) in Dalin City, Jinzhou County, Liao Ning Province, Research Student Internship, 1991.
- Archaeological Excavation at 興城址 in Ningan County, Hei Long Jiang Province, Instructing Teacher, 1993.
- Archaeological Excavation at Xin Pu Archaeological Site (新浦遺址) in Zhongxing City, Fengyi County, for the “Three Gorges Heritage Conservation Project” (“三峽文物保護工程”) (Continual Project), Team Leader, 1998, Spring and Autumn 2000.
- Archaeological Excavation at Gaiziding Archaeological Site (蓋子頂遺址) in Beipiao City, Liao Ning Province (Continual Project), Team Leader, 1999 and 2000.
- Archaeological Excavation at Ying Kang Kiln Site in Warring State Period (銀崗戰國窯址) in Huizhou City, Guang Dong Province, Instructing Teacher, 2003.
- Archaeological Excavation at Leijiaping Graveyard (雷家坪墓地) in Badong County, Hubei Province, for the “Three Gorges Heritage Conservation Project”, Archaeological Team Leader, 2003.
- Archaeological Excavation at Bohai (渤海), Mudanjiang City, Hei Long Jiang Province, Instructing Teacher, 2004.
- Archaeological Excavation at Daishan Archaeological Site (台山遺址) in Chifeng City, Inner Mongolia, Instructing Teacher, 2005.
- Archaeological Excavation at Wangjiawan Graveyard (王家灣墓地) in Badong County, Hubei Province, for the “Three Gorges Heritage Conservation Project”, Archaeological Team Leader, 2005.

- Archaeological Excavation at Ruins of Dongjin City Site (東金城遺址) in Jiaozuo City, Henan Province, for the “South-North Water Transfer Heritage Conservation Project” (“南水北調文物保護工程”), Team Leader, 2006.
- Archaeological Excavation at Heisha Archaeological Site (黑沙遺址) in Xingtai City, Hebei Province, for the “South-North Water Transfer Heritage Conservation Project”, Archaeological Team Leader, 2006

Publications

Archaeological Reports:

- 《重慶市奉藝縣新浦遺址 1998 年發掘簡報》，載《重慶庫區考古報告集》（1998 年卷），科學出版社 2003 年。
- 《重慶市奉藝縣新浦遺址 2000 年春季發掘簡報》（第一執筆），《重慶庫區考古報告集》（1999 年卷），科學出版社 2006 年。
- 《黑龍江省海林市興農渤海時期城址的發掘》（第二執筆），《考古》2005 年第 3 期。
- 《湖北省巴東縣雷家坪墓地發掘報告》（第一執筆），《湖北庫區考古報告集》（第三卷），科學出版社 2007 年。

Journals:

- 《拓跋鮮卑早期歷史的考古學研究》，吉林大學碩士學位（1993 年）。
- 《中國東北東北地區漢墓研究》，吉林大學博士學位（1997 年）。
- 《大寧江長城的相關問題》，《史學集刊》1997 年第 1 期。
- 《遼寧遼寧錦縣昌盛石椁墓與遼東屬國》，《北方文物》1997 年第 2 期。
- 《劉賢墓志的若干問題》，《博物館研究》1998 年第 3 期。
- 《早期東部鮮卑與早期拓跋鮮卑族源關係概論》，載《青果集》中國大百科全書出版社 1998 年。
- 《察右后旗三道灣墓地文化因素分析》，《內蒙古文物考古》1998 年第 2 期。
- 《烏桓遺存的新綫索》，《文物春秋》1999 年第 2 期。
- 《戰國時期燕墓陶器的初步分析》，《考古學報》2001 年第 3 期（獲廣東省首屆哲學社會科學優秀成果論文類第三獎）。
- 《峽江地區西漢墓葬研究的若干綫索》，載《重慶·2001 年三峽文物保護研討會論文集》，科學出版社 2003 年。

- 《關於游牧性質遺存的判定標準及其相關問題》，《邊疆考古研究》（第 2 輯），科學出版社 2004 年。
- 《西方學者關於游牧文化起源研究的簡要評述》，《社會科學戰綫》2004 年第 3 期。人大書報資料中心複印報刊資料《文化研究》2004 年 8 期全文轉載。全文收入內蒙古社會科學院圖書館編《草原文化研究資料選編》（內蒙古教育出版社 2005 年）。
- 《戰國燕墓的非燕文化因素及其歷史背景》，《文物》2005 年第 3 期。
- 《遼陽漢魏畫小識三則》，《四川文物》2005 年第 3 期。全文收入中國社會科學院文獻信息中心編《堅持科學發展觀，構建和諧社會——黨史干部理論學習文選》（科學文化卷）（紅旗出版社 2007 年）。
- 《近東、中東和非洲大陸游牧業起源研究的若干背景材料譯介》（第一作者），《農業考古》2005 年第 3 期。
- 《論“西漢墓幽州分布區”》，《考古與文物》2005 年第 6 期。
- 《從漢墓材料透視漢代樂浪郡的居民構成》，《北方文物》2005 年第 2 期。
- 《峽江地區漢晉六朝花紋磚上的車輪紋飾》，《江漢考古》2006 年第 3 期。
- 《北江上游的南越國墓及秦漢嶺南的民族分布》，《四川文物》2006 年第 3 期。
- 《漢代東南沿海與遼東半島和朝鮮半島海路文化交流的幾個考古學例証》，載《漢代考古與漢文化國際學術研討會論文集》，齊魯書社 2006 年。
- 《關於游牧性質遺存的一些圖示和幾個補充》，《內蒙古文物考古》2007 年第 2 期。
- 《文化人類學的族群認同與考古學文化的族屬研究》，《思想戰綫》2007 年第 4 期。
- 《論歷史上北方游牧民的山岳崇拜》，載《地域社會與信仰習俗——立足於田野的人類學研究》，中山大學出版社 2007 年。

Commentary:

- 《戰國秦漢時期考古》和《鮮卑考古》，載《內陸歐亞古代史研究》，福建人民出版社 2005 年。

Thesis:

- 《關於田野考古學幾個關鍵環節的思考》，載《教學研究與實踐——教師論文集》，中山大學出版社 2005 年。

Dr Jin Zhiwei (金志偉)

Experience Archaeologist

Dr Jin is an associated archaeologist with ERM and has over 18 years of experience in archaeological investigation and excavation in Hong Kong and Mainland China.

Apart from archaeological fieldwork experience, Dr Jin is also a Lecturer in the Anthropology Department of the Sun Yat-sen University, teaching and conducting research in Archaeology.

Dr Jin was involved as one of the field archaeologists in the team of the Sun Yat-sen University to participate in the Territory Wide Archaeological Survey in Hong Kong between 1997 and 1998 covering the Tuen Mun and Tsuen Wan areas for the Antiquities and Monuments Office (AMO), as well as to assist in the rescue excavation for the Neolithic archaeological site at Sai Kung Ho Chung where fruitful archaeological deposits were unearthed.

In addition, being one of the team members of the Peking University, Dr Jin had also assisted AMO to conduct finds processing work for artefacts discovered from So Kwu Wat archaeological site in Tuen Mun.

With Dr Jin's involvement in AMO's archaeological projects, he is very familiar with the archaeological field practice, standards and requirements in Hong Kong.

In 2001, Dr Jin obtained the qualification as an Archaeological Excavation Team Leader under the State Administration of Cultural Heritage in China and had led a number of archaeological excavations in China.

Dr Jin is also a qualified archaeologist to apply for a *Licence to Excavate and Search for Antiquities* under the *Antiquities and Monuments Ordinance* in Hong Kong. He has successfully obtained the *Licence* to conduct a number of archaeological excavation, survey and watching brief projects in Hong Kong.

Fields of Competence

- Archaeological Research
- Archaeological Rescue Excavation
- Archaeological Investigation
- Archaeological Watching Brief
- Archaeological Impact Assessment
- Anthropological Research
- Anthropological Field Survey
- Social Impact Assessment

Education

- PhD in Anthropology, Sun Yat-sen University, China, 2007
- Master in Archaeology, Peking University, China, 1996
- Bachelor in Archaeology, Peking University, 1992

Qualification

- Certificate of Archaeological Excavation Team Leader, State Administration of Cultural Heritage, China, 2001 to present

Languages

- Chinese
- English

Working Experience

- Senior Lecturer, Department of Anthropology, Sun Yat-sen University, China, 1996 to present
- Tutor, Department of Archaeology, Peking University, China, 1992 to 1993

Key Projects

Dr Jin has conducted numerous archaeological surveys and excavations projects in Hong Kong and in Mainland China. Key project Dr Jin led or participated include:

Hong Kong Projects:

Archaeological Excavation

- Archaeological Survey-cum-Excavation for Sewage Interception Scheme in Kowloon City – Pumping Station, Rising Mains and Trunk Sewers, for DSD via Penta-Ocean – Concentric Joint Venture, 2009– 2011. Dr Jin is the Licenced Archaeologist to lead the excavation.
- Archaeological Watching Brief and Rescue Excavation for Central Police Station Compound Conservation and Revitalisation EIA Study, for Hong Kong Jockey Club, 2012 – on going. Dr Jin is a qualified archaeologist to lead the excavation.
- Archaeological Survey Cum Rescue Excavation for Ma On Shan Development – Roads, Drainage and Sewerage Works at Whitehead and Lok Wo Sha Phase 1, for CEDD via China Road and Bridge Corporation (Hong Kong) Ltd., 2009 - 2010. Dr Jin was the Licenced Archaeologist to lead the excavation.
- Archaeological Rescue Excavation at Ho Chung Archaeological Site in Sai Kung, for AMO, 2001. Dr Jin was invited by AMO as field archaeologist to assist in conducting the excavation.
- Archaeological Watching Brief and Rescue Excavation for the Transformation of the Former Police Married Quarters Site on Hollywood Road into a Creative Industries Landmark, for ArchD, 2012 – on going.

Archaeological Survey

- Archaeological Survey for Replacement of the Existing 11kV Submarine Cable Circuit Connecting Liu Ko Ngam and Pak Sha Tau Tsui at Kat O, for CLP Hong Kong, Limited, 2012. Dr Jin is the licenced holder to lead the survey.
- Archaeological Impact Assessment for Central Police Station Compound Conservation and Revitalisation EIA Study, for Hong Kong Jockey Club, 2011. Dr Jin is a qualified archaeologist to lead the investigation.
- Archaeological Impact Assessment for the Transformation of the Former Police Married Quarters Site on Hollywood Road into a Creative Industries Landmark, for ArchD, 2010 – 2011. Dr Jin is a qualified archaeologist to lead the investigation.

- Archaeological Investigation for Planning and Engineering Study of Private Housing Development at Cheung Sha, Lantau – Feasibility Study, CEDD via Scott Wilson, 2008. Dr Jin was the Licenced Archaeologist to lead the survey.
- Tuen Mun District Archaeological Investigation as part of the Territory Wide Archaeological Survey, AMO, 1997 - 1998. Dr Jin was invited by AMO as field archaeologist to assist in conducting the survey.

Archaeological Watching Brief

- Archaeological Watching Brief in Lung Kwu Tan, Tuen Mun North and Sha Tau Kok for Replacement and Rehabilitation of Water Mains Stage 4 Phase 1 – Mains in Tuen Mun, Yuen Long, North District and Tai Po, for WSD via Tsun Yip Civil Construction Limited, 2011 – ongoing. Dr Jin is a qualified archaeologist to lead the archaeological watching brief.
- Archaeological Watching Brief for Upgrading of Central and East Kowloon Sewerage – Phase 1, for DSD via Penta Ocean – Concentric Joint Venture, 2010 - 2012. Dr Jin is the Licenced Archaeologist to lead the archaeological watching brief.
- Archaeological Watching Brief for the Replacement & Rehabilitation of Water Mains Stage 3 – Mains in West Kowloon (Package A), for WSD via Noble Crown Development Limited, 2009 – ongoing. Dr Jin is a qualified archaeologist to lead the archaeological watching brief.

General Archaeological Project

- North East New Territories New Development Areas Planning and Development Studies, CEDD and PlanD, 2008 – ongoing. Dr Jin is a qualified archaeologist who provide specialist input on the archaeological aspect of the Project.
- Finds Processing of Archaeological Discovery from So Kwu Wat archaeological site in Tuen Mun, AMO, 2005. Dr Jin was invited by AMO to assist in the finds processing work.

Mainland China Projects:

As the qualified Archaeological Excavation Team Leader in Mainland China, Dr Jin has led a number of archaeological excavations in China:

- Archaeological Excavation of Men Huo archaeological site in Xi Chuan County in Henan Province (河南省淅川縣門夥遺址) in 2007.

- Archaeological Excavation of a Grave Yard at Shi Xia Zi in Zhong County of Chongqing City (重慶市忠縣石匣子墓群) in 2004 and 2007.
- Archaeological Excavation of the Shao Peng Zui archaeological site in Zhong County of Chongqing City (重慶市忠縣哨棚嘴遺址) in 2002.

Dr Jin has also participated in leading the following archaeological excavations:

- Archaeological Excavation of Han Dynasty kiln sites in Yanhe County of Guizhou Province (貴州省沿河縣漢代窑址) in 2005.
- Archaeological Excavation of Ba Li Jiang archaeological site in Tang Zhou City of Henan Province (河南省鄧州市八里崗遺址) in 1992. The excavation was led by Assistant Professor Zhang Jiangkai (張江凱).
- Archaeological Excavation of Wang clan village archaeological site in Bei Hai Village, Lu Shun Kou District in Dalian City of Liaoning Province (遼寧省大連市旅順口區北海鄉王家村遺址) in 1994. The excavation was led by Curator Mr Xin (辛) from the Archaeological Institution of Liaoning Province (遼寧省考古研究所).

Dr Jin has also participated in numerous archaeological excavations and investigations:

- Archaeological Investigation at the Gu Jie Yang and Rong Jiang area in Guangdong (廣東“古揭陽及榕江流域考古調查和試掘”) in 2003 and 2004.
- Archaeological Excavation at Heng Ling Mountain Grave Yard in Bo Luo County in Guangdong Province (廣東省博羅縣橫嶺山墓群) in 2000.
- Archaeological Excavation at Guangxiao Temple in Guangzhou City in Guangdong (廣州市光孝寺) in 1999 and 2000.
- Archaeological Excavation and Reporting of Niu Lan Cave archaeological site in Yun Ling Town, Ying De City of Guangdong Province (廣東省英德市雲嶺鎮牛欄洞遺址) in 1996 and 1997.
- Archaeological Investigation and Reporting for Bei San City in Dalian City of Liaoning Province (遼寧省大連市北三市) in 1995.
- Archaeological Excavation for the Qu Chuan archaeological site in Qu Wo County in Shanxi Province (山西省曲沃縣天馬一曲村遺址) in 1990.

Other anthropological projects:

- Social Impact Assessment for the Gan Yue Highway project in Jiangxi Province (江西省贛粵高速公路) for World Bank;
- Social Impact Assessment for the Tong Tang Highway project in An Hui Province (安徽省銅湯高速公路) for World Bank.
- Social Impact Assessment for the modernisation of agricultural industry in Zhong Shang Rao district in Jiangxi Province (江西省農業現代化專案) for World Bank.
- Social Impact Assessment at the middle Hailongjiang Province (黑龍江省) due to the Promotion of Agricultural Technology for World Bank.
- Social Impact Assessment for the Agricultural Technology Promotion Project for World Bank.
- Christian Study at the Shangzha Town in Jiexi County in Guangdong Province (廣東省揭西縣上砂鎮);
- Social Assessment for the Environmental Protection Project at Da Li Zhou in Yunnan Province (雲南省大理州) for World Bank.

Publications

- “Region Rule and Behavioural Choice (宗教規範與行為選擇)” in *Qing Hai Race Study* (青海民族研究), February 2006.
- “The Existing Catholic Church Investigation in Shang Shan (上山天主教會現狀調查)” in *Qing Hai Race Study* (青海民族研究), April 2006.
- “Views on Internet Museum (對網上博物館的一點看法)” (co-author) in *China Museum* (中國博物館), March 2004.
- “Summary Report of Archaeological Investigation at the Niu Lan Cave archaeological site in Yun Ling Town, Ying De City of Guangdong Province (英德雲嶺牛欄洞遺址試掘簡報)” (co-author) in *Jiangnan Archaeology* (江漢考古), January 1998.
- “Ancient Cultural Remains and Archaeological Investigation for Gou Liao Chung in Ying De City of Guangdong Province (廣東英德沙口狗了沖古文化遺存與試掘)” (co-author) in *Jiangnan Archaeology* (江漢考古), January 1998.
- “Summary Report on the Neolithic Cultural Site at North Dalian (大連北部新石器文化遺址調查簡報)” (co-author) in *Academic Journal of Liaohai Relics* (遼海文物學刊), January 1997.

Raymond Ng 吳震霖

Experience Archaeologist

Mr. Ng is a trained field archaeologist with ERM. He has seven years archaeological fieldwork experience which has been obtained through participation in archaeological surveys and rescue excavations during his academic studies in the three years MPhil study in the School of Archaeology and Museology, Peking University (PKU), Beijing, China and four years undergraduate study in the Department of Museology and Archaeology, Wuhan University (WHU), Hubei Province, China.

During his undergraduate study in WHU, he was involved in several archaeological projects by participated in archaeological excavation and archaeological survey programs. During his MPhil study in PKU, he conducted research on kiln sites along the coast of China and participated in some archaeological excavation and surveys. His experience in archaeological survey and excavation qualified him to supervise archaeological excavation works in Hong Kong.

Since joining ERM, Mr Ng has been involved in a number of archaeological projects.

Fields of Competence

- Conducting archaeological surveys, archaeological excavations and archaeological watching briefs;
- Registering and Cataloging of archaeological finds;
- Conservation of archaeological and ethnographical artifacts and materials;
- Drawing of archaeological excavation, which includes general plan of archaeological site, test-pit/trench plan and section.
- Drawing of archaeological features;
- Drawing of archaeological artifacts;
- Photography of archaeological and ethnographical artifacts.

Education

- BA in Archaeology, Wuhan University, Wuhan, Hubei Province, China
- MPhil in Ceramic Archaeology, Peking University, Beijing, China

Languages

- English
- Chinese (Cantonese and Mandarin)

Key Projects

Mr. Ng has been involved in a number of archaeological projects in Hong Kong including:

- *Archaeological Watching Brief and Rescue Excavation for Transformation of Former Police Married Quarters Site on Hollywood Road into a Creative Industries Landmark, for Architectural Services Department, 2012 – ongoing.* Mr. Ng acts as the field archaeologist to supervise the archaeological watching brief and rescue excavation.
- *Archaeological Watching Brief and Rescue Excavation for Central Police Station Conservation and Revitalisation Project, for Hong Kong Jockey Club, 2012 – ongoing.* Mr. Ng acts as the field archaeologist to supervise the archaeological watching brief and rescue excavation.
- *Archaeological Survey and Impact Assessment for Replacement of the Existing 11kV Submarine Cable Circuit Connecting Liu Ko Ngam and Pak Sha Tau Tsui at Kat O Pak Sha Tau, Kat O Island for CLP Power Hong Kong Limited, 2012 - ongoing.* Mr. Ng acts as the archaeologist to prepare the Archaeological Survey Proposal, supervise the archaeological survey and conduct the archaeological impact assessment.
- *Archaeological Survey for Resort Development on Lamma Island, for Confidential Client, 2012 – ongoing.* Mr. Ng acts as the field archaeologist to supervise the archaeological survey work.

In addition to Hong Kong projects, Mr Ng participated in the following archaeological projects in China.

- Field archaeologist of an archaeological survey at a Jingdezhen kiln, Jiangxi Province, China (江西省景德鎮窯址調查), April 2011; Mr. Ng, acted as a field archaeologist, supervised the survey excavation, collected the artifacts and conducted detailed recording of the discovery.
- The Schemer of the ceramic exhibition, Compass Project held by State Cultural Relics Bureau (under the Ministry of Culture), Beijing, China (國家文物局指南針計畫陶瓷工藝展), April to November, 2010; The exhibition was conducted by the State Cultural Relics Bureau, China, Mr. Ng as

the organizing committee, was involved in the exhibition design, selection of artefacts to display, supervise the exhibition design works, wrote captions and book recommendations for the exhibition.

- Field archaeologist of an archaeological survey at a Zhangzhou kiln, Fujian Province, China (福建省漳州窯遺址), April, 2010; Mr. Ng, acted as a field archaeologist, supervised the survey excavation, collected the artifacts and conducted detailed recording of the discovery.
- Field Archaeologist of an archaeological excavation at the Ding Kiln, Hebei Province, China (河北省定窯遺址), September to January, 2009-2011; Mr. Ng, acted as a field archaeologist, supervised the excavation core area, handled discovered artifacts with detailed recordings;
- Field Archaeologist of an archaeological excavation at the Liaowadianzi site, Yuan County, Shiyan, Hubei Province, China (湖北省遼瓦店子遺址), September to January, 2006-2007; Mr. Ng, acted as a field archaeologist, supervised the excavation core area, handled discovered artifacts with detailed recordings;
- Field Archaeologist in the archaeological excavation of Yangdi town site, Yuzhou, Xuchang, Henan Province, China (河南省陽翟故城遺址), June to September, 2005. Mr. Ng, acted as a field archaeologist, supervised the excavation core area, handled discovered artifacts with detailed recordings;
- Final Year Project – *Periodization of Ceramics excavated from Jin to Tang Graves*, Dr. He Shiwei as the supervisor, 2007 to 2008. Mr. Ng was involved in the following tasks: research planning; collection research materials including literature and journals; photography of ceramics; preparing relic catalog of the ceramics; graph drawing of ceramics; typology arrangement of ceramics; writing thesis.
- Final Year Project– *The research of Zhangzhou wares found in Southeast Asia from the end of the 16th century and early 17th century*, Dr. Quan Kuishan as the supervisor, 2010-2011. Mr. Ng was involved in the following tasks: research planning; collection of materials including literature and journals; photography of ceramics; preparing relic catalog of the ceramics; graph drawing of ceramics; typology arrangement of ceramics; conduct a fieldwork of Zhangzhou kiln; writing thesis.

Annex D

Appendix 4.6 of the
approved SCL (TAW-HUH)
EIA Report

Annex B

Curriculum Vitae of Dr Liu Wei

Liu Wei

Experience Archaeologist and ceramic expert

Dr Liu is an associated archaeologist with ERM and has over 10 years of experience in archaeological investigation and excavation in Mainland China. Apart from archaeological fieldwork experience, Dr Liu is also an assistant Professor in the School of History of the Renmin University of China in Beijing, teaching and conducting research in Archaeology.

With extensive archaeological excavation experience in particular kiln sites excavation, Dr Liu is an expert specialized in the identification of ceramic typology and chronology in particular ceramic products for trade from Song dynasty to Qing dynasty.

Fields of Competence

- Song to Ming Dynasties Archaeology
- Ceramic Assessment
- Archaeological Research
- Archaeological Rescue Excavation
- Archaeological Investigation
- Archaeological Watching Brief
- Archaeological Impact Assessment

Education

- PhD in Archaeology, Peking University, China, 2011
- Master in Archaeology, Peking University, China, 2004
- Bachelor in History, Liaoning University, China, 2001

Languages

- English
- Mandarin

Academic/Teaching Experience

- Assistant Professor, School of History, Renmin University of China, China, 2011 to present
- Teaching Assistant, Institute of Archaeology, Nanjing University of Aeronautics & Astronautics, China, 2004 to 2006

Key Projects

Dr Liu has participated in numerous archaeological excavations and investigations in China and overseas:

- **Archaeological Excavation of Mambrui archaeological site in Malindi, Kenya (肯尼亚马林迪曼布鲁伊遗址)** in 2012. Dr Liu was the Executive team leader to direct the excavation. The discovery included China Song and Yuen Dynasties celadon, greenish white porcelain and Ming dynasty blue and white porcelain products. Based on their chronology, Mr Liu established the chronology of the local pottery products (斯瓦西里陶器) from 11th century to 16th century.
- **Archaeological Investigation of ceramics excavated from Xisha Islands (西沙群岛出水陶瓷)** in Yangjiang City, Guangdong Province in 2011. Dr Liu conducted ceramic measurement, recording, drawing and write up finds description and assess the dating of the products. The discoveries included Five dynasty to Song dynasty products blue and white porcelain from Yue Kiln (越窑), Ding Kiln (定窑) and white porcelain from other kilns at Anhui (安徽) province.
- **Archaeological Excavation of Wayaoyang archaeological site in Longquan City, Zhejiang Province (浙江龙泉瓦窑坪遗址)** from 2010 to 2011. Dr Liu was the archaeologist to supervise full excavation of this famous kiln. The outcome of the excavation provided strong material evidence to establish the chronology of the kiln which is dated to middle of southern Song dynasty. In addition to the excavation of this famous kiln, a number of investigations were also conducted at the adjacent kiln sites in Longquan City in order to establish the comprehensive understanding on the Longquan kilns products from different period.
- **Archaeological Excavation of Dingyao archaeological site in Quyang County, Hebei Province (河北曲阳定窑遗址)** from 2009 to 2010. Dr Liu was the Executive team leader to direct this large scale excavation of the Dingyao kiln. Based on the stratigraphy and the discovery, Dr

Liu established the chronology of the kiln products which was dated from late Tang dynasty to Yuan dynasty. This discovery allowed Dr Liu to obtain in depth knowledge on the Dingyao kiln production and characteristic of the porcelain products.

- **Archaeological Excavation of Guanying archaeological site in Jingdezhen City, Jiangxi Province (江西景德鎮觀音閣遺址) from 2007 to 2008.** Dr Liu was the archaeologist to supervise the excavation of this Ming dynasty kiln site. Through the excavation of the kiln deposits, Dr Liu established the detailed chronology of the Jingdezhen blue and white porcelain products and obtained further understanding on the typology of different types of products and their inter-relationship.
- **Archaeological Excavation of Buyao archaeological site in Lincheng County, Hebei Province (河北曲陽補要村遺址) in 2007.** Dr Liu was the archaeologist to supervise the excavation of this site with finds from Neolithic Age to Shang dynasty and Tang to Song dynasties.
- **Archaeological Investigation of ceramic kiln sites in Jiangxi, Guangdong, Fujian and Zhejiang Provinces (江西、廣東、福建、浙江瓷窯遺址) in 2005.** Dr Liu investigated various ceramic kiln sites dated to Song- Yuan Dynasty, including ceramic kilns at Jingdezhen (景德鎮) in Jiangxi Province (江西), Jizhou (Yonghe) Kiln (吉州永和窯), Qilizhen (Ganzhou) Kiln (贛州七里鎮窯), Baishe (Nanfeng) Kiln (南豐白舍窯); Chaozhou (Bijashan) Kiln (潮州筆架山窯) at Guangdong Province; kilns at Fujian Province namely Dingxi Kiln at Xiamen City (廈門汀溪窯), Cizao Kiln at Jinjiang City (晉江磁灶窯), Qudougong Kiln at Dehua County (德化屈斗宮窯), Yi Kiln at Minqing County (閩清義窯), Chayang Kiln at Nanping City (南平茶洋窯), Huiyao Kiln at Sanming City (三明回瑤窯), Lanxi Kiln at Jianning County (建寧瀾溪窯), Sidu Kiln at Zhaowu City (邵武四都窯), Shuiji Kiln at Jianyang City (建陽水吉窯), Dakou Kiln at Pucheng County (浦城大口窯); as well as various ceramic kilns at Longquan city (龍泉市) of Zhejiang Province.
- **Archaeological Investigation of Gangguantun ceramic kiln site in Liaoyang City (遼陽江官屯瓷窯遺址), Liaoning Province from 2004 to 2010.** Dr Liu had conducted serious of investigations on representative ceramic kilns dated to Liao-Jin period at the northeastern part of China.

Investigation reports had been completed.

- **Archaeological Excavation of Shaopengzui archaeological site and Yajiao Burial Ground in Zhong County, Chongqing Province (重慶忠縣哨棚嘴遺址和崖腳墓葬群) from 2002 to 2003.** Dr Liu was the archaeologist to supervise the excavation of this site. This site is a Neolithic Age to Qing dynasty site.
- **Archaeological Investigation of Lin'an City of Southern Song Dynasty in Hangzhou City, Zhejiang Province (南宋臨安城遺址) in 2011.**
- **Archaeological Investigation of ancient cities in Hebei Province (河北古代城市遺址) in 2008.**
- **Archaeological Investigation of imperial city and tombs of Northern Song Dynasty (北宋都城與皇陵) in Henan Province in 2007.**
- **Archaeological Investigation of Ming Dynasty tombs in Nanjing City (南京明代墓葬), Jiangsu Province from 2004 to 2006.**
- **Archaeological Investigation of Liao Dynasty tombs in Liaoning and Inner Mongolia (遼寧、內蒙古遼代墓葬) Province in 2003.**
- **Archaeological Investigation of various family graveyards dated to Southern Song Dynasty in Ningbo City (寧波南宋家族墓地), Zhejiang Province in 2006.**

• Publications

Archaeological Reports:

- 《江西景德鎮觀音閣明代窑址发掘简报》，《文物》2009年12期。执笔

Journals:

- 《南宋临安府治址考》，《庆祝宿白先生九十华诞文集》，科学出版社，2012年。
- 《龙门唐萧元礼妻张氏瘞窟考察札记》，《中国历史文物》2012年5期。
- 《邵谔、王晋锡与修内司窑》，《故宫博物院院刊》2010年5期。
- 《辽代契丹墓葬研究》，《考古学报》2009年4期。
- 《宋代的石藏葬制》，《故宫博物院院刊》2009年6期。

- 《大同金代张澄石棺铭跋》，《山西大同大学学报》2009年3期。
- 《高句丽石室墓的起源与发展阶段》，《南方文物》2008年4期。
- 《尉氏元代壁画墓札记》，《故宫博物院院刊》2007年3期。
- 《辽代汉人墓葬研究》，《汉学研究》24卷1期，台北汉学研究中心，2006年6月。
- 《魏晋南北朝图像资料中的伞扇仪仗》，《东南文化》2005年3期。
- 《辽阳汉魏晋壁画墓研究》，《边疆考古研究》第2辑，科学出版社，2004年。
- Book Critics:
- 《评〈徐水西黑山〉》，《文物春秋》2009年4期。
- 《评〈魏晋南北朝壁画墓研究〉》，《艺术史研究》第5辑，中山大学出版社，2003年。