

China State Construction Engineering (Hong Kong) Limited

Contract No. 3/WSD/08
Replacement and Rehabilitation of
Water Mains Stage 3 – Mains in
West Kowloon (Package A):
Archaeological Watching Brief Report

September 2014

Environmental Resources Management


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West Kowloon (Package A):**
Archaeological Watching Brief Report

September 2014

Reference 0111164

For and on behalf of ERM-Hong Kong, Limited	
Approved by:	<u>Frank Wan/Dr Liu wensuo</u>
Signed:	
Position:	<u>Partner/licence holder</u>
Date:	<u>September 2014</u>

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摘要

中國建築工程(香港)有限公司受香港水務署委託為更換及修復水管工程第3階段—西九龍水管工程〈甲組〉(合約編號3/WSD/08)的承建商。按合約的要求，承建商必須在施工期間，對一些指定的工程段進行考古監察工作，以記錄挖掘工程期間可能發現之考古堆積。而香港環境資源管理有限公司(ERM)則受上述承建商委託為專家顧問，以進行上述的考古監察工作。

在與古物古蹟辦事處就考古監察的計劃取得共識，並由考古學家劉文鎖博士取得相關的搜尋或挖掘牌照後(牌照編號301及320)，於2010年8月31日及10月27日進行了兩天的考古監察工作，共對6個位處花園街(第3段)的地點進行了考古監察。在牌照期內，並沒有進行其他的考古監察工作。在本合約中餘下的水管更換及修復工程段已經延期，且未有確定的施工時間表。因此，現時未能制定進行餘下工程段的考古監察工作之時間表。本報告按《古物及古蹟條例》(條例第53章)的搜尋或挖掘牌照之要求，展示了第3段的考古監察工作之發現。

考古監察的結果顯示，絕大部份監察了的挖掘工作都在現代水泥層和填土層中進行，而在所有進行了監察工作的地點都沒有發現考古遺存。由於在位處市區中心繁忙地區的旺角進行考古監察工作有很多的困難與局限性，本考古監察的結果只能反映各地點中，由現存地面到挖掘坑溝底部之間的堆積，只有很低的考古潛力。但是，在考慮到2004年及2011年在旺角區的考古發現後，本報告不能排除在本合約中所指定的考古監察區內或已監察的深度以下，發現其他考古遺存的可能性。

SUMMARY

China State Construction Engineering (Hong Kong) Limited (the Contractor) has been commissioned by the Water Supplies Department (WSD) for the *Replacement and Rehabilitation of Water Mains Stage 3 – Mains in West Kowloon (Package A)* under *Contract No.3/WSD/08* (the Contract). As part of the contract requirement, an Archaeological Watching Brief (AWB) was conducted during the construction stage of relevant section of the Works to record any archaeological deposits identified from the excavation works. ERM-Hong Kong, Ltd (ERM) was commissioned by the Contractor as the specialist sub-contractor to carry out the AWB.

Upon agreement of the AWB Proposal with the Antiquities and Monuments Office (AMO) and relevant Licences to Excavate and Search for Antiquities (Licence Nos. 301 and 320) was obtained by the archaeologist, Dr Liu Wensuo. The AWB was conducted on 31 August and 27 October 2010. Six (6) AWB Locations along Fa Yuen Street (in Section 3) were monitored. No other AWB were conducted during the licenced period. The construction works of the remaining Sections of the Contract have been postponed and it is not known when the remaining Works will be carried out. Therefore, no AWB work schedule is available at this stage. This *Report* presents the findings of the AWB conducted in Section 3 under the requirement of the Licence to Excavate and Search for Antiquities granted under the Antiquities and Monuments Ordinance (Cap. 53).

The AWB results show that most of the excavation works monitored were conducted in modern concrete and fill layers. No archaeological remain was identified for all monitored AWB Locations. As Mongkok is a highly urbanised and busy district, the AWB faced many difficulties and limitations. The AWB findings could only conclude that the archaeological potential of those monitored AWB Locations, from the existing ground level to the bottom of the excavated trenches, is very low. However, in considering the archaeological discoveries in 2004 and 2011, the chance of discovering other archaeological remains in the Zone of AWB or below monitored level cannot be ruled out.

As part of the *Replacement and Rehabilitation of Water Mains Stage 3, Mains in Kowloon – Investigation, Design and Construction* under Agreement No. CE25/2006(W) for Water Supplies Department, a Cultural Heritage Study (CHS) Report was prepared and issued by Atkins China Limited in June 2009.

Under the CHS, a Zone of AWB (see *Figure A* in *Annex A*) was defined. It was recommended that if excavation works are undertaken at depth greater than 1m below existing ground level within this zone, an AWB should be implemented.

China State Construction Engineering (Hong Kong) Limited (the Contractor) has been awarded the *Contract No.3/WSD/08 - Replacement and Rehabilitation of Water Mains Stage 3 – Mains in West Kowloon (Package A)* (the Contract). The replacement and rehabilitation works will require excavation within the zone of AWB at depth greater than 1m below ground. An AWB is therefore required to be undertaken by a qualified and licenced archaeologist in order to identify any archaeological materials or features revealed during the excavation works in accordance with the requirements of *Appendix 1.25* to the *Particular Specification* (PS) of the Contract. ERM - Hong Kong, Ltd (ERM) has been commissioned by the Contractor as the specialist sub-contractor to carry out the AWB.

According to *Clause 12(1)* of the *Appendix 1.25* of the PS, the *Proposal for Undertaking the Archaeological Watching Brief* (the AWB Proposal) (dated 24 May 2010) for the Contract was prepared by ERM and agreed with the Antiquities and Monuments Office (AMO). A *Licence to Excavate and Search for Antiquities* under the *Antiquities and Monuments Ordinance* for this Contract was granted to Dr Liu Wensuo with Licence No. 301 (hereafter refer to first licence).

The AWB commenced on 31 August 2010 within the first licence period (27 July 2010 to 26 July 2011). Throughout the first licence period, AWB was conducted twice on 31 August and 27 October 2010, at Locations 3a, 3b, 3c, 3d, 3e, 3f. Beside the two AWB conducted in 2010, no other AWB has been conducted for the Contract before the expiry of the first licence.

As the required scope of work covered in the AWB Proposal was not completed when the first licence expired, a licence renewal was applied and granted to Dr Liu Wensuo with Licence No. 320 (hereafter refer to second licence) (the licence period is 8 August 2011 to 7 August 2012). However, no further AWB was conducted during the second licence period.

No further construction work programme is available to schedule the remaining AWB works. This *AWB Report* presents the findings of the AWB conducted from 31 August 2010 to 7 August 2012 which is covered by Licence Nos. 301 and 320.

1.1 TEAM MEMBERS

The individuals participated in the AWB include:

Ms Peggy Wong	Project Manager
Dr Liu Wensuo	Licensed Archaeologist
Dr Zheng Junlei	Experienced Archaeologist
Mr Edward Chiu	Assistant Archaeologist

The post-AWB finds processing and interpretation of data retrieved from the AWB were led by Dr Liu Wensuo and Dr Zheng Junlei, who were supported by Ms Peggy Wong, Ms Kitty Liu, Mr Edward Chiu and Mr Raymond Ng. Photography of the artefacts recovered was undertaken by Mr Edward Chiu.

This *Report* was prepared by Ms Peggy Wong, Ms Kitty Liu, Mr Edward Chiu and Mr Raymond Ng under the direction of the the licence holder, Dr Liu Wensuo. Dr Liu has technically reviewed this report.

1.2 STRUCTURE OF THE REPORT

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

Section 2 provides the background information of areas requiring AWB;

Section 3 describes the scope of work of the areas requiring AWB;

Section 4 provides key findings of the AWB;

Section 5 presents the conclusions of the AWB;

Section 6 presents the bibliography.

The following annexes are also included:

Annex A presents the Zone of Archaeological Watching Brief under the Contract; and

Annex B presents the records of AWB completed locations.

2.1 GEOLOGY AND TOPOGRAPHY BACKGROUND

Mongkok was a coastal area in the past before reclamations. The area mainly comprises superficial geology of alluvium and marine sand; and solid geology of medium-grained granite. The geology map marked with locations of discoveries in 2004 and 2011 is shown in *Figure 2.1*.

Mongkok is now developed into a central district of the Kowloon Peninsula. It is the commercial, recreational and transportation hub. As a center of the urban area, all of the land has been covered by developed roads and buildings. Only a tiny fraction of low hill at the east in King's Park is comparatively less developed and covered with greens.

2.2 HISTORICAL BACKGROUND

Mongkok and its surrounding area have been occupied by settlement of village size for a long time ago. The earliest historical record showing the place name - Mongkok Village (芒角村) - had been found in the 1820 edition (edition of the 25th year of *Jiaqing* (嘉慶二十五年)) of the *Xin'an Gazetteer* ⁽¹⁾.

Reclamation of land in Kowloon started at the end of 19th Century. The government sold lands to private owners, and required them to undertake reclamation projects according to the standard listed in the land auctions ⁽²⁾. The coastline west of Mongkok has undergone a lot of changes since the reclamation projects took place. Three historical maps are presented to show some of the changes and developments around the Zone of AWB.

The Zone of AWB is located in the area between Mongkok, Mongkok Tsui and former Ho Mun Tin (何文田) (Ho Mun Tin was later used to describe area east of Kowloon – Canton Railway), as shown in the map, *China – Kowloon and part of New Territory* (see *Figure 2.2*), completed and printed in Southampton by the Ordnance Survey in 1904 ⁽³⁾. The majority part of the Zone and its adjacent areas were agricultural lands with a few low hills. Only a small number of structures were located within the Zone.

Review of another map, *War Office 8 Inch Series – Sheets 4 and 8* (see *Figure 2.3*), of Kowloon Peninsula in 1924 ⁽⁴⁾ indicated that roads started to be built in and around the Zone of AWB. As shows in the Map, part of a hill south of Ho Mun Tin had been levelled to build the Orient Tobacco Factory. It was located at the block between Coronation Road (加冕路) (later became part of the Nathan Road), Soy Street and Dundas Street. Moreover, the Argyle Street (亞皆老街) was also built.

(1) [清]舒懋官修, 王崇熙等纂. 《新安縣志》. 臺北: 成文出版社. 1974. 頁35。

(2) 何佩然. 《地換山移: 香港海港及土地發展一百六十年》. 香港: 商務印書館. 2004. 頁88。

(3) Hal Empson, *Mapping Hong Kong – A Historical Atlas*, Government Information Services, Hong Kong, 1992, p. 180.

(4) *Ibid*, p. 181.

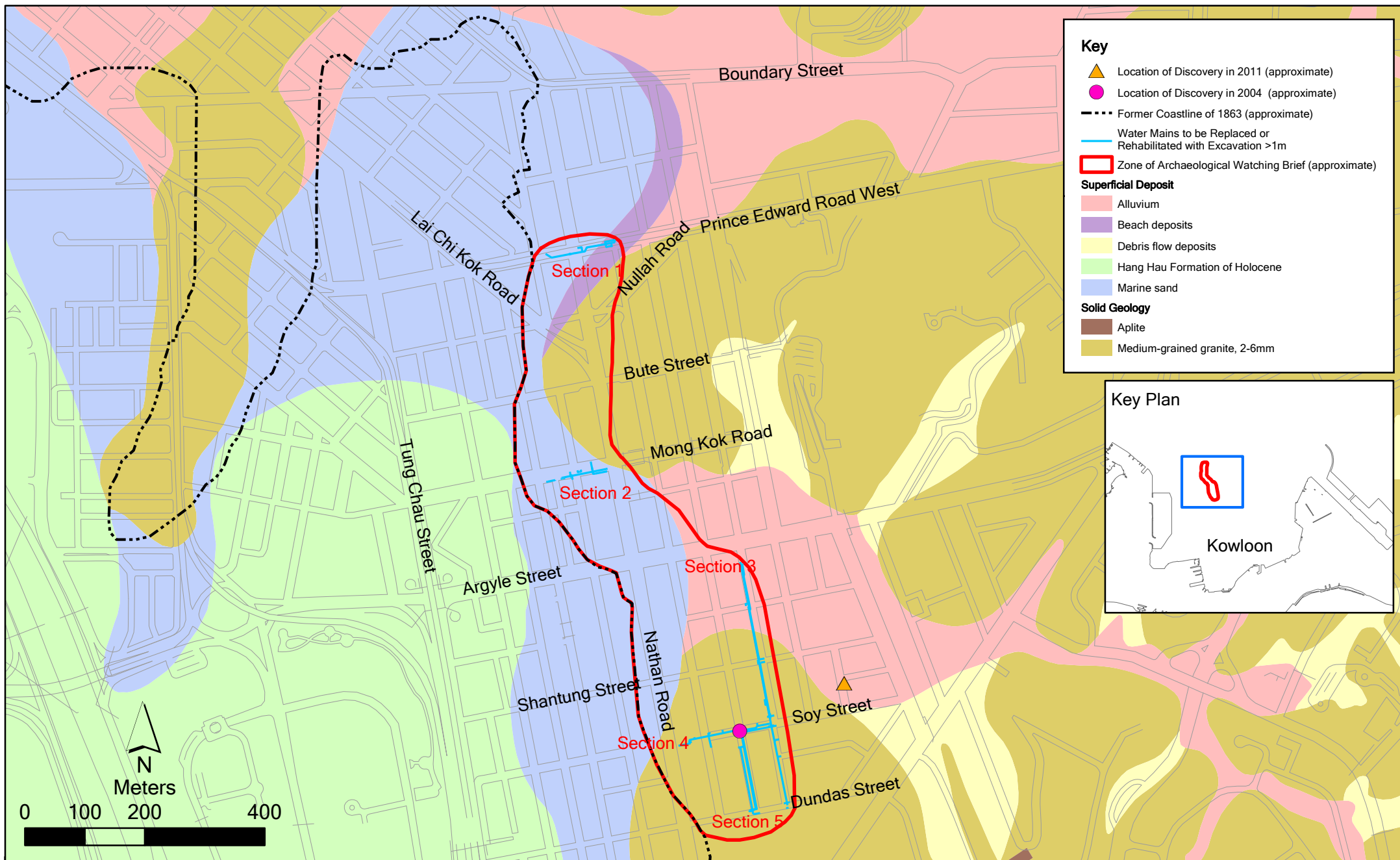


Figure 2.1

Geology of Mongkok

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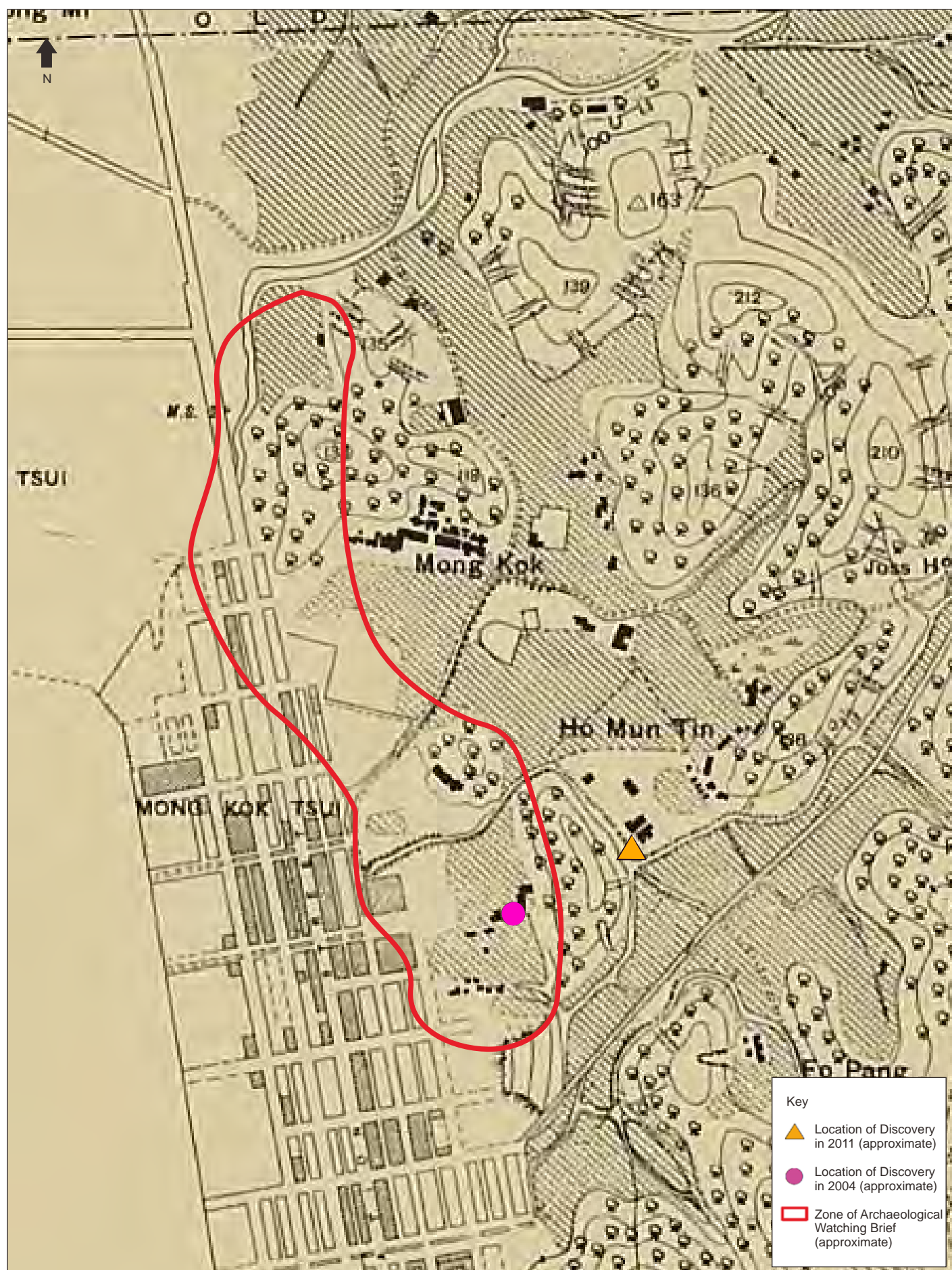


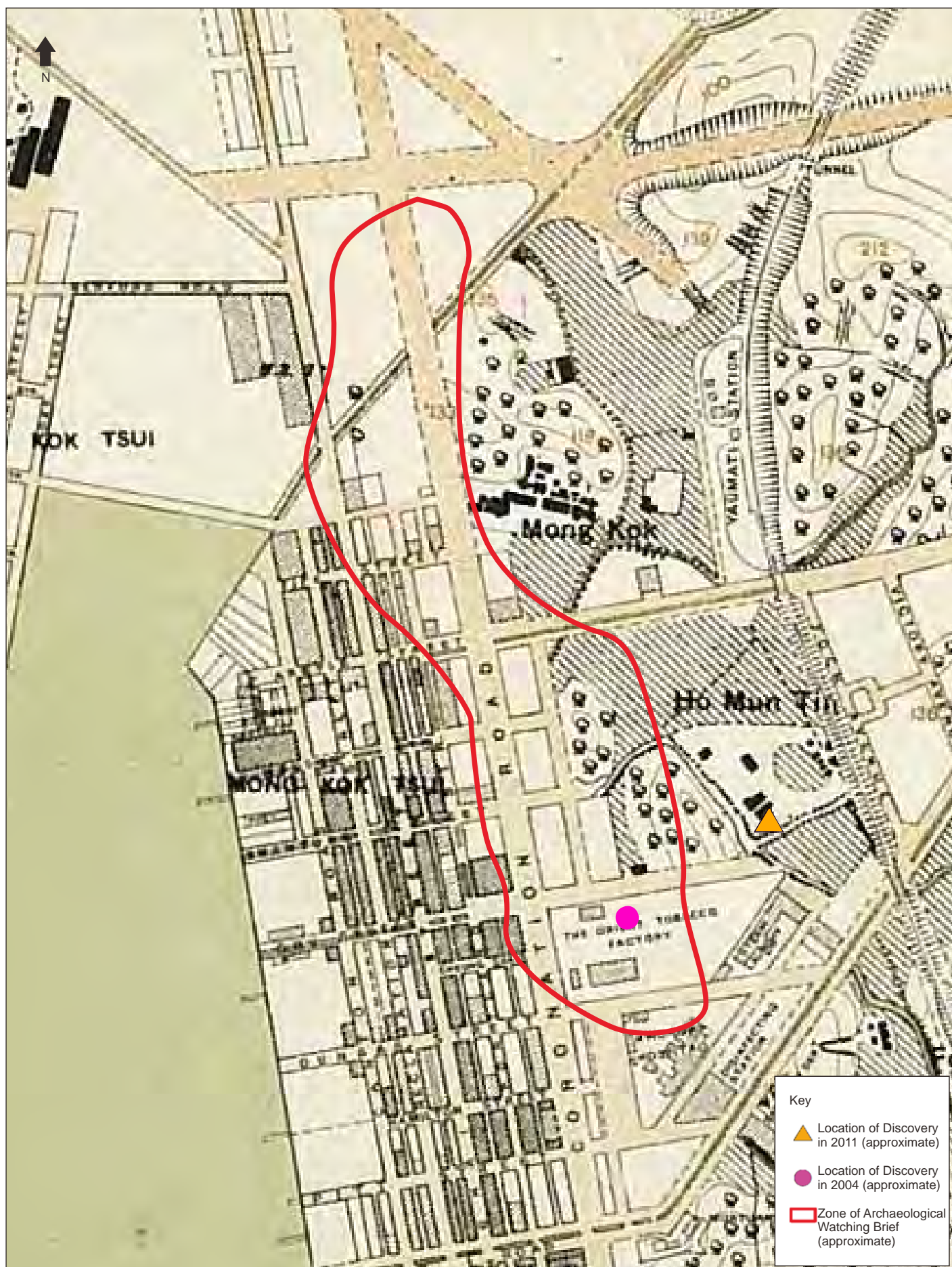
Figure 2.2

Historical Map
 China – Kowloon and part of New Territory, 1904, Magnified

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Not to Scale

(Source: Hal Empson, *Mapping Hong Kong – A Historical Atlas*, Government Information Services, Hong Kong, 1992, p. 184 - 185)

Figure 2.3

Historical Map
War Office 8 Inch Series – Sheets 4 and 8, 1924, Magnified

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In a map of 1947, *Kowloon Peninsula 1947* (see Figure 2.4), produced by the Crown Lands and Survey Office, Hong Kong ⁽¹⁾, complete urbanisation of the Zone of AWB and its adjacent areas were shown. Pak Po Street and Hak Po Street are also present in the map. The Orient Tobacco Factory was no longer existed and only the Land Lot Number 1203 shows on the map at its previous location.

2.3

ARCHAEOLOGICAL BACKGROUND

In 2004, an archaeological discovery was reported during the construction of the at the junction between Tung Choi Street and Soy Street in Mongkok where artefacts and kiln fragments dated to Tang, Jin and Han dynasties were unearthed at a level about 2m below existing ground level ⁽²⁾ (see Figure 2.1 for discovery location). It was reported that over 100 pieces of objects were collected including a broken pot, fragments of pottery cauldron, kiln debris and associated furniture, various ceramic shards and grey bricks ⁽³⁾.

In 2011, another archaeological discovery was reported at the junction between Hak Po Street and Pak Po Street during the replacement and rehabilitation of water mains under the Contract but outside the Zone of AWB (see Figure 2.1 for the discovery location), where an open trench, with a dimension of approximately 2.3m x 1.2m (LxW) and 1.2m – 1.7m deep, was excavated for the replacement works of existing water mains. The discovery was made in a soil heap next to the trench and later on followed up by the AMO.

In the soil heap, a green glazed spittoon which could be dated to Qing dynasty or later period was found. Red brick fragments, porcelain shards, village ware shards and tile fragments were also collected in the heap, in which two pieces of porcelain shards could be dated to Late-Qing Dynasty or later periods.

A piece of brick and cement conglomerate was collected from Layer 3 and it is modern construction material mixed into the Layer by disturbance. Red brick fragments, porcelain shard, village ware shards and stone shards were collected from Layer 4. Most shards or fragments collected do not have known dating characteristic, all of them cannot be dated. Only some porcelain shards could be dated to late-Qing dynasty or later periods. All the findings are not considered to have high archaeological significance ⁽⁴⁾.

(1) Ibid, pp. 184-185.

(2) South China Morning Post dated 8 May 2004.

(3) Antiquities and Monuments Office (AMO), Relic Found at the Works Site in Mongkok, 2011, retrieved 1 February 2012, <http://www.lcsd.gov.hk/CE/Museum/Monument/en/news_200405112.php>.

(4) Environmental Resources Management (HK) Ltd. (ERM). Contract No. 3/WSD/08 Replacement and Rehabilitation of Water Mains Stage 3 – Mains in West Kowloon (Package A): Discovery Report. 2014. (Unpublished)



Not to Scale

(Source: Hal Empson, *Mapping Hong Kong – A Historical Atlas*, Government Information Services, Hong Kong, 1992, p. 184 - 185)

Figure 2.4

Historical Map Kowloon Peninsula 1947, 1947, Magnified

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In accordance with the agreed AWB Proposal, the monitoring focused on any proposed excavation with depth greater than 1m within the Zone of AWB as defined in *Clause 1.95(1)(b)* of the PS of the Contract.

3.1

SECTIONS AND LOCATIONS OF THE AWB

Based on the construction details and programme of the concerned construction work sections, *Table 3.1* summarises the locations and status of AWB works involved in terms of the five different alignment sections: the sections along Prince Edward Road West (Section 1), Mong Kok Road (Section 2), Fa Yuen Street (Section 3), Soy Street (Section 4) and Tung Choi Street (Section 5). The AWB locations of each section are presented in *Figure 3.1*.

As presented in *Table 3.1* and *Figure 3.1*, only six (6) AWB locations of Section 3 were monitored, the detailed maps for the monitored AWB locations are presented in *Figures 3.2a* and *3.2b*. No AWB was conducted at other sections (Sections 1, 2, 4 and 5) because the construction work schedule of these sections has been postponed and still not confirmed.

Table 3.1 *Locations and Status of AWB for each Section*

Section Name	Section No.	Excavation Depth (m)	Total Length of Section (m)	Recommended AWB Location No.	Status of AWB (a)
Prince Edward Road West	1	2	200	1a	N
				1b	N
Mong Kok Road	2	2	150	2a	N
				2b	N
Fa Yuen Street	3	1.5	400	3a	C
				3b	C
				3c	C
				3d	C
				3e	C
				3f	C
Soy Street	4	1.5	150	4a	N
				4b	N
				4c	N
Tung Choi Street	5	2	175	5a	N
				5b	N
Note:					
(a) C – Completed; N – Not commenced.					

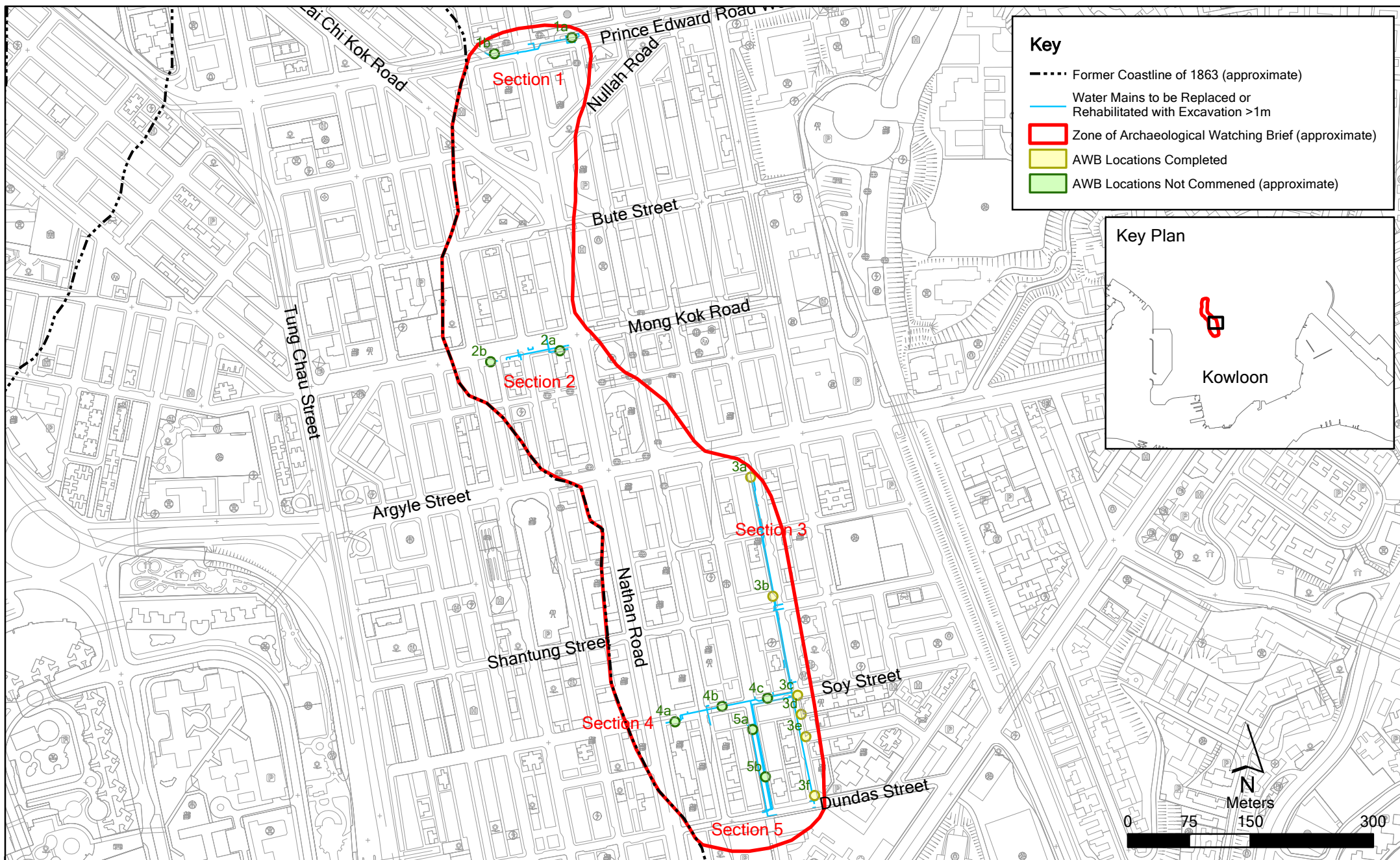


Figure 3.1

AWB Locations

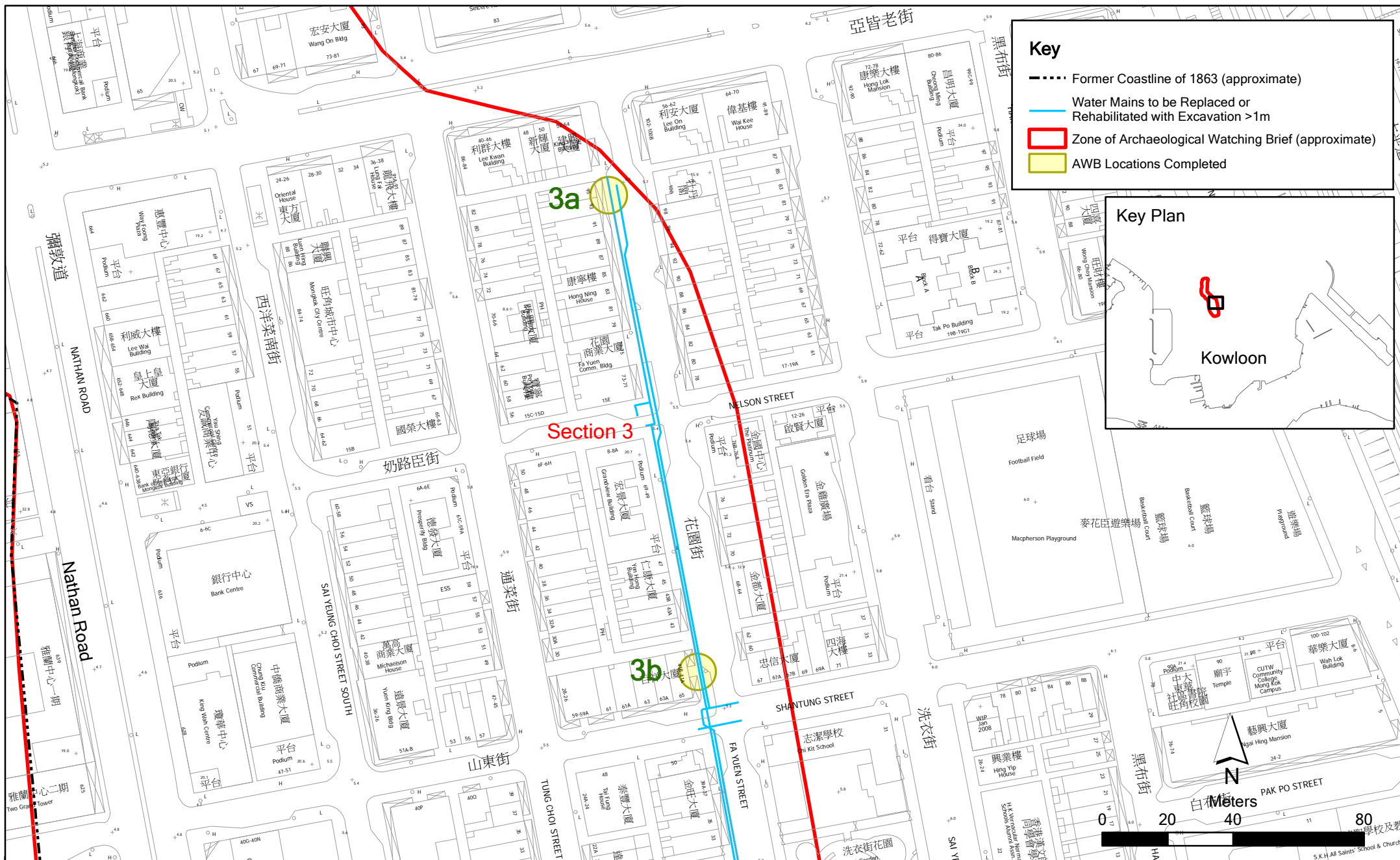


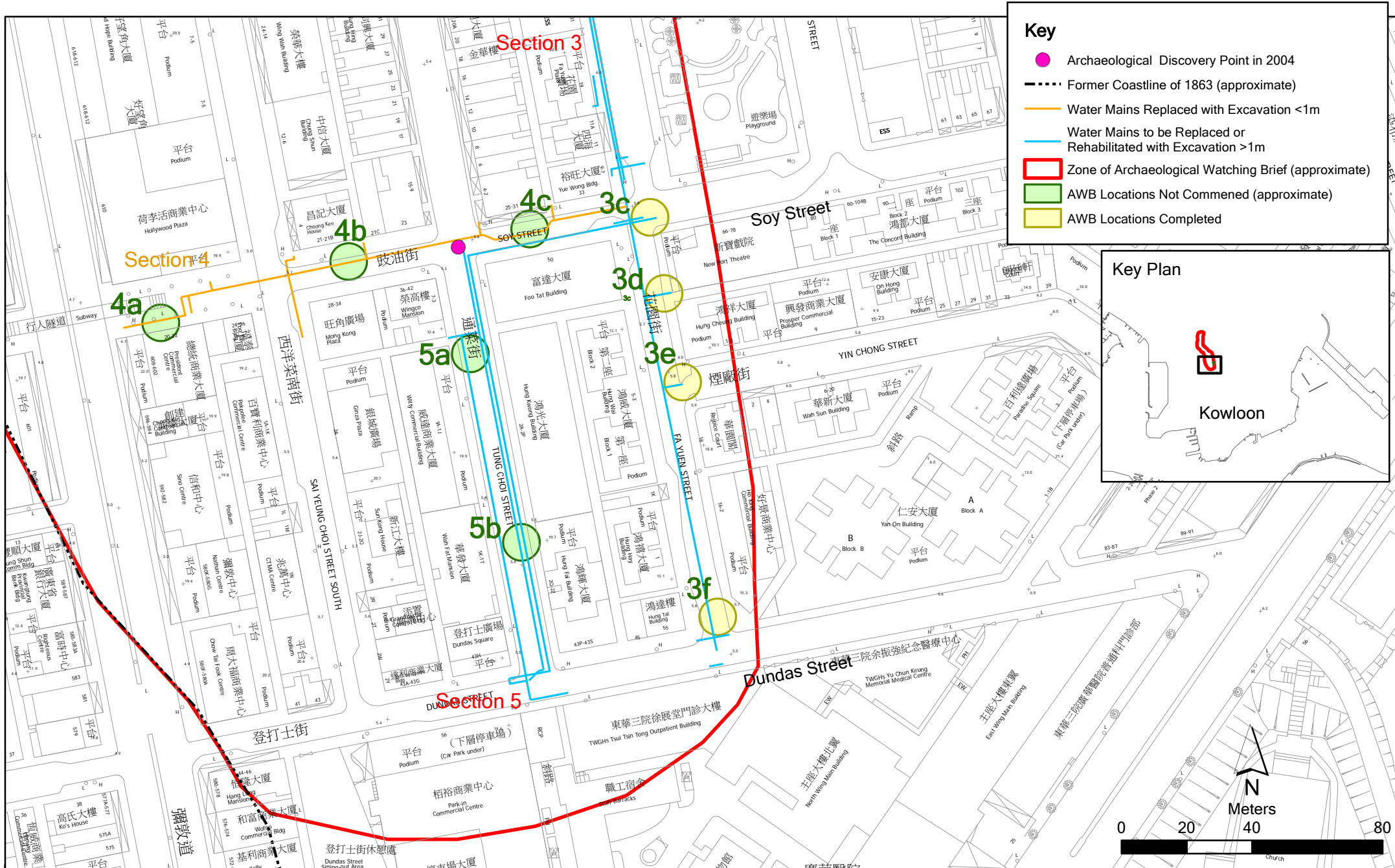
Figure 3.2a

AWB Completed in Section 3

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The works under the Contract involve soil excavation, mechanically (mini-backhoe) and manually, for replacement of water mains and the associated service connections, construction of chambers associated with pipeworks, and installations of fire hydrants.

Open cut method was adopted for laying the water mains for the Contract. According to the *Method Statement for Water Mains Laying by Open Cut Method* provided by the Contractor, the general construction procedures are as follows:

- excavate to level 0.2m below the first layer of strut using an excavator;
- install waling and struts as the guarding frame;
- install sheet pile with the required toe penetration;
- further excavate to level 0.3m below second layer of strut;
- install second layer of waling and strut;
- continue process of excavation and lateral supports until formation level;
- make good the condition of formation level and inform the Engineer for checking; and
- at the base of excavation a 75mm thick blinding layer will be laid, if required.

The AWB works were conducted on 31 August and 27 October 2010.

Six (6) AWB locations along Section 3 (i.e. Locations 3a to 3f) were conducted. Locations of the AWB completed are shown in *Figures 3.2a* and *3.2b*. The findings from the AWB conducted are presented in *Table 4.1*. The AWB records of each location are presented in *Annex B*.

Table 4.1 *Findings for each AWB Locations Completed*

Location	Date of AWB	Summary of Findings
3a	27 October 2010	No archaeological remain had been identified at this AWB location as the pit was excavated in the fill layer
3b	27 October 2010	No archaeological remain had been identified at this AWB location as the pit was excavated in the fill layer
3c	27 October 2010	No archaeological remain had been identified at this AWB location as the pit was excavated in the fill layer and a moderately sorted red fine sand deposit of suspected natural layer at the bottom of the trench.
3d	31 August and 27 October 2010	No archaeological remain had been identified at this AWB location as the pit was excavated in the fill layer and a layer of white sand with unknown formation nature.
3e	31 August and 27 October 2010	No archaeological remain had been identified at this AWB location as the pit was excavated in the fill layer and a brownish red sand deposit of unknown formation nature at the bottom of the trench.
3f	31 August and 27 October 2010	No archaeological remain had been identified at this AWB location as the pit was excavated in the fill layer and a poorly sorted coarse white sand with gray and black sand deposit of unknown formation nature at the bottom of the trench.

Most of the excavation works monitored were conducted in modern concrete and fill layers. No archaeological remain was identified in all AWB Locations. It should be noted that conducting archaeological works in a highly urbanised and busy area faces many difficulties and limitations. As those monitored trenches were small in size; filled with concrete fragments and underground water; and obscured and disturbed by many existing modern underground utilities that are in use, the chance of identifying archaeological remains is very low. Moreover, the excavation depth was generally relatively shallow, which barely reached beyond the modern fill layer and dig into unknown cultural/sterile layer. With such limited data collected for soil deposits below modern fill layers, it is impossible to determine the nature of those deposits. Therefore, from the AWB result, it is only possible to conclude that the archaeological potential of those monitored AWB Locations, from the existing ground level to the bottom of the excavated trenches being monitored, is very low.

However, in considering the archaeological discoveries in 2004 and 2011, the chance of discovering other archaeological remains in the Zone of AWB or below monitored level cannot be ruled out.

An AWB has been recommended during construction stage of the Contract within the Zone of Archaeological Watching Brief. Upon agreement with the AMO regarding the AWB Proposal and relevant licences obtained by the archaeologist, Dr Liu Wensuo, the AWB was conducted on 31 August and 27 October 2010. Six (6) AWB Locations along Fa Yuen Street (Section 3) were monitored but the AWB Locations in the remaining Sections (including Section 1, 2, 4 and 5) have not been completed as the relevant construction works have been postponed but the updated programme is not yet available. This *report* only covers the AWB results in Section 3.

The AWB completed in Section 3 indicates that most of the excavation works monitored were conducted in modern concrete and fill layers. No archaeological remain was identified for all AWB Locations in Section 3. As Mongkok is a highly urbanised and busy district, the AWB faced many difficulties and limitations. The AWB findings could only conclude that the archaeological potential of those monitored AWB Locations, from the existing ground level to the bottom of the excavated trenches, is very low. However, in considering the archaeological discoveries in 2004 and 2011, the chance of discovering other archaeological remains in the Zone of AWB or below the monitored level cannot be ruled out.

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English

Atkins China Ltd. (Atkins). 2009. *Agreement No. CE25/2006(W5) Replacement and Rehabilitation of Water Mains Stage 3, Mains in Kowloon – Investigation, Design and Construction under: Cultural Heritage Study Report (Rev.5)*. (Unpublished)

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South China Morning Post, dated 8 May 2004.

Chinese

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[清]舒懋官修, 王崇熙等纂. 《新安縣志》. 臺北：成文出版社. 1974。

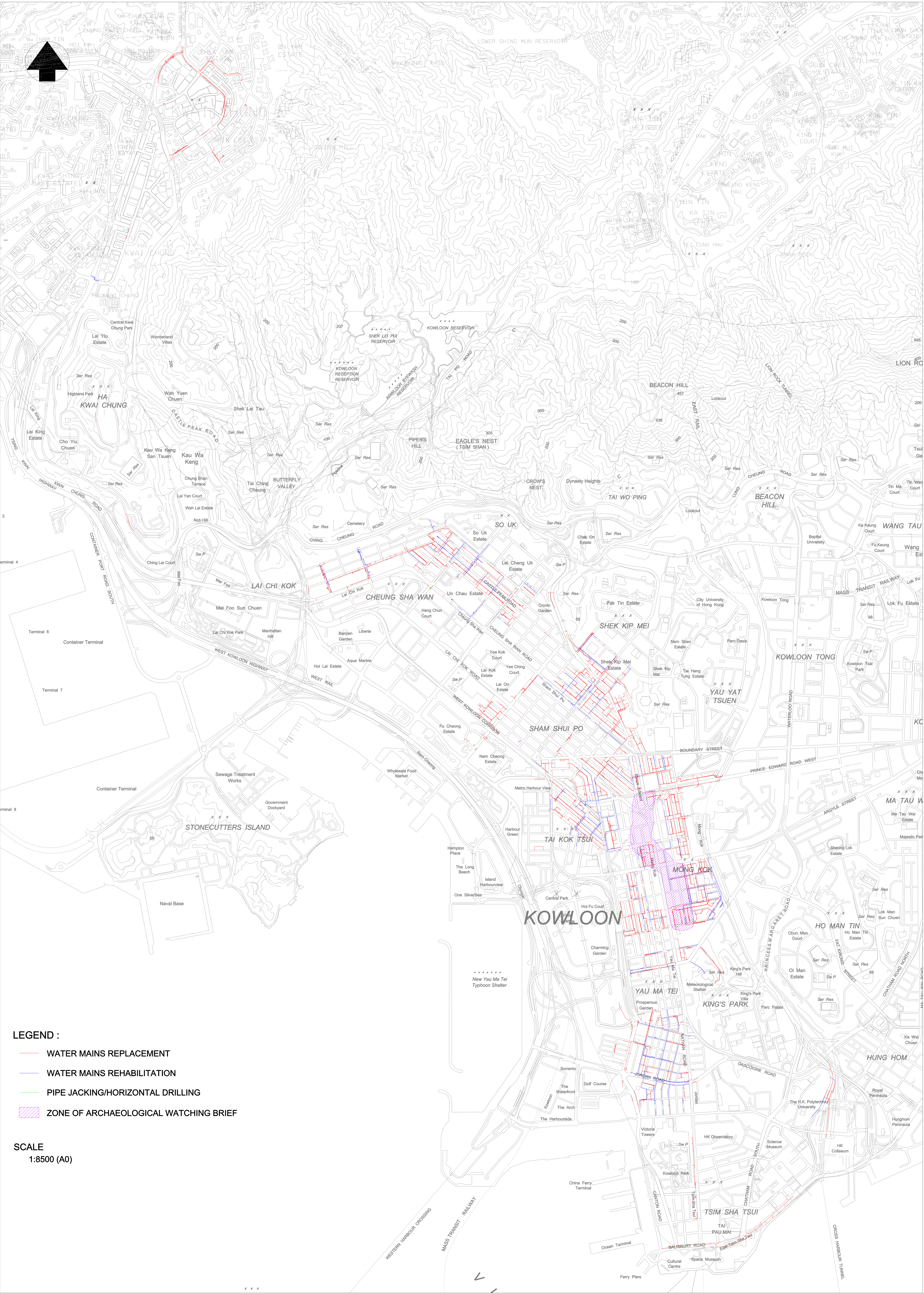
Internet Resources

Antiquities and Monuments Office (AMO), Relic Found at the Works Site in Mongkok, 2011, retrieved 1 February 2012, <http://www.lcsd.gov.hk/CE/Museum/Monument/en/news_200405112.php>.

Mingpao, dated 2 August 2011, retrieved 8 February 2012, <http://life.mingpao.com/cfm/Photo1.htm?File=20110802/nalga/_02GO001.jpg>

Annex A

Zone of Archaeological Watching Brief under the Contract



LEGEND :

- WATER MAINS REPLACEMENT
- WATER MAINS REHABILITATION
- PIPE JACKING/HORIZONTAL DRILLING
- ▨ ZONE OF ARCHAEOLOGICAL WATCHING BRIEF

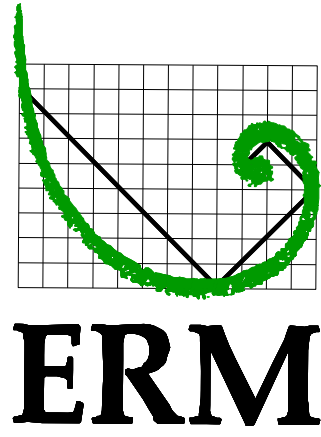
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Figure A

Zone of Archaeological Watching Brief under
Replacement & Rehabilitation of Water Mains Stage 3 -
Mains in West Kowloon (Package A) (Contract No. 3/WSD/08)

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Annex B

Records of AWB Completed Locations

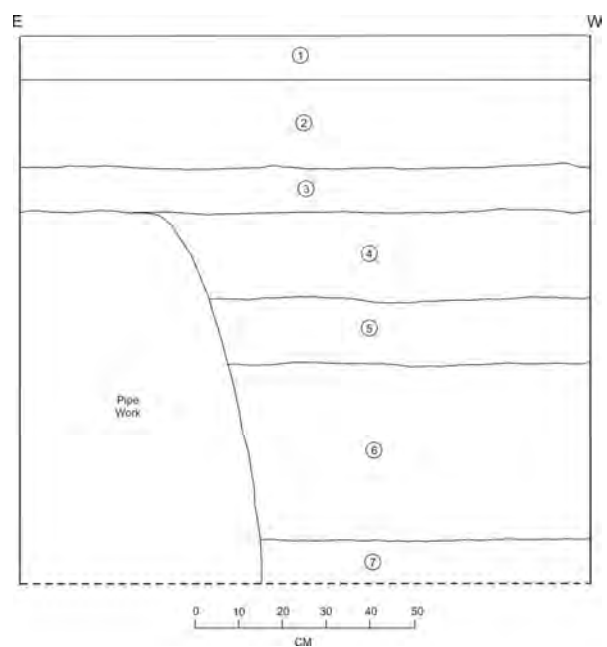
Section No.	3	Location No.	3a		
Monitoring Date	27 October 2010	Figure No.	3.2a		
Excavation Method:					
It is located at junction of Fa Yuen Street and Argyle Street. Rehabilitation work was conducted at the saltwater pit (SW11), where manual open trench excavation was adopted at this location.					
Mechanical excavation was carried out only to remove the top most cement paving.					
The excavated pit available for inspection is measured approximately 1.3m long, 0.8m wide and 1.25m deep.					
Findings and discovery:					
No archaeological remain had been identified at this AWB location as the pit was excavated in the fill layer.					
Stratigraphy:					
Layer	Description	Archaeological Remains	Dating and Interpretation	Approximate Depth from Ground Level (cm)*	Thickness (cm)
1	Red brick	None	Modern	0	10
2	Light grey sand with cement	None	Modern	10	20
3	Yellow fine sandy soil	None	Modern	30	10
4	Dark grey sand with cement	None	Modern	40	20
5	Reddish brown sandy soil	None	Modern	60	15
6	Reddish brown fill	None	Modern	75	40
7	Red sandy soil	None	Modern	115	>10
* Depth is measured from the ground level to the surface of each layer					

Section No.	3	Location No.	3a
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Photographic Record:



Illustration:



South Section of Location 3a

Section No.	3	Location No.	3b		
Monitoring Date	27 October 2010	Figure No.	3.2a		
Excavation Method:					
It is located at junction of Fa Yuen Street and Shantung Street. Rehabilitation work was conducted at the saltwater pit (SW06 and SW07, combined excavation), where manual open trench excavation was adopted at this location. Mechanical excavation was adopted only to remove the top most cement paving.					
The excavated pit available for inspection is measured approximately 3.5m long, 0.9m – 1.1m wide and 1.5m deep.					
Findings and discovery:					
No archaeological remain had been identified at this AWB location as the pit was excavated in the fill layer.					
Stratigraphy:					
Layer	Description	Archaeological Remains	Dating and Interpretation	Approximate Depth from Ground Level (cm)*	Thickness (cm)
1	Red brick	None	Modern	0	10
2	Yellow fill soil	None	Modern	10	10
3	Grey sand with cement	None	Modern	20	40
4	Red sandy soil	None	Modern	60	20
5	Yellow sandy soil	None	Modern	80	30
6	Grey sandy soil	None	Modern	110	20
7	Yellow sandy soil	None	Modern	130	>20
* Depth is measured from the ground level to the surface of each layer					

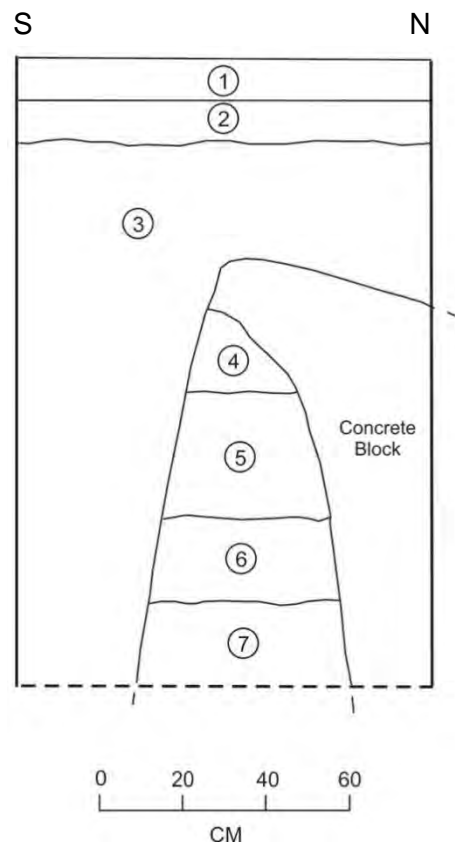
Section No.	3	Location No.	3b
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Photographic Record:



West Section of Location 3b

Illustration:



West Section of Location 3b

Section No.	3	Location No.	3c		
Monitoring Date	27 October 2010	Figure No.	3.2b		
Excavation Method:					
It is located at junction of Fa Yuen Street and Soy Street. Rehabilitation work was conducted at the fresh water pit (FW01), where manual open trench excavation was adopted at this location. Mechanical excavation was adopted only to remove the top most cement paving.					
The excavated pit available for inspection is measured approximately 2.45m long, 0.7m wide and 1.45m deep.					
Findings and discovery:					
No archaeological remain had been identified at this AWB location as the pit was excavated in the fill layer and a moderately sorted red fine sand deposit of suspected natural layer at the bottom of the trench.					
Stratigraphy:					
Layer	Description	Archaeological Remains	Dating and Interpretation	Approximate Depth from Ground Level (cm)*	Thickness (cm)
1	Concrete	None	Modern	0	5
2	Stone fragment and concrete	None	Modern	5	35
3	Concrete and cement	None	Modern	40	10
4	Red sandy soil	None	Modern	50	80
5	Red fine sandy soil	None	Natural layer(?)	130	>15
* Depth is measured from the ground level to the surface of each layer					

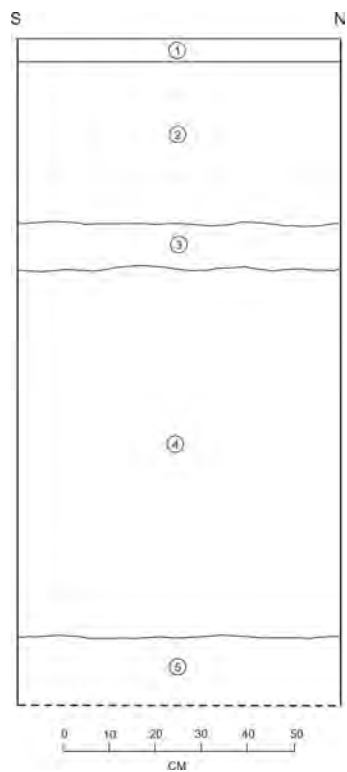
Section No.	3	Location No.	3c
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Photographic Record:



West Section of Location 3c

Illustration:



West Section of Location 3c

Section No.	3	Location No.	3d
Monitoring Date	31 August 2010 27 October 2010	Figure No.	3.2b

Excavation Method:

It is located approximately 10m south of the junction of Fa Yuen Street and Soy Street (see its location in Figure 2.2b). Rehabilitation work was conducted at the fresh water pit (FW04), where manual open trench excavation was adopted at this location. Mechanical excavation was adopted only to remove the top most cement paving.

The excavated pit available for inspection is measured approximately 5.2m long, 2m wide and 1.2m deep.

Findings and discovery:

No archaeological remain had been identified at this AWB location as the pit was excavated in the fill layer and a layer of white sand with unknown formation nature.

Stratigraphy:

Layer	Description	Archaeological Remains	Dating and Interpretation	Approximate Depth from Ground Level (cm)*	Thickness (cm)
1	Concrete	None	Modern	0	30
2	Greyish yellow filled soil	None	Modern	30	20
3	Red sandy soil	None	Modern	50	70
4	White sandy soil	None	Unknown	50	>70

* Depth is measured from the ground level to the surface of each layer

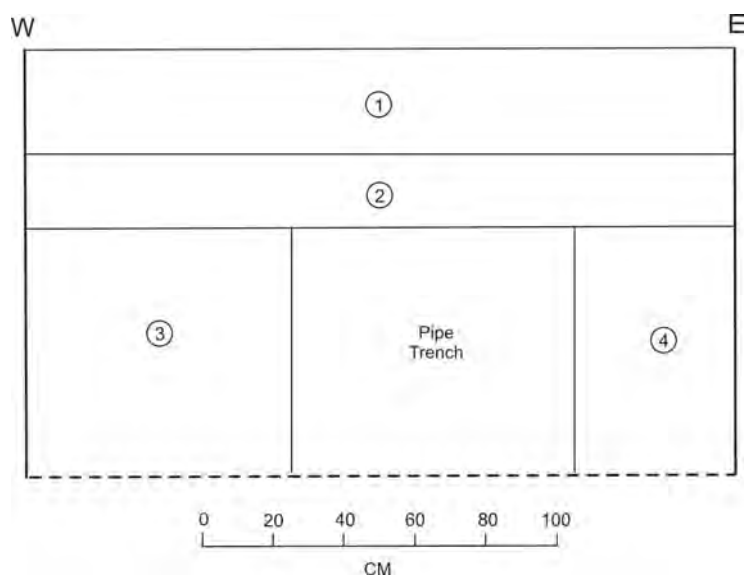
Section No.	3	Location No.	3d
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Photographic Record:



North Section of Location 3d

Illustration:



North Section of Location 3d

Section No.	3	Location No.	3e
Monitoring Date	31 August 2010 27 October 2010	Figure No.	3.2b

Excavation Method:

It is located at junction of Fa Yuen Street and Yin Chong Street (see its location in Figure 2.2b). Rehabilitation work was conducted at the fresh water pit (FW05), where manual open trench excavation was adopted at this location. Mechanical excavation was adopted only to remove the top most cement paving.

The excavated pit available for inspection is measured approximately 7.15m long, 1.2m – 2.05m wide and 1.3m deep.

Findings and discovery:

No archaeological remain had been identified at this AWB location as the pit was excavated in the fill layer and a brownish red sand deposit of unknown formation nature at the bottom of the trench.

Stratigraphy:

Layer	Description	Archaeological Remains	Dating and Interpretation	Approximate Depth from Ground Level (cm)*	Thickness (cm)
1	Concrete	None	Modern	0	40
2	Grey sandy soil	None	Modern	40	40
3	White sandy soil	None	Modern	80	25
4	Brownish red sandy soil	None	Unknown	105	>25

* Depth is measured from the ground level to the surface of each layer

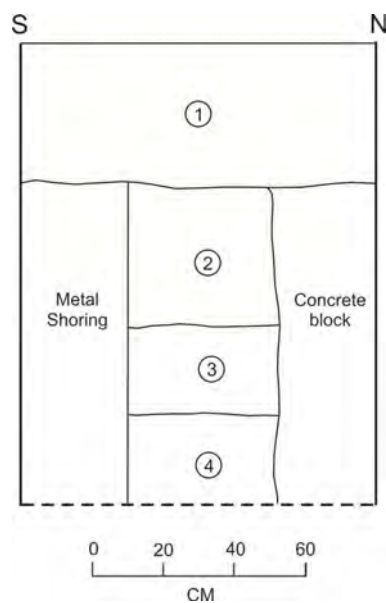
Section No.	3	Location No.	3e
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Photographic Record:



West Section of Location 3e

Illustration:



West Section of Location 3e

Section No.	3	Location No.	3f
Monitoring Date	31 August 2010 27 October 2010	Figure No.	3.2b

Excavation Method:

It is located at junction of Fa Yuen Street and Dundas Street (see its location in Figure 2.2b). Rehabilitation work was conducted at the fresh water pit (FW07), where manual open trench excavation was adopted at this location. Mechanical excavation was adopted only to remove the top most cement paving.

The excavated pit available for inspection is measured approximately 4.9m long, 1.4m wide and 1.5m deep.

Findings and discovery:

No archaeological remain had been identified at this AWB location as the pit was excavated in the fill layer and a poorly sorted coarse white sand with grey and black sand deposit of unknown formation nature at the bottom of the trench.

Stratigraphy:

Layer	Description	Archaeological Remains	Dating and Interpretation	Approximate Depth from Ground Level (cm)*	Thickness (cm)
1	Concrete	None	Modern	0	15
2	Filled soil	None	Modern	15	35
3	Yellow sandy soil	None	Modern	50	60
4	White sandy soil, with red sand	None	Modern	50	60
5	White sandy soil, with grey and black sand	None	Unknown	110	>40

* Depth is measured from the ground level to the surface of each layer

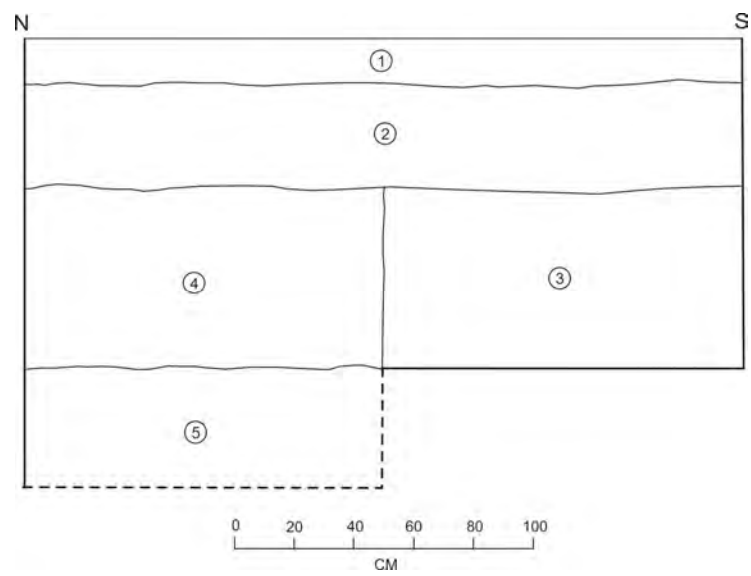
Section No.	3	Location No.	3f
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Photographic Record:



East Section of Location 3f

Illustration:



East Section of Location 3f