
APPENDIX A

附錄一

Test Pit and Auger Hole Recording Sheets

探方鑽孔紀錄表

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I. Test Pit Records 探方紀錄

1. KTN 古洞北
2. FLN 粉嶺北
3. PC/TKL 坪輦／打鼓嶺

II. Auger Hole Records 鑽孔紀錄


1. KTN 古洞北
2. FLN 粉嶺北
3. PC/TKL 坪輦／打鼓嶺

I. Test Pit Records 探方紀錄

1. KTN 古洞北

Location	Kwu Tung North	Area Code	KTN	Test Pit No.	K1a
Test Pit Coordinate	827962E	842207N	Test Pit Measurement	1 m x 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +12.7mPD	
Stratigraphy and Finds					
Layer	Soil Texture		Soil Colour	Finds	Chronology
L1	Humus soil		Light Black	Nil	Modern
L2	Sandy clay with rock granules		Grayish Yellow	Nil	
L3	Clay with rock granules		Reddish Yellow	Nil	Regolith

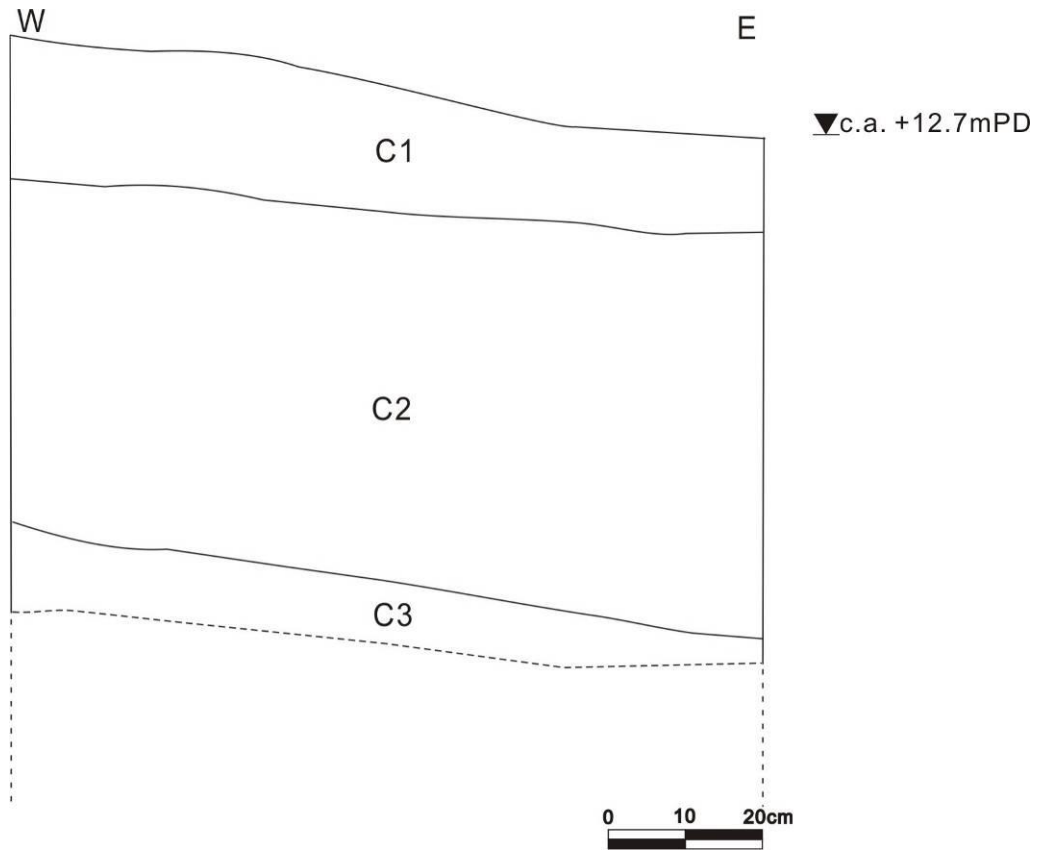
Test Pit Wall Photography



Northern Profile of K1a

Test Pit Wall Drawing

K1a North Profile




Representative Artefacts

Date	7-Sep-2010	Log by	WANG Wenjian
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Location	Kwu Tung North	Area Code	KTN	Test Pit No.	K2a
Test Pit Coordinate	828032E	842040N	Test Pit Measurement	1 m × 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +14.9mPD	
Stratigraphy and Finds					
Layer	Soil Texture		Soil Colour	Finds	Chronology
L1	Loose silt		Light Black	Nil	Modern
L2	Loose silty clay		Grayish Yellow	Nil	
L3	Fine clay		Reddish Yellow	Nil	Regolith

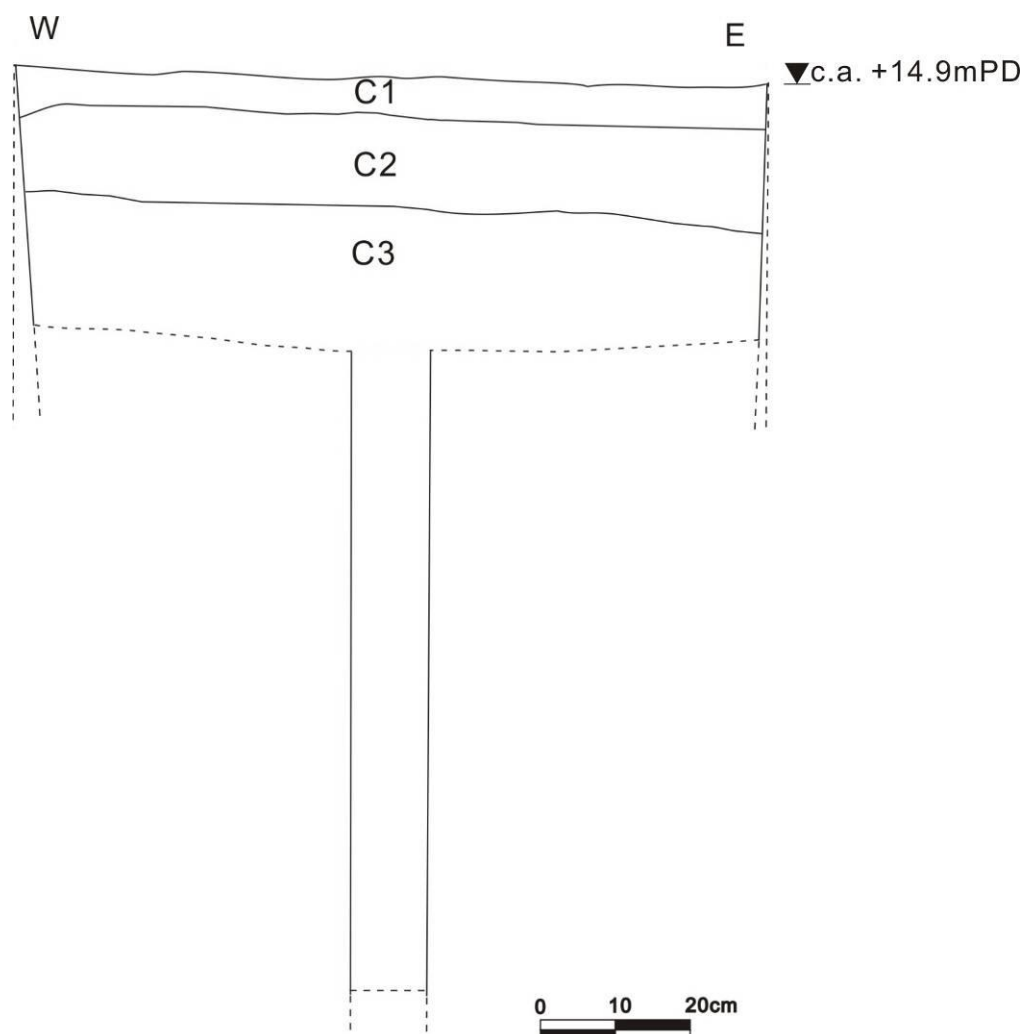
Test Pit Wall Photography



Northern Profile of K2a

Test Pit Wall Drawing

K2a North Profile




(Auger hole in the middle of the test pit)

Representative Artefacts

Date	6-Sep-2010	Log by	WANG Wenjian
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Location	Kwu Tung North	Area Code	KTN	Test Pit No.	K2c
Test Pit Coordinate	828054E	841930N	Test Pit Measurement	1 m x 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +14.8mPD	
Stratigraphy and Finds					
Layer	Soil Texture		Soil Colour	Finds	Chronology
L1	Loose silt		Light Black	Nil	Modern
L2	Loose silty clay		Grayish Yellow	Nil	
L3	Clay with rock granules		Reddish Yellow	Nil	Regolith

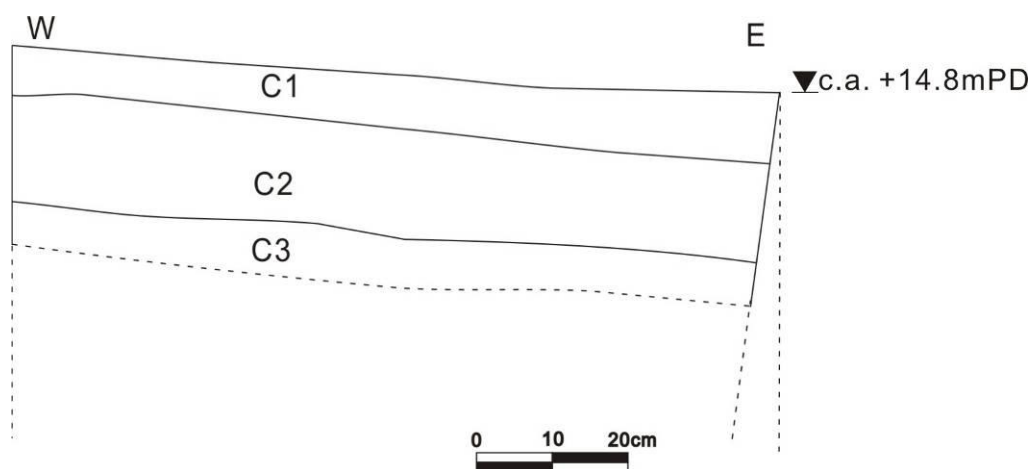
Test Pit Wall Photography



Northern Profile of K2c

Test Pit Wall Drawing

K2c North Profile




Representative Artefacts

Date	7-Sep-2010	Log by	WANG Wenjian
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Location	Kwu Tung North	Area Code	KTN	Test Pit No.	K3b
Test Pit Coordinate	828117E	841802N	Test Pit Measurement	1 m x 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +14.7mPD	
Stratigraphy and Finds					
Layer	Soil Texture		Soil Colour	Finds	Chronology
L1	Humus soil		Light Black	Nil	Modern
L2	Clay		Reddish Yellow	Nil	Regolith
L3	Clay with rock fragments		Reddish Yellow	Nil	Regolith

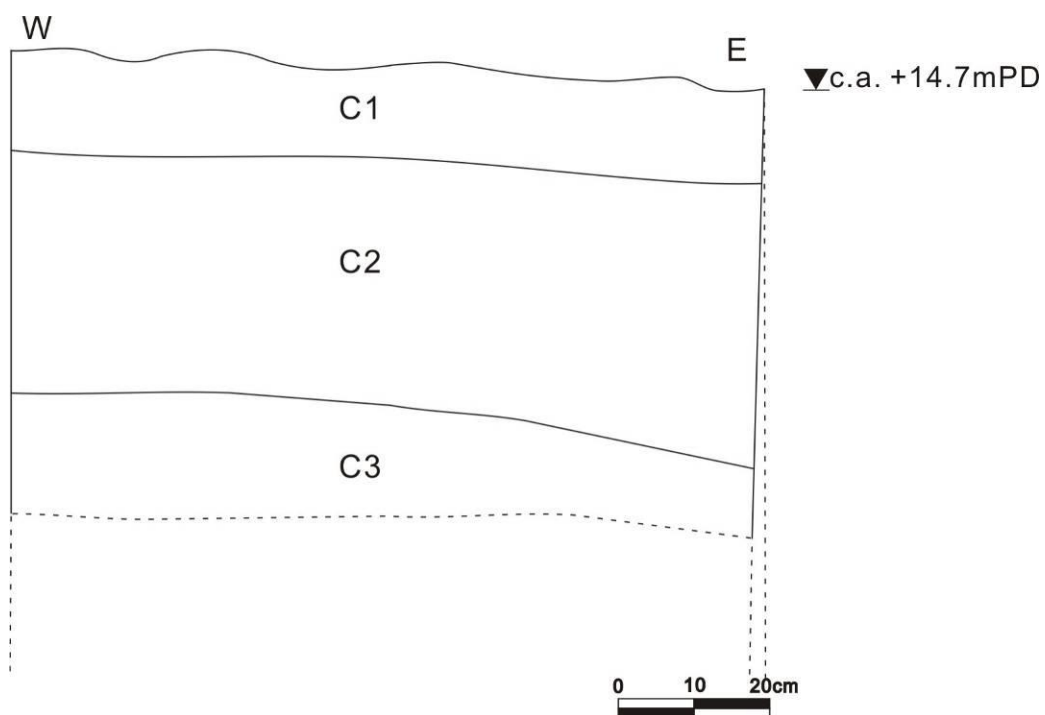
Test Pit Wall Photography



Northern Profile of K3b

Test Pit Wall Drawing

K3b North Profile



Representative Artefacts

Date	8-Sep-2010	Log by	WANG Wenjian
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Location	Kwu Tung North	Area Code	KTN	Test Pit No.	K4a
Test Pit Coordinate	828347E	841789N	Test Pit Measurement	1 m x 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +18.1mPD	
Stratigraphy and Finds					
Layer	Soil Texture		Soil Colour	Finds	Chronology
L1	Humus soil		Light Black	Nil	Modern
L2	Fill with water pipe and beer bottle		Grayish Yellow	Nil	Modern
L3	Clay with rock fragments		Reddish Yellow	Nil	Regolith

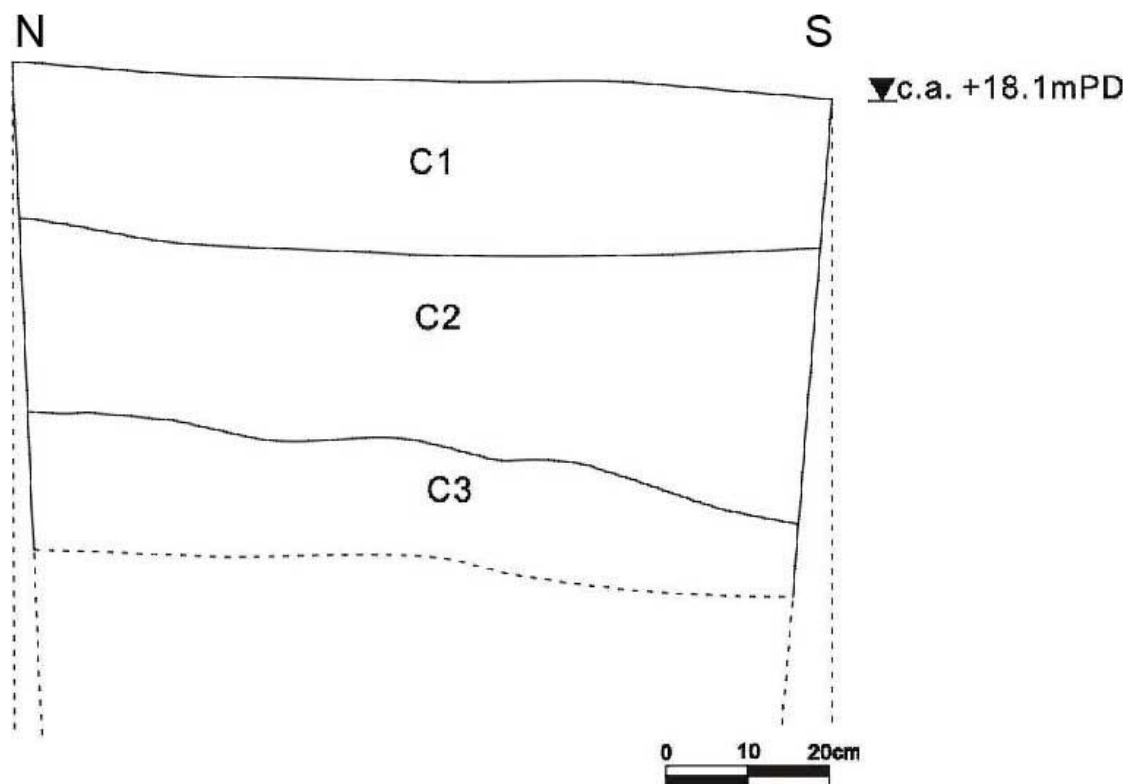
Test Pit Wall Photography



Eastern Profile of K4a

Test Pit Wall Drawing

K4a East Profile




Representative Artefacts

Date	8-Sep-2010	Log by	WANG Wenjian
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Location	Kwu Tung North	Area Code	KTN	Test Pit No.	K5b
Test Pit Coordinate	828620E	841870N	Test Pit Measurement	1 m × 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +28.8mPD	
Stratigraphy and Finds					
Layer	Soil Texture		Soil Colour	Finds	Chronology
L1	Loose silt		Light Black	Nil	Modern
L2	Hard clay with rock fragments		Reddish Yellow	Nil	Regolith

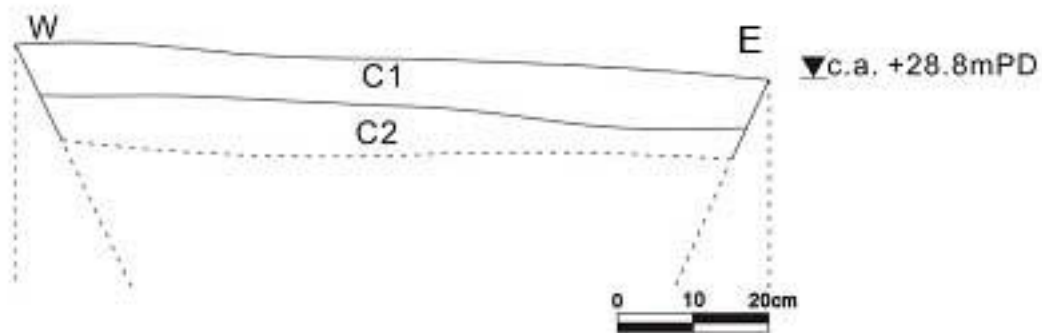
Test Pit Wall Photography



Northern Profile of K5b

Test Pit Wall Drawing

K5b North Profile




Representative Artefacts

Date	9-Sep-2010	Log by	WANG Wenjian
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Location	Kwu Tung North	Area Code	KTN	Test Pit No.	K5e
Test Pit Coordinate	828744E	841774N	Test Pit Measurement	1 m x 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +30.0mPD	
Stratigraphy and Finds					
Layer	Soil Texture		Soil Colour	Finds	Chronology
L1	Loose silt		Light Black	Nil	Modern
L2	Fill with glass		Mixed Red-Yellow-Brown	Nil	Modern
L3	Clay		Reddish Yellow	Nil	Regolith

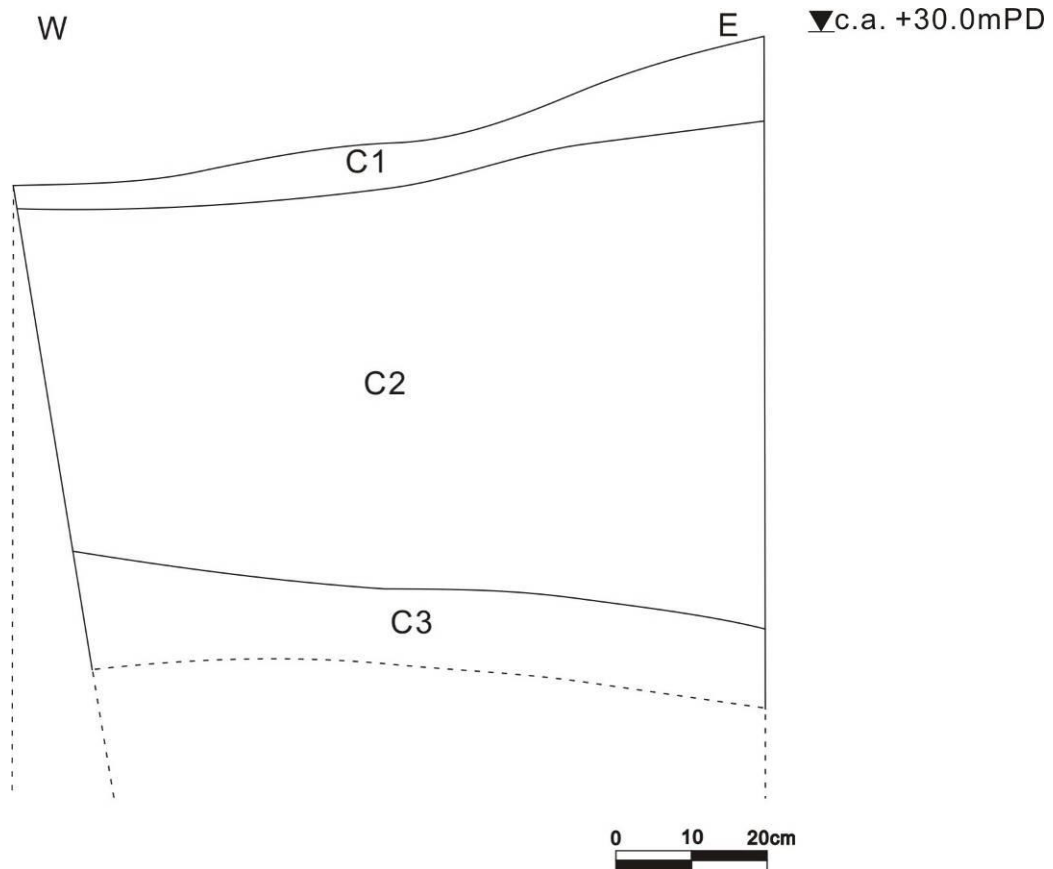
Test Pit Wall Photography



Northern Profile of K5e

Test Pit Wall Drawing

K5e North Profile




Representative Artefacts

Date	9-Sep-2010	Log by	WANG Wenjian
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Location	Kwu Tung North	Area Code	KTN	Test Pit No.	K6d
Test Pit Coordinate	829336E	841707N	Test Pit Measurement	1 m x 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +11.4mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds	Chronology	
L1	Silty Clay	Light Brown	Nil	Modern	
L2	Clayey fill with tile sherd	Light Yellow	Glazed Ware, Tiles	Modern	
L3	Clayey fill	Grayish Yellow	Nil	Modern	
L4	Clayey fill with houseware sherd	Grayish Brown	Glazed Ware	Modern	
L5	Clayey fill	Brown	Nil	Modern	

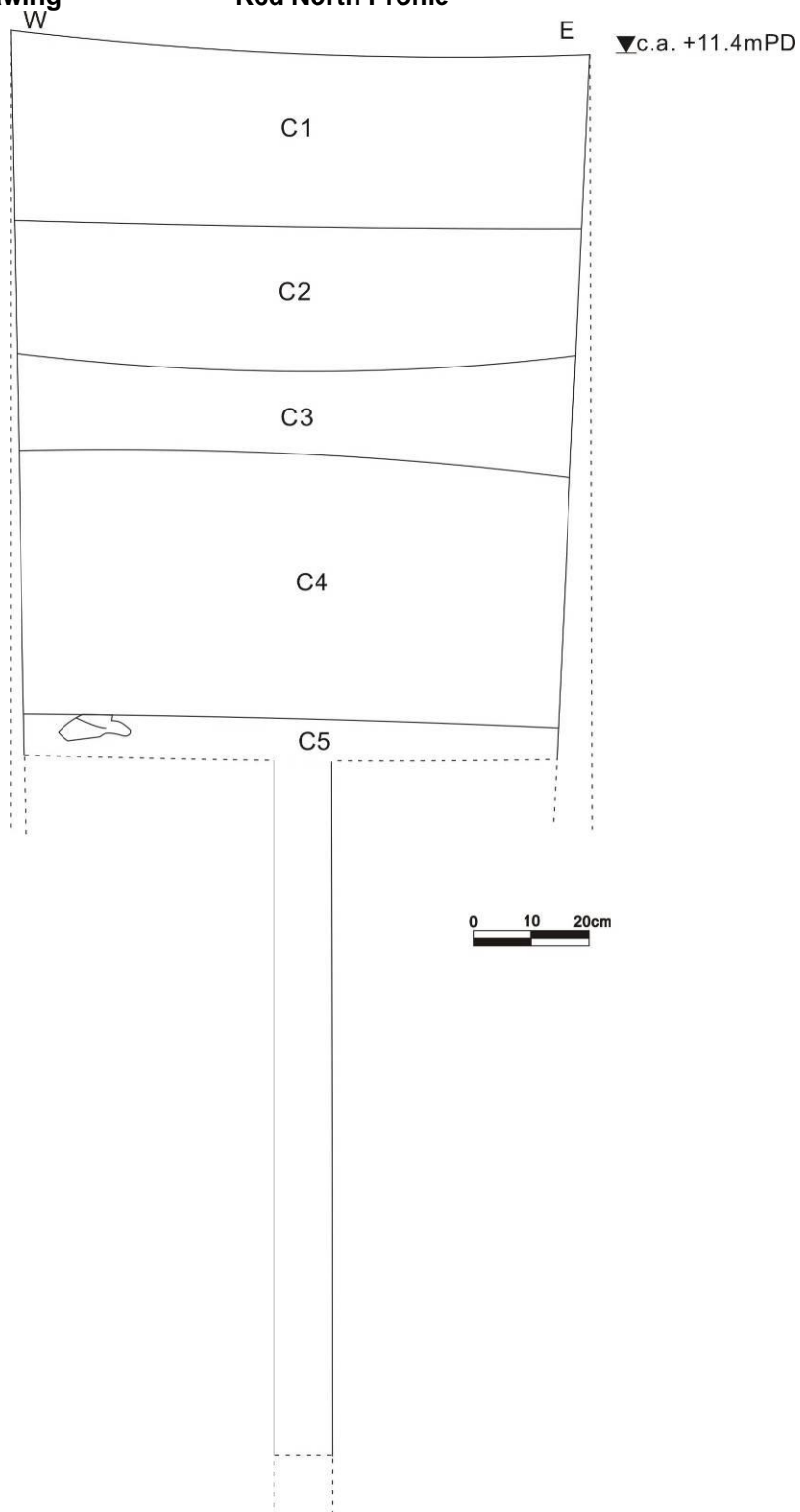
Test Pit Wall Photography



Northern Profile of K6d

Test Pit Wall Drawing

K6d North Profile



Representative Artefacts

Date


20-Sep-2010

Log by

WANG Wenjian

Location	Kwu Tung North	Area Code	KTN	Test Pit No.	K6e
Test Pit Coordinate	829381E	841664N	Test Pit Measurement	1 m x 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +10.4mPD	
Stratigraphy and Finds					
Layer	Soil Texture		Soil Colour	Finds	Chronology
L1	Humus soil		Light Black	Nil	Modern
L2	Clay		Reddish Brown	Nil	
L3	Clay with sandstone boulders		Reddish Yellow	Nil	Regolith

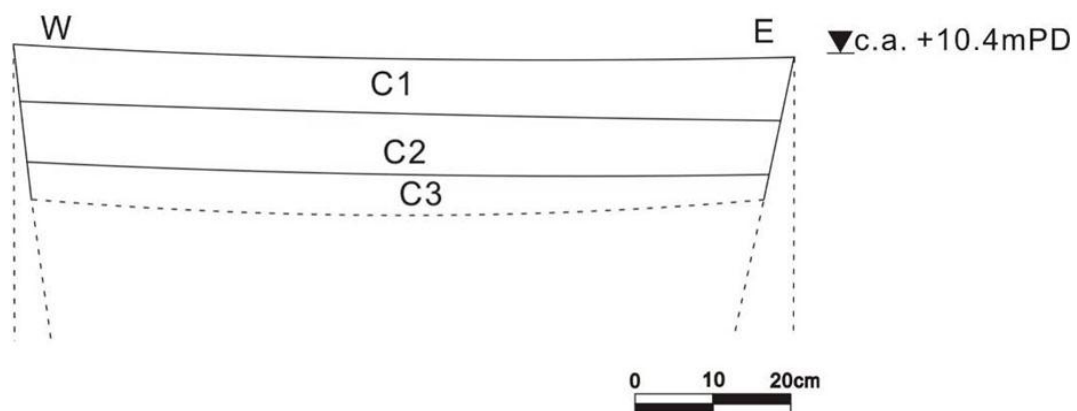
Test Pit Wall Photography



Northern Profile of K6e

Test Pit Wall Drawing

K6e North Profile




Representative Artefacts

Date	20-Sep-2010	Log by	WANG Wenjian
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Location	Kwu Tung North	Area Code	KTN	Test Pit No.	K7a
Test Pit Coordinate	828388E	841607N	Test Pit Measurement	1 m x 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +27.6mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds	Chronology	
L1	Humus soil	Light Black	Nil	Modern	
L2	Silt with rock granules	Light Brown	Nil		
L3	Loose fine clay	Grayish Yellow	Nil		
L4	Fine clay	Reddish Yellow	Nil	Regolith	

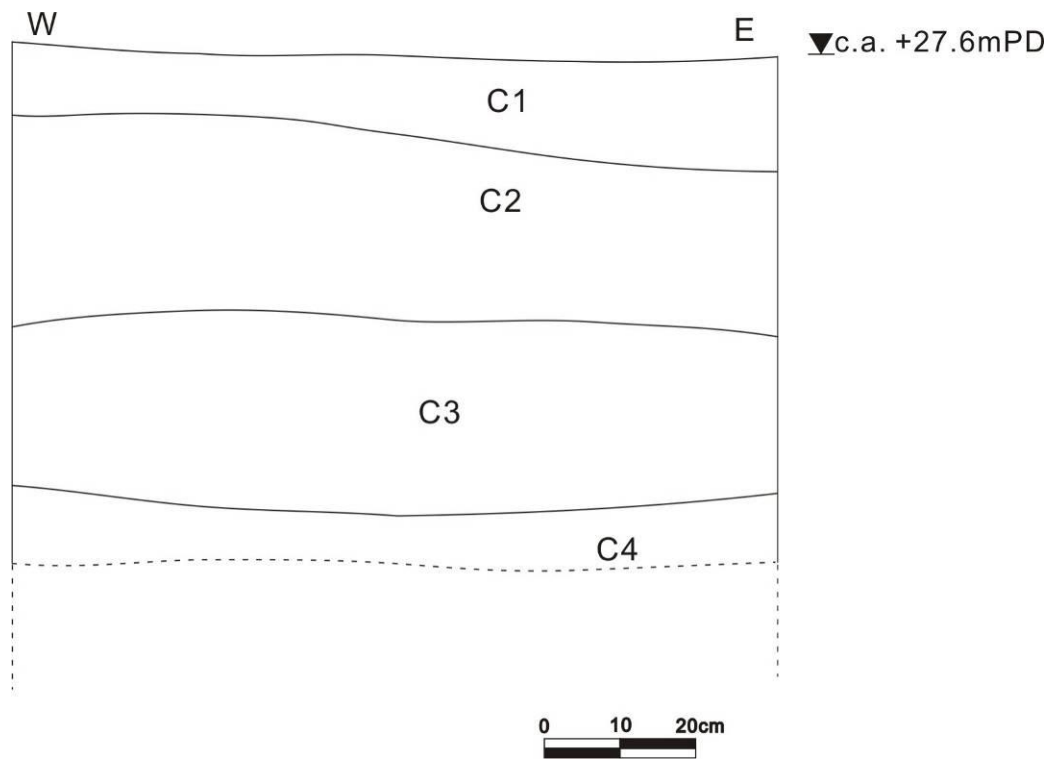
Test Pit Wall Photography



Northern Profile of K7a

Test Pit Wall Drawing

K7a North Profile




Representative Artefacts

Date	10-Sep-2010	Log by	WANG Wenjian
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Location	Kwu Tung North	Area Code	KTN	Test Pit No.	K7b
Test Pit Coordinate	828512E	841531N	Test Pit Measurement	1 m x 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +24.0mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds	Chronology	
L1	Humus soil	Light Black	Nil	Modern	
L2	Silty clay with rock granules	Light Brown	Nil		
L3	Fine clay sludge	Dark Gray	Nil		
L4	Fine clay	Reddish Yellow	Nil	Regolith	

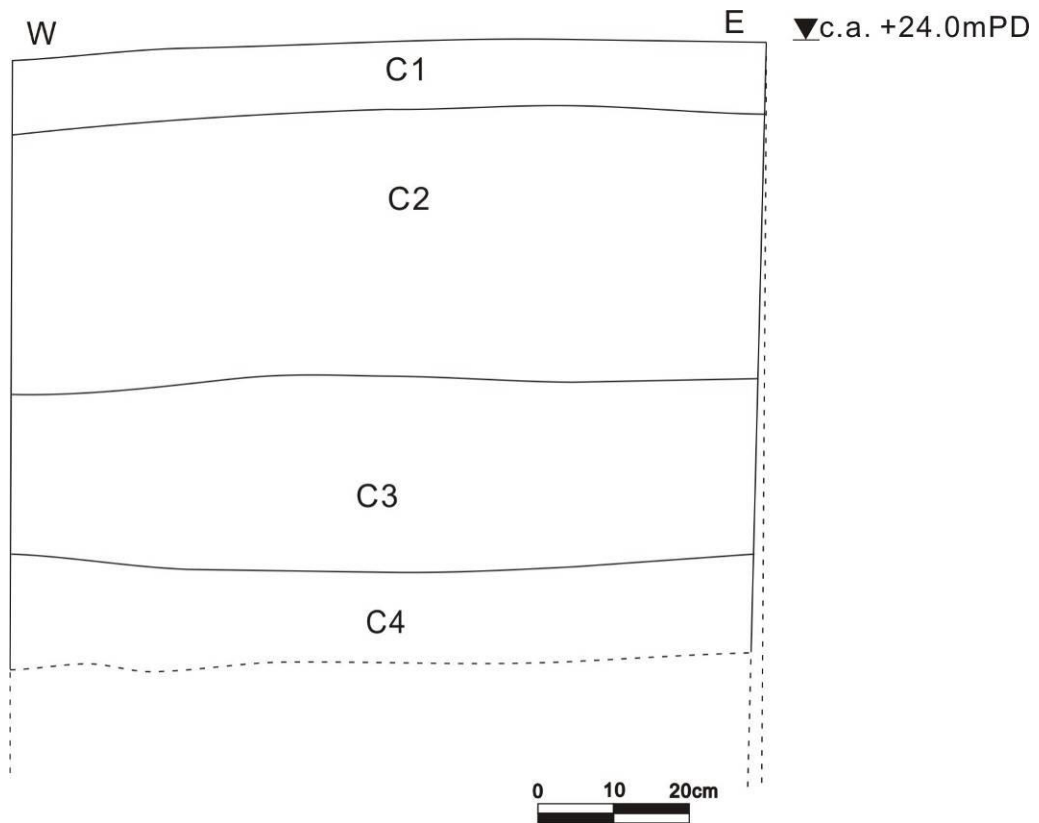
Test Pit Wall Photography



Northern Profile of K7b


Test Pit Wall Drawing

K7b North Profile



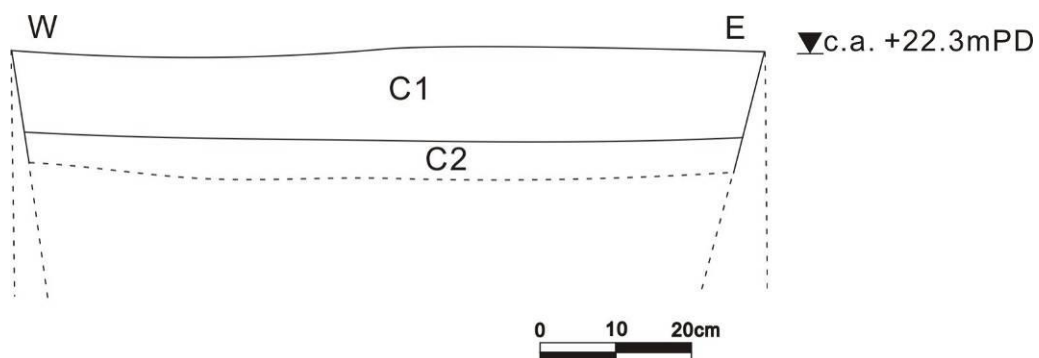
Representative Artefacts

Date	10-Sep-2010	Log by	WANG Wenjian
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Location	Kwu Tung North	Area Code	KTN	Test Pit No.	K8a
Test Pit Coordinate	827725E	841455N	Test Pit Measurement	1 m x 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +22.3mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds	Chronology	
L1	Humus soil	Light Black	Nil	Modern	
L2	Clay with granules	Reddish Yellow	Nil	Regolith	
Test Pit Wall Photography					
					
Northern Profile of K8a					

Test Pit Wall Drawing

K8a North Profile




Representative Artefacts

Date	16-Sep-2010	Log by	WANG Wenjian
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Location	Kwu Tung North	Area Code	KTN	Test Pit No.	K8b
Test Pit Coordinate	827722E	841425N	Test Pit Measurement	1 m x 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +22.3mPD	
Stratigraphy and Finds					
Layer	Soil Texture		Soil Colour	Finds	Chronology
L1	Humus soil		Light Black	Nil	Modern
L2	Clay with granules		Reddish Yellow	Nil	Regolith

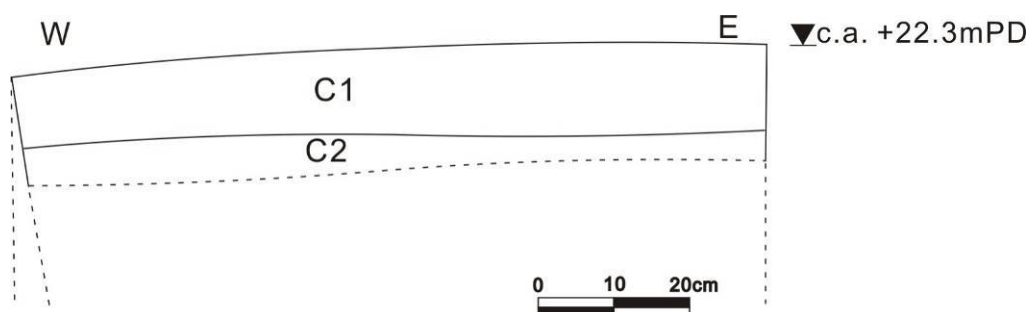
Test Pit Wall Photography



Northern Profile of K8b

Test Pit Wall Drawing

K8b North Profile




Representative Artefacts

Date	16-Sep-2010	Log by	WANG Wenjian
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Location	Kwu Tung North	Area Code	KTN	Test Pit No.	K9a
Test Pit Coordinate	828344E	841542N	Test Pit Measurement	1 m x 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +22.0mPD	
Stratigraphy and Finds					
Layer	Soil Texture		Soil Colour	Finds	Chronology
L1	Humus soil with rocks		Light Black	Nil	Modern
L2	Clay with rock fragments		Reddish Yellow	Nil	Regolith

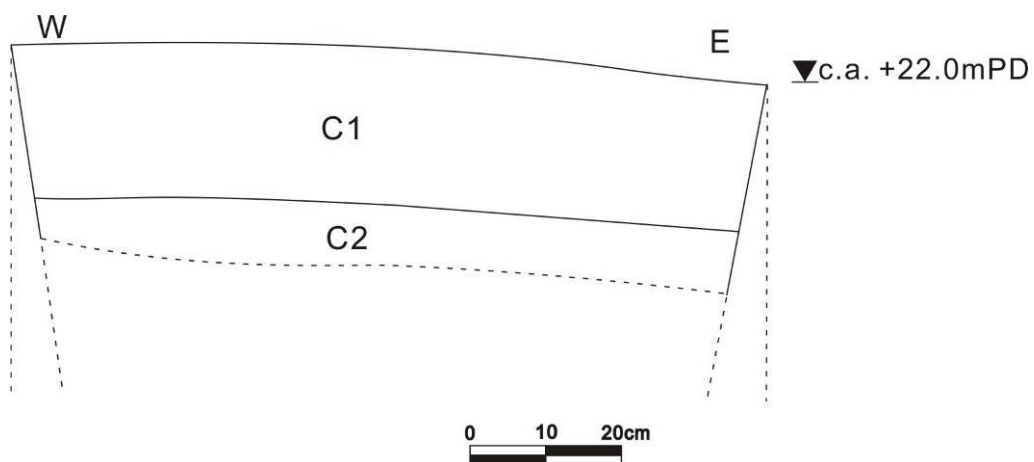
Test Pit Wall Photography



Northern Profile of K9a

Test Pit Wall Drawing

K9a North Profile




Representative Artefacts

Date	11-Sep-2010	Log by	WANG Wenjian
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Location	Kwu Tung North	Area Code	KTN	Test Pit No.	K9c
Test Pit Coordinate	828469E	841367N	Test Pit Measurement	1 m x 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +25.0mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds	Chronology	
L1	Humus soil with rocks	Light Black	Nil	Modern	
L2	Clayey fill with rocks, bricks, plastic sheets, iron bars	Reddish Brown	Nil	Modern	
L3	Silty clay (original surface)	Light Black	Nil	Modern	
L4	Clay with rock fragments	Reddish Yellow	Nil	Regolith	

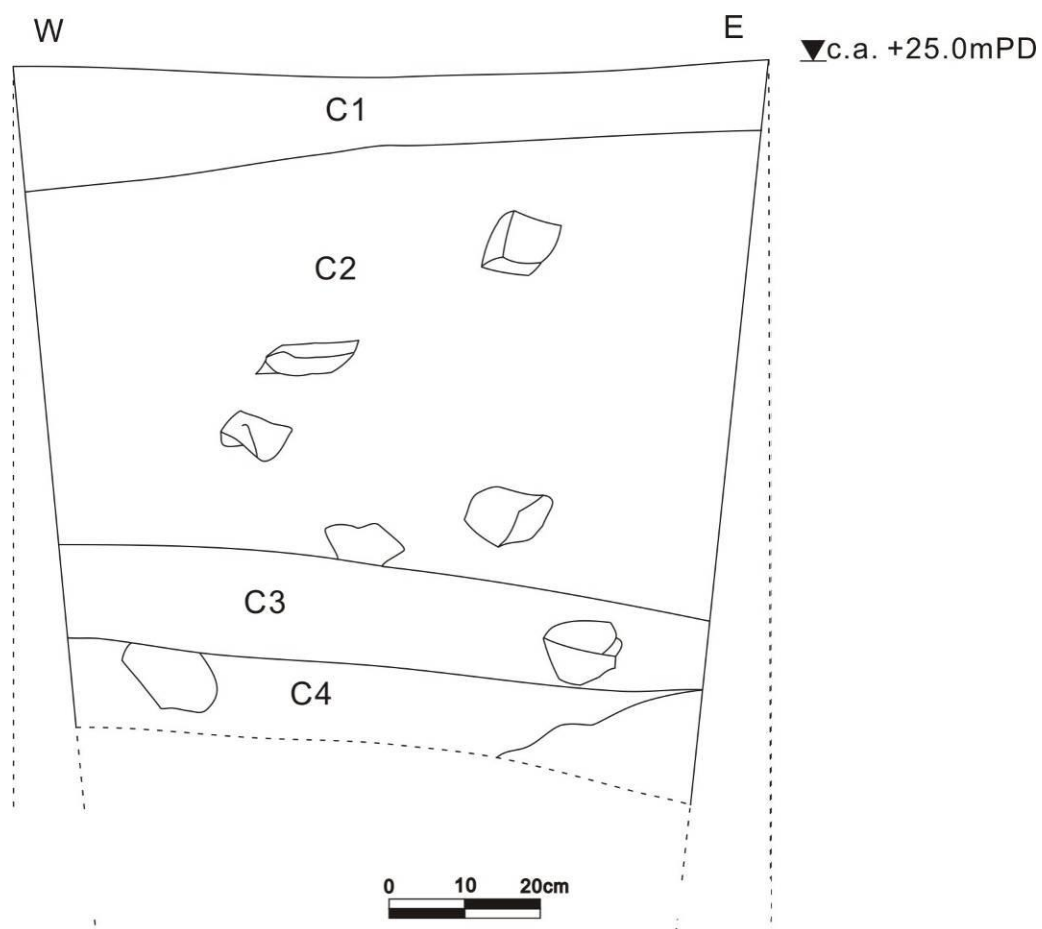
Test Pit Wall Photography



Northern Profile of K9c

Test Pit Wall Drawing

K9c North Profile



Representative Artefacts

Date	14-Sep-2010	Log by	WANG Wenjian
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Location	Kwu Tung North	Area Code	KTN	Test Pit No.	K10b
Test Pit Coordinate	828478E	841188N	Test Pit Measurement	1 m x 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +11.5mPD	
Stratigraphy and Finds					
Layer	Soil Texture		Soil Colour	Finds	Chronology
L1	Humus soil		Light Black	Nil	Modern
L2	Sandy clay		Gray	Nil	
L3	Clay		Brown	Nil	
L4	Clay with rock fragments		Reddish Yellow	Nil	Regolith

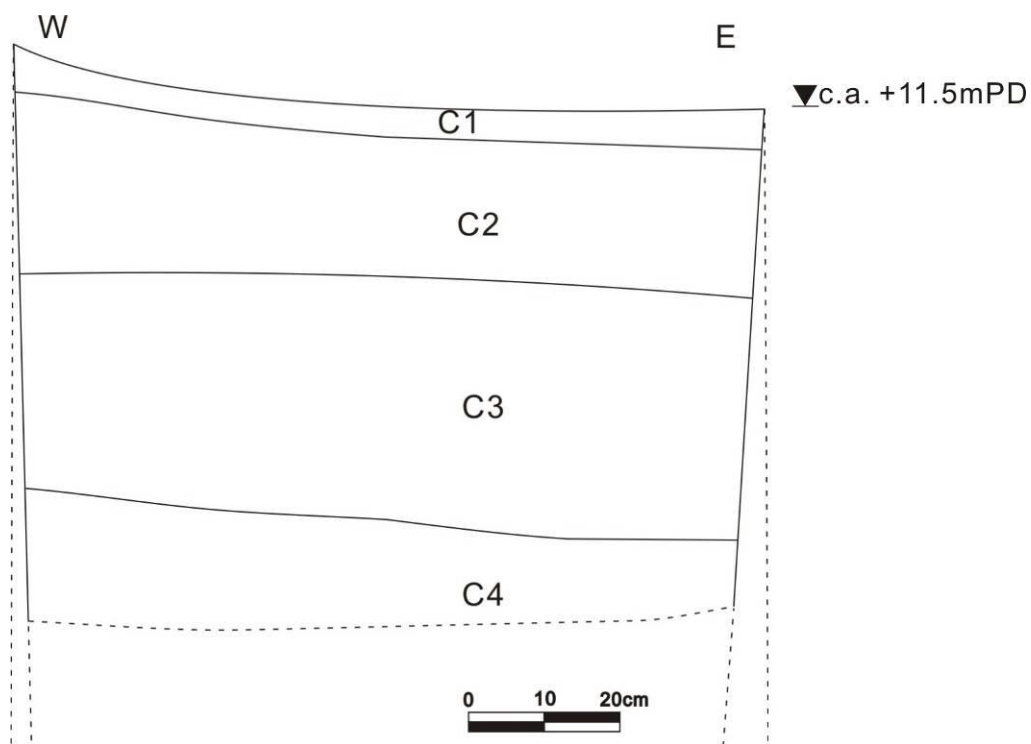
Test Pit Wall Photography



Northern Profile of K10b

Test Pit Wall Drawing

K10b North Profile




Representative Artefacts

Date	13-Sep-2010	Log by	WANG Wenjian
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Location	Kwu Tung North	Area Code	KTN	Test Pit No.	K10d
Test Pit Coordinate	828470E	841134N	Test Pit Measurement	1 m x 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +12.3mPD	
Stratigraphy and Finds					
Layer	Soil Texture		Soil Colour	Finds	Chronology
L1	Humus soil		Light Black	Nil	Modern
L2	Silty fill with modern ceramics, glass and plastics		Mixed Gray, Yellow and Black	Nil	Modern

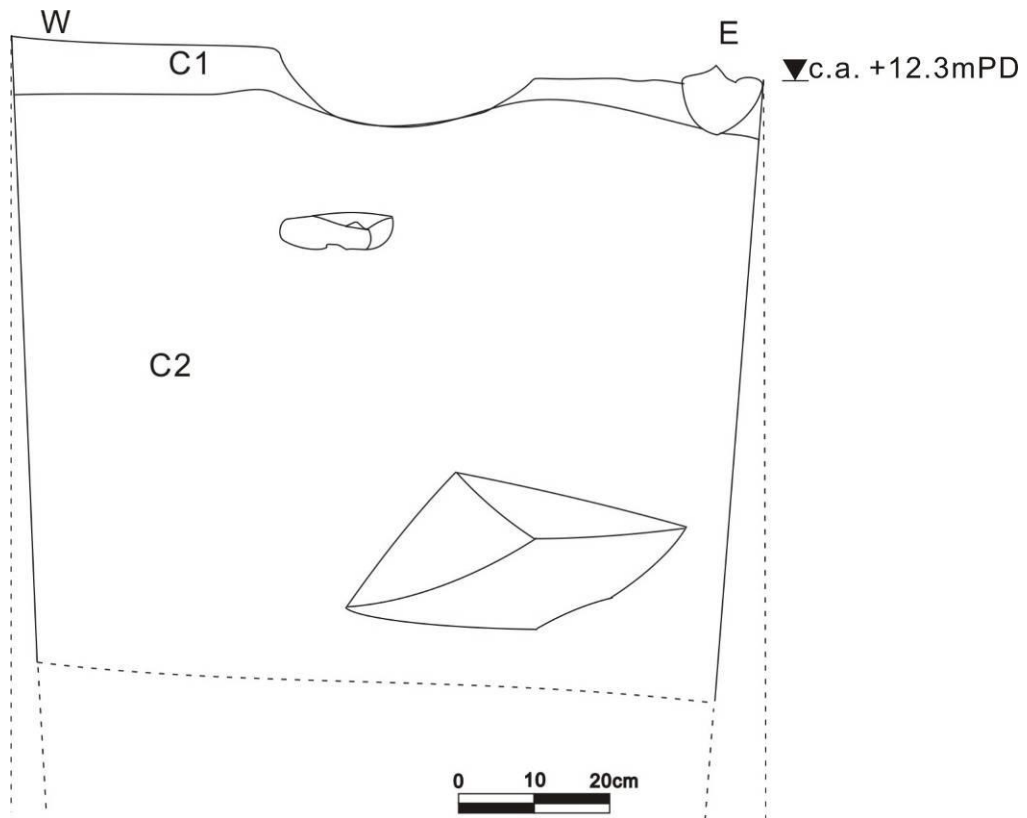
Test Pit Wall Photography



Northern Profile of K10d

Test Pit Wall Drawing

K10d North Profile




Representative Artefacts

Date	14-Sep-2010	Log by	WANG Wenjian
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Location	Kwu Tung North	Area Code	KTN	Test Pit No.	K10e
Test Pit Coordinate	828470E	841126N	Test Pit Measurement	1 m x 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +11.3mPD	
Stratigraphy and Finds					
Layer	Soil Texture		Soil Colour	Finds	Chronology
L1	Humus soil		Light Black	Nil	Modern
L2	Fluvial sediment soaked with water		Mixed Yellow and Gray	Nil	Modern

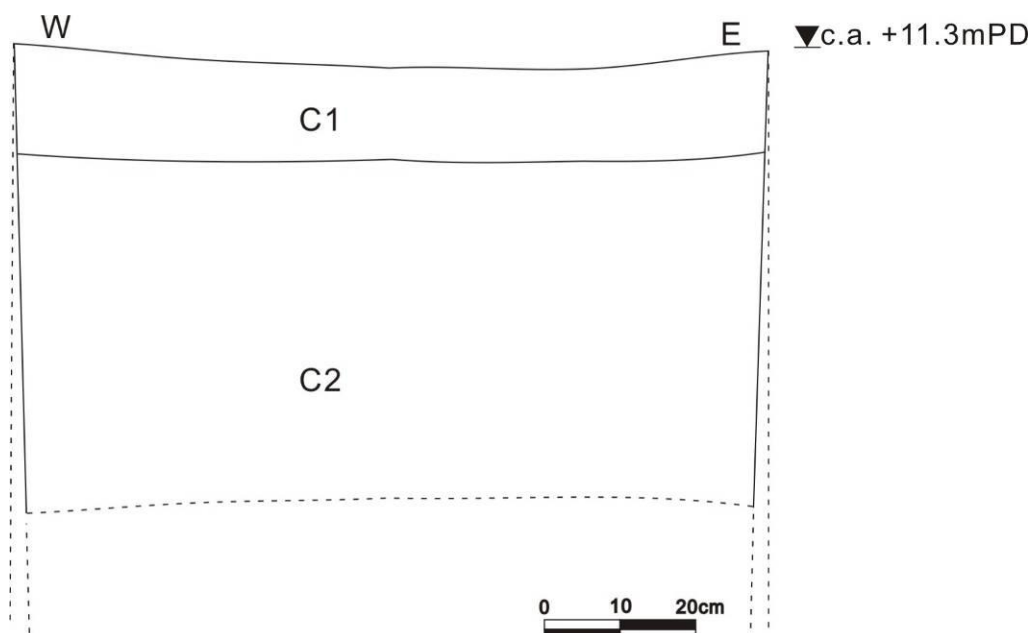
Test Pit Wall Photography



Northern Profile of K10e

Test Pit Wall Drawing

K10e North Profile



Representative Artefacts

Date	14-Sep-2010	Log by	WANG Wenjian
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Location	Kwu Tung North	Area Code	KTN	Test Pit No.	K11d
Test Pit Coordinate	828143E	842122N	Test Pit Measurement	1 m x 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +10.5mPD	
Stratigraphy and Finds					
Layer	Soil Texture		Soil Colour	Finds	Chronology
L1	Loose silt		Light Black	Nil	Modern
L2	Silt with rock fragments		Yellow	Nil	Regolith

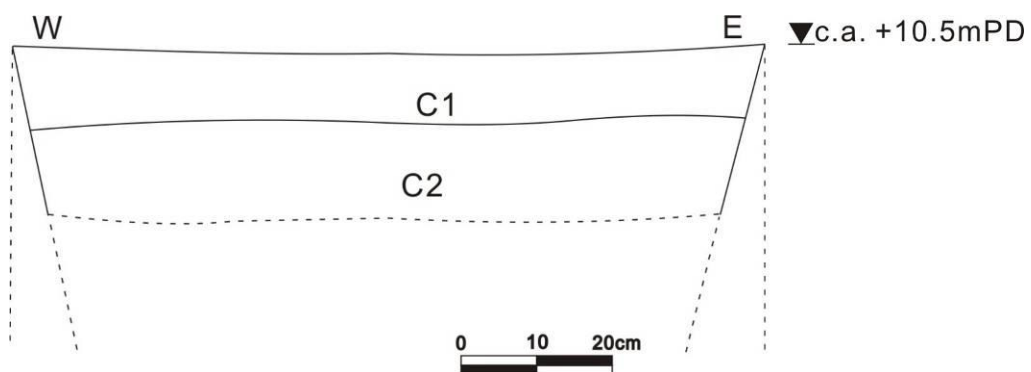
Test Pit Wall Photography



Northern Profile of K11d

Test Pit Wall Drawing

K11d North Profile




Representative Artefacts

Date	15-Sep-2010	Log by	WANG Wenjian
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Location	Kwu Tung North	Area Code	KTN	Test Pit No.	K12a
Test Pit Coordinate	829008E	841195N	Test Pit Measurement	1 m x 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +8.8mPD	
Stratigraphy and Finds					
Layer	Soil Texture		Soil Colour	Finds	Chronology
L1	Humus soil		Light Black	Nil	Modern
L2	Silty fill with rock boulders		Mixed colours	Nil	Modern

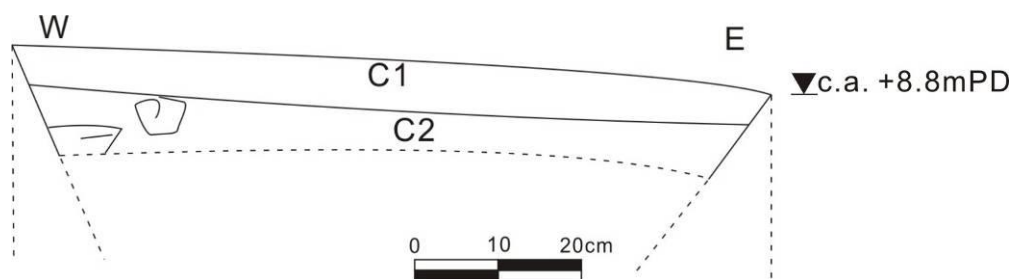
Test Pit Wall Photography



Northern Profile of K12a

Test Pit Wall Drawing

K12a North Profile




Representative Artefacts

Date	22-Sep-2010	Log by	WANG Wenjian
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Location	Kwu Tung North	Area Code	KTN	Test Pit No.	K13a
Test Pit Coordinate	828590E	841108N	Test Pit Measurement	1 m x 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +9.4mPD	
Stratigraphy and Finds					
Layer	Soil Texture		Soil Colour	Finds	Chronology
L1	Humus soil		Light Black	Nil	Modern
L2	Silty clay		Grayish Yellow	Nil	
L3	Sticky clay		Blackish Brown	Nil	
L4	Sandy clay		Grayish white	Nil	Regolith

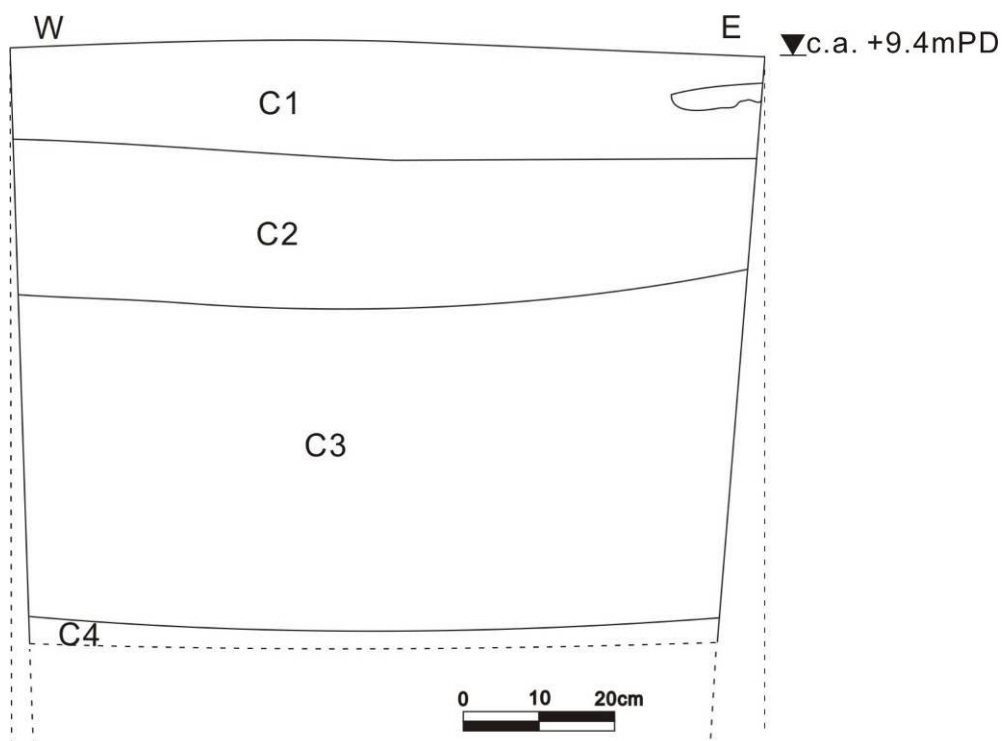
Test Pit Wall Photography



Northern Profile of K13a

Test Pit Wall Drawing

K13a North Profile



Representative Artefacts

Date	15-Sep-2010	Log by	WANG Wenjian
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Location	Kwu Tung North	Area Code	KTN	Test Pit No.	K14a
Test Pit Coordinate	829030E	841066N	Test Pit Measurement	1 m x 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +8.0mPD	
Stratigraphy and Finds					
Layer	Soil Texture		Soil Colour	Finds	Chronology
L1	Humus soil		Light Black	Nil	Modern
L2	Silty clay		Yellow	Nil	
L3	Sludge		Black	Stoneware and Tile sherds	Ming dynasty
L4	Clay		Grayish Yellow	Celadon, glazed stone ware, tile sherds	Song dynasty
L5	Clay		Brown	Nil	Regolith

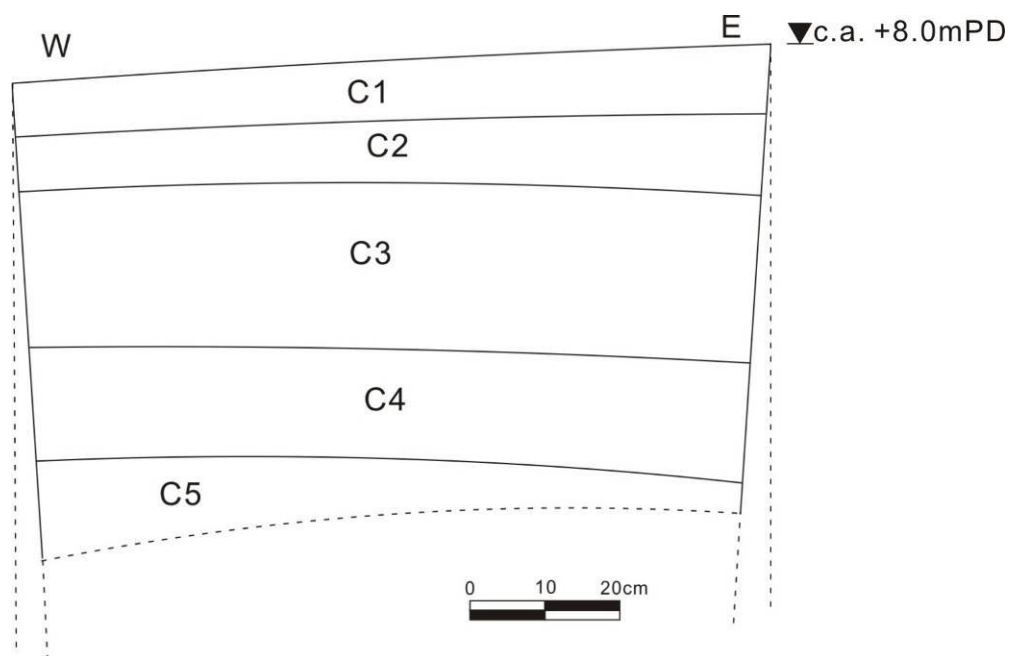
Test Pit Wall Photography



Northern Profile of K14a

Test Pit Wall Drawing

K14a North Profile




Representative Artefacts

Date	21-Sep-2010	Log by	WANG Wenjian
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Location	Kwu Tung North	Area Code	KTN	Test Pit No.	K16a
Test Pit Coordinate	829425E	840602N	Test Pit Measurement	1 m x 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +6.0mPD	
Stratigraphy and Finds					
Layer	Soil Texture		Soil Colour	Finds	Chronology
L1	Humus soil		Grayish Yellow	Nil	Modern
L2	Fill with rocks and plastics		Black	Nil	Modern

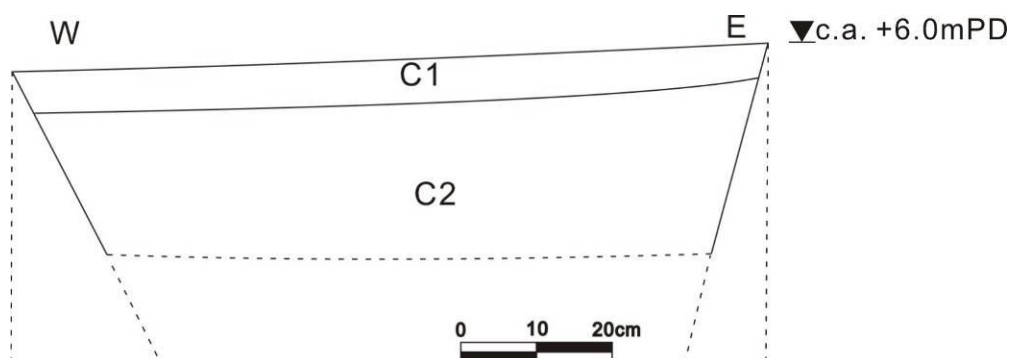
Test Pit Wall Photography



Northern Profile of K16a

Test Pit Wall Drawing

K16a North Profile



Representative Artefacts

Date	23-Sep-2010	Log by	WANG Wenjian
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Location	Kwu Tung North	Area Code	KTN	Test Pit No.	K17a
Test Pit Coordinate	829214E	840527N	Test Pit Measurement	1 m x 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +5.9mPD	
Stratigraphy and Finds					
Layer	Soil Texture		Soil Colour	Finds	Chronology
L1	Loose garden soil		Light Black	Glazed ware	Modern
L2	Sandy clay		Grayish Yellow	Unglazed stoneware, glazed ware	Modern
L3	Clay		Yellowish Gray	Unglazed stoneware, glazed ware	Modern
L4	Clay		Grayish Brown	Nil	
L5	Sandy clay		Brown	Nil	
L6	Sand with cobbles		Yellowish Brown	Nil	Regolith

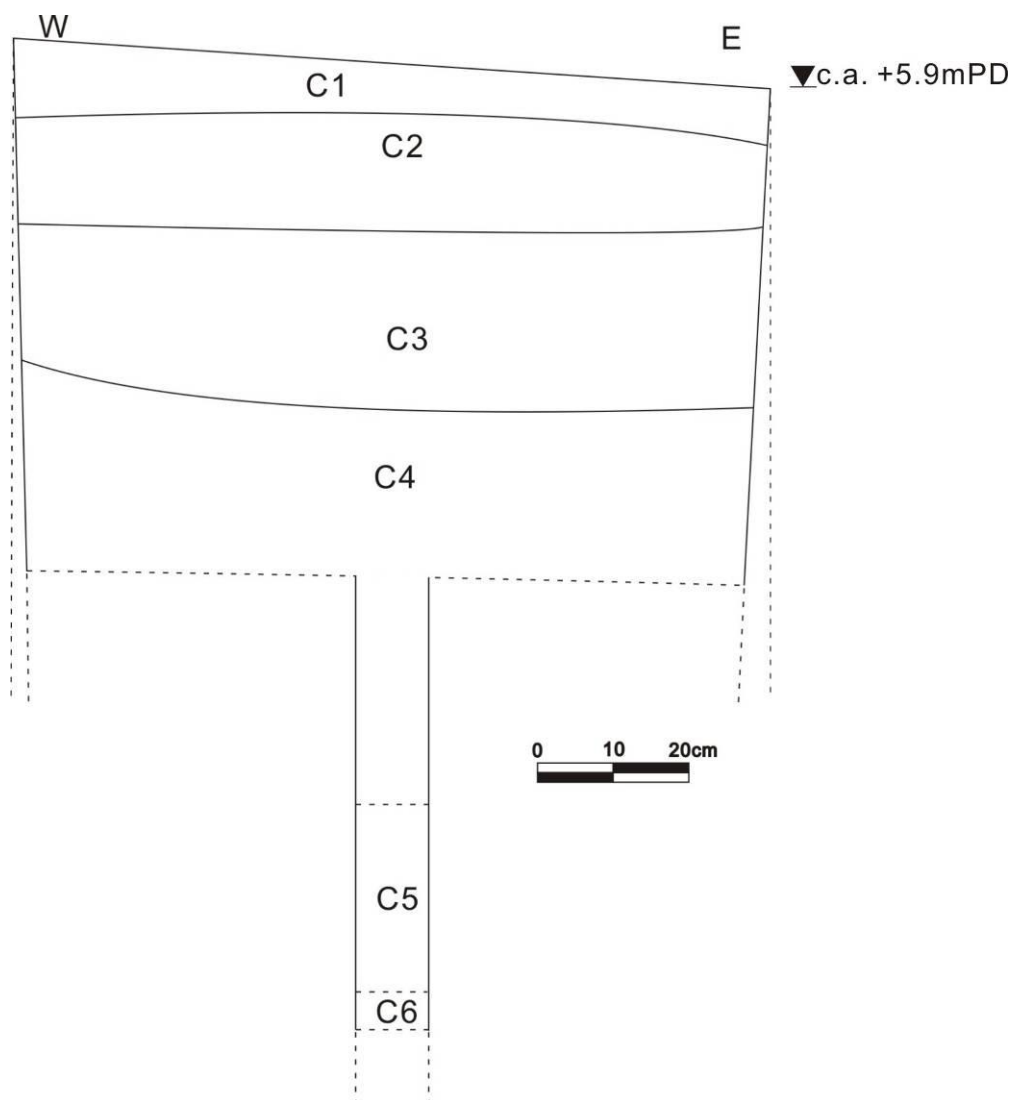
Test Pit Wall Photography



Northern Profile of K17a

Test Pit Wall Drawing

K17a North Profile




Representative Artefacts

Date	22-Sep-2010	Log by	WANG Wenjian
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2. FLN 粉嶺北

Location	Fanling North	Area Code	FLN	Test Pit No.	F1c
Test Pit Coordinate	830514E	841723 N	Test Pit Measurement	1.7 m × 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +5.9mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds	Chronology	
L1	Sandy Silt	Dark Brown	Nil	Modern Topsoil	
L2	Clayey sand	Brownish Yellow	Shreds of blue-and-white porcelain, white wares glazed wares, pottery shards; tiles; bricks	Late Qing Subsoil	
L3	Clayey Silt	Yellow	Nil	Qing or earlier Subsoil	
L4	Sandy Clay	Reddish Yellow	Nil	Regolith	
L5	Clay	Orange	Nil	Regolith	

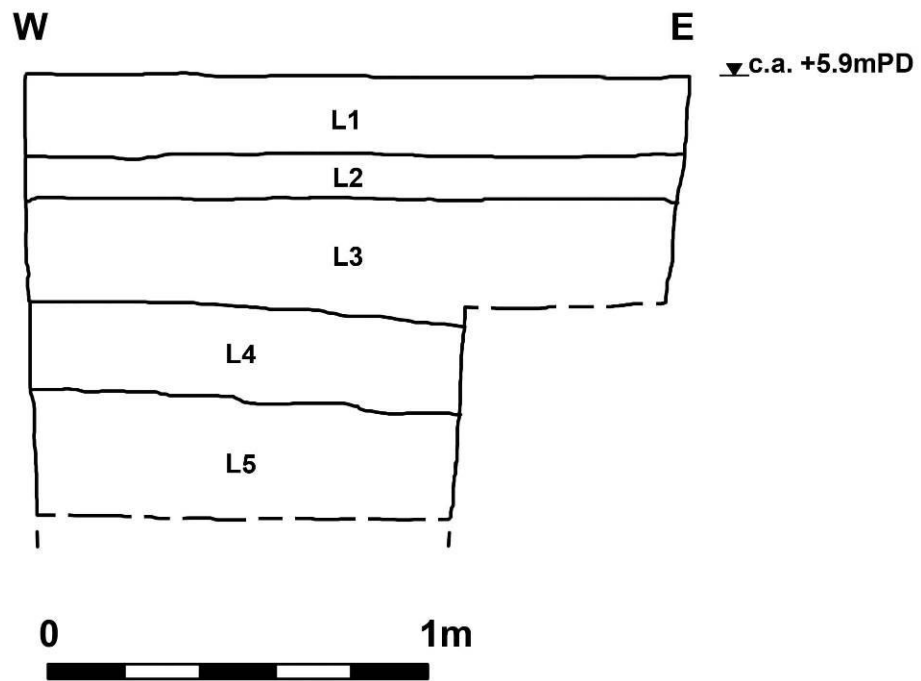
Test Pit Wall Photography



F1c Northern Profile

Test Pit Wall Drawing

F1c North Profile



Date


6-Sep-2010

Log by

Steven Ng

Location	Fanling North	Area Code	FLN	Test Pit No.	F2b
Test Pit Coordinate	830769E	841971N	Test Pit Measurement	1.2 m x 1.2 m	
Digging Method	Hand Digging		Ground Level	c.a. +18.5mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds		Chronology
L1	Clay	Dark Brown	Nil		Modern Topsoil
L2	Clayey Sand	Reddish Brown	Nil		Regolith

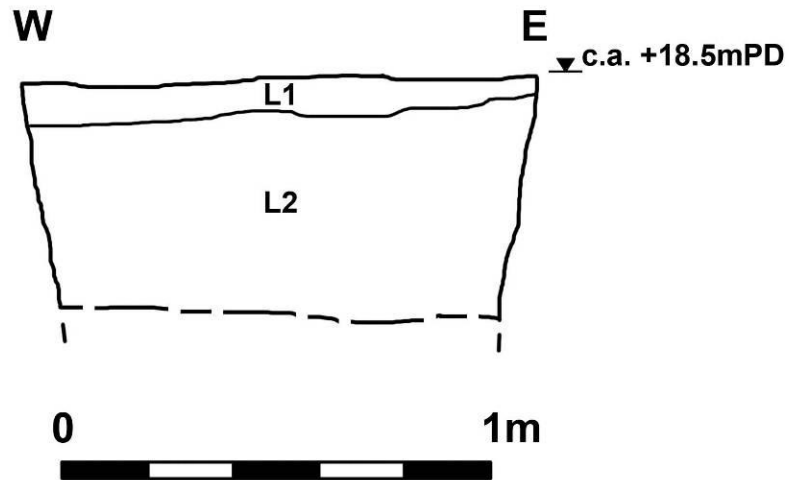
Test Pit Wall Photography



F2b Northern Profile

Test Pit Wall Drawing

F2b North Profile



Date

6-Sep-2010

Log by

Patrick Lai and
Hon Yeung Suen

Location	Fanling North	Area Code	FLN	Test Pit No.	F4a
Test Pit Coordinate	831042E	841954N	Test Pit Measurement	1.4 m x 1.2 m	
Digging Method	Hand Digging		Ground Level	c.a. +9.5mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds		Chronology
L1	Sandy Clay	Reddish Brown	Modern ware		Modern Topsoil
L2	Clayey Sand	Greyish Brown	Blue-and-white porcelain shreds,mixed with plastic strings and concrete dumps, white wares, tiles		Late Qing Subsoil
L3	Clayey Sand	Brown	Blue-and-white porcelain shreds, village ware shreds, tiles and bricks		Late Qing Subsoil
L4	Clay	Reddish Brown	Nil		Regolith

Test Pit Wall Photography



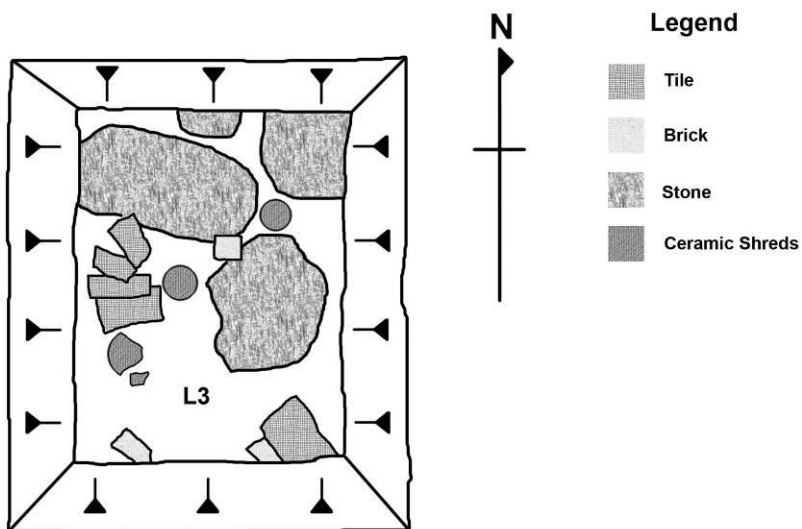
F4a Northern Profile at a depth of c.a. 90cm



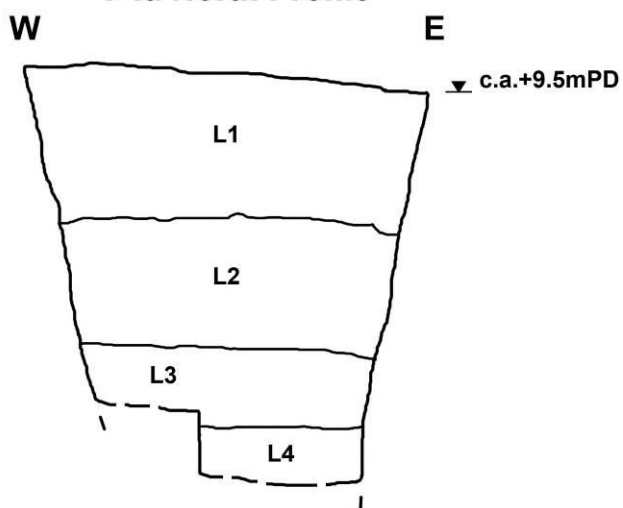
F4a Northern Profile

Test Pit Wall Drawing

F4a Plan at c.a. 90cm deep



F4a North Profile



Date


7-Sep-2010

Log by

Hon Yeung Suen

Location	Fanling North	Area Code	FLN	Test Pit No.	F4b
Test Pit Coordinate	831209E	841978N	Test Pit Measurement	1.6 m × 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +7.9mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds	Chronology	
L1	Clayey Silt	Greyish Brown	Tiles, bricks	Modern Topsoil	
L2	Sandy Silt	Dull Yellow Orange	Nil	Regolith	
L3	Clay with (quartz) pebbles	Orange	Nil	Bedrock	

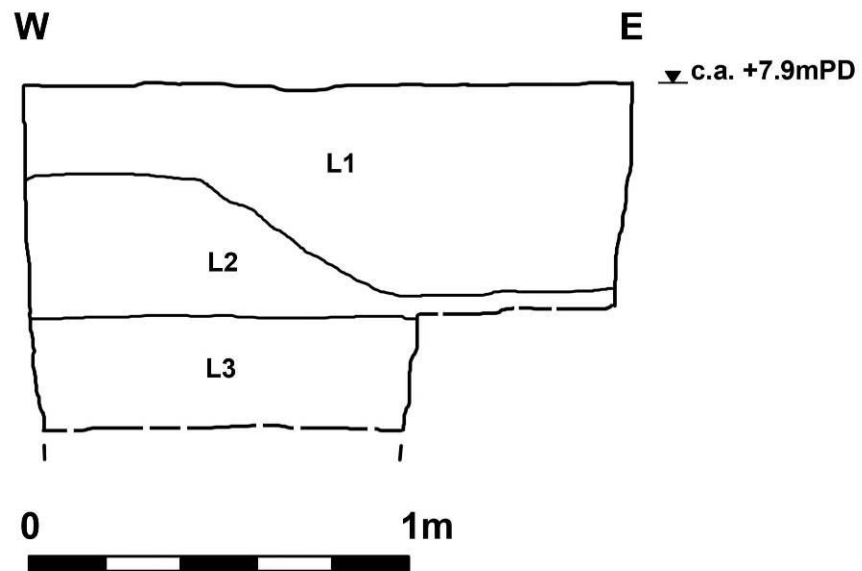
Test Pit Wall Photography



F4b Northern Profile

Test Pit Wall Drawing

F4b North Profile



Date

7-Sep-2010

Log by

Steven Ng

Location	Fanling North	Area Code	FLN	Test Pit No.	F6a
Test Pit Coordinate	831899E	841512N	Test Pit Measurement	1 m x 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +10.3mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds		Chronology
L1	Clayey Sand	Dark Brown	Nil		Modern Topsoil
L2	Clayey Silt	Reddish Brown	Nil		Regolith

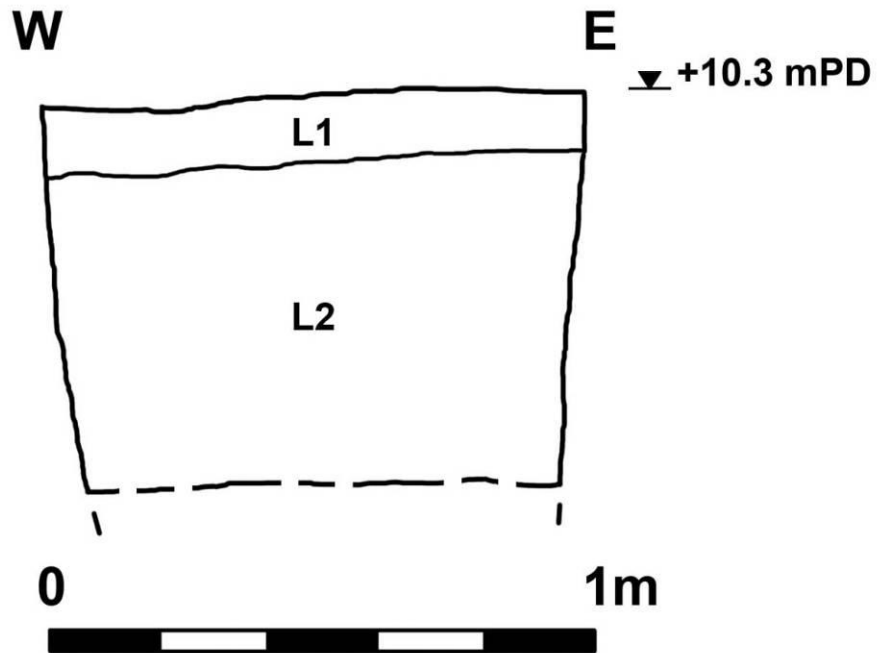
Test Pit Wall Photography



F6a Northern Profile

Test Pit Wall Drawing

F6a Northern Profile



Date

9-Sep-2010

Log by

Patrick Lai

Location	Fanling North	Area Code	FLN	Test Pit No.	F6c
Test Pit Coordinate	831915E	841501N	Test Pit Measurement	1 m x 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +11.0mPD	

Stratigraphy and Finds

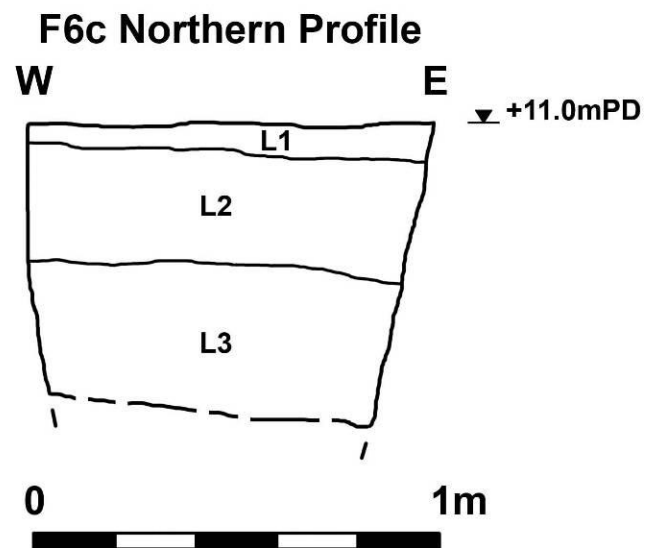
Layer	Soil Texture	Soil Colour	Finds	Chronology
L1	Clayey Sand	Greyish Brown	Modern rubbish	Modern Topsoil
L2	Clay	Yellowish Brown	Nil	Subsoil
L3	Clayey Sand	Reddish Brown	Nil	Regolith

Test Pit Wall Photography



F6c Northern Profile

Test Pit Wall Drawing




Date

9-Sep-2010

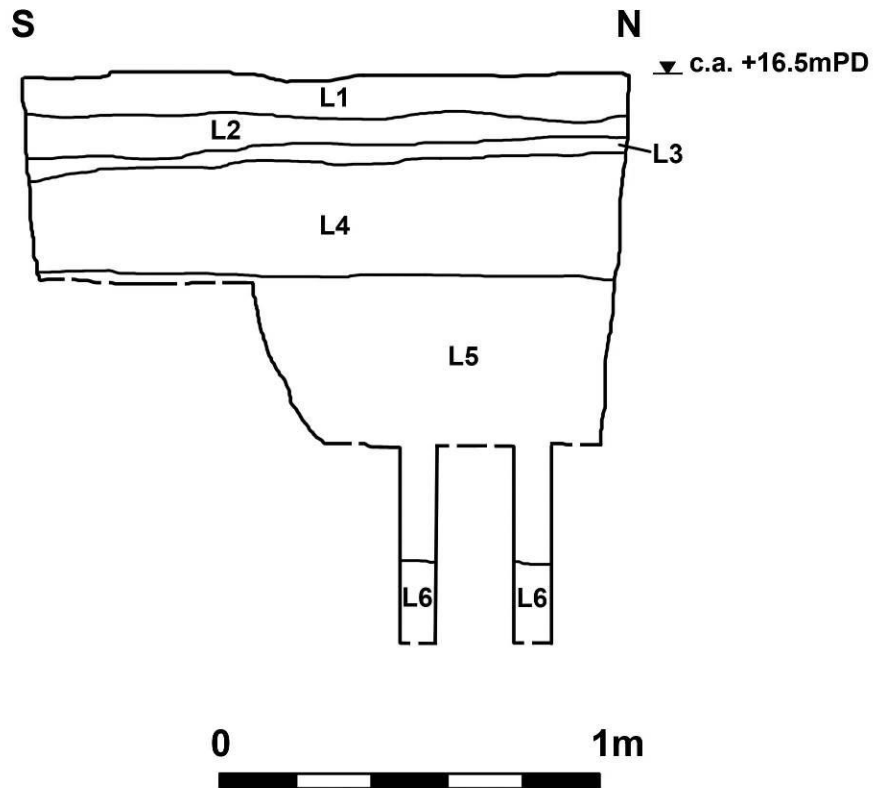
Log by

Hon Yeung Suen

Location	Fanling North	Area Code	FLN	Test Pit No.	F6g
Test Pit Coordinate	832000E	841454N	Test Pit Measurement	1.6 m x 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +16.5mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds	Chronology	
L1	Sandy Loam	Greyish Brown	Nil	Modern Topsoil	
L2	Clayey Sand	Dull Orange	Nil	Modern Subsoil	
L3	Clayey Loam	Orange	Nil	Modern fill soil of school foundation	
L4	Clayey Loam	Light Yellow Orange	Nil	In situ soil prior to the school construction	
L5	Sandy Loam	Greyish Brown	Nil	Regolith	
L6	Bedrock	Reddish Brown	Nil	Bedrock	
Test Pit Wall Photography					
					
Western Profile of F6g					

Test Pit Wall Drawing

F6g Western Profile



Date


8-Sep-2010

Log by

Steven Ng

Location	Fanling North	Area Code	FLN	Test Pit No.	F6h
Test Pit Coordinate	832041E	841455N	Test Pit Measurement	1.6 m × 1.2 m	
Digging Method	Hand Digging		Ground Level	c.a. +16.9mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds		Chronology
L1	Clay	Dark Brown	Nil		Modern Topsoil
L2	Clayey Silt	Orange Brown	Nil		Regolith

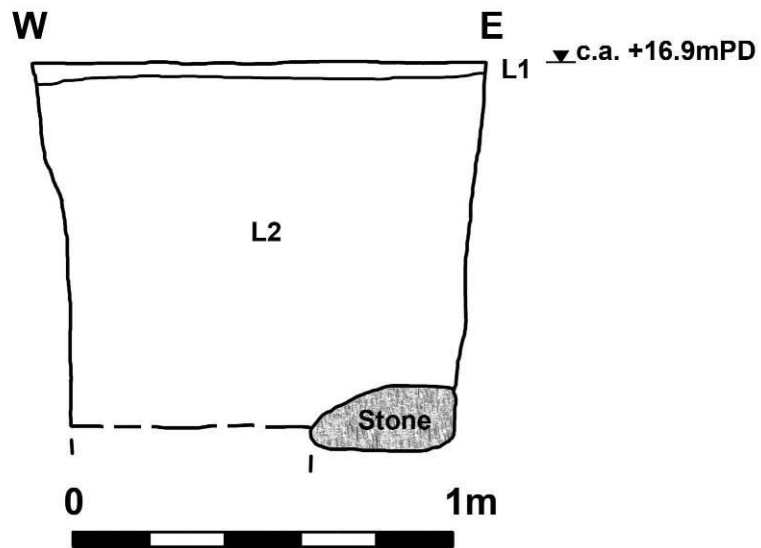
Test Pit Wall Photography



F6h Northern Profile

Test Pit Wall Drawing

F6h Northern Profile



Date


8-Sep-2010

Log by

SHUM KAM YUEN

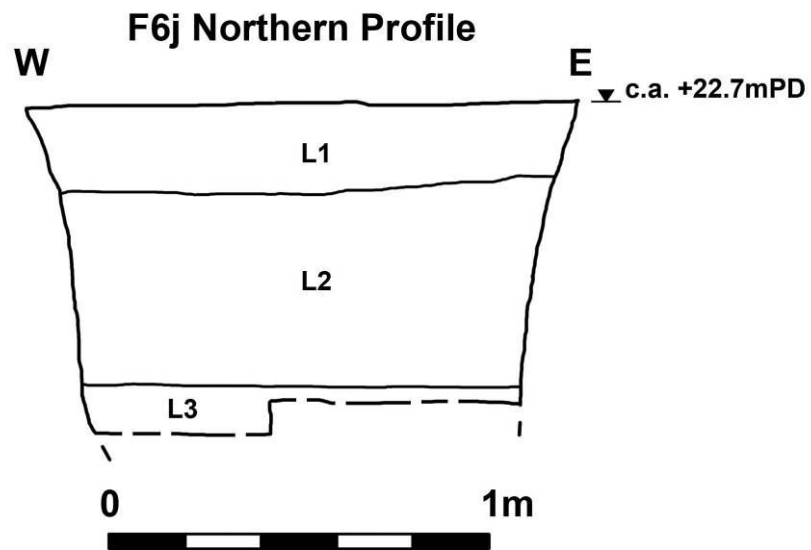
Location	Fanling North	Area Code	FLN	Test Pit No.	F6j
Test Pit Coordinate	832120E	841489N	Test Pit Measurement	1.5 m x 1.4 m	
Digging Method	Hand Digging		Ground Level	c.a. +22.7mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds		Chronology
L1	Clayey Silt	Dark Brown	Nil		Modern Topsoil
L2	Clayey Silt	Brownish Yellow	Nil		Subsoil
L3	Clayey Silt	Reddish Brown	Nil		Regolith

Test Pit Wall Photography



F6j Northern Profile

Test Pit Wall Drawing



Date


9-Sep-2010

Log by


Kathy Chan

Location	Fanling North	Area Code	FLN	Test Pit No.	F7a
Test Pit Coordinate	831860E	840527N	Test Pit Measurement	1.1 m x 1.1 m	
Digging Method	Hand Digging		Ground Level	c.a. +8.8mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds		Chronology
L1	Clayey Silt	Yellowish Brown	Nil		Modern Topsoil
L2	Clayey Silt	Greyish Brown	Nil		Modern Subsoil
L3	Clayey Silt	Greyish Yellow	Nil		Alluvium
L4	Clayey Silt	Orange Red	Nil		Regolith
L5	Clayey Silt	Bright Orange Red	Nil		Regolith

Test Pit Wall Photography

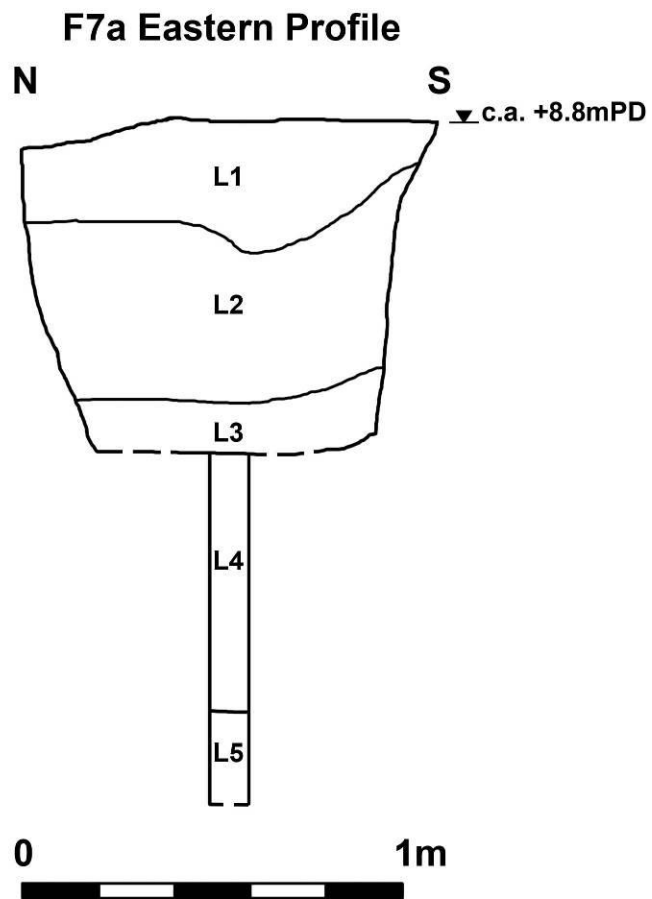


F7a Eastern Profile



F7a Soil of L4 and L5

Test Pit Wall Drawing



Date

10-Sep-2010

Log by

LO KA LEUNG

Location	Fanling North	Area Code	FLN	Test Pit No.	F8a
Test Pit Coordinate	832190E	840499N	Test Pit Measurement	1 m x 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +8.6mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds		Chronology
L1	Reddish Brown	Clayey Sand	Nil		Modern Fill soil
L2	Greyish Brown	Clayey Silt	Nil; underground water emerged at c.a. 40cm deep		Modern
L3	Reddish Brown	Clay	Nil		Regolith

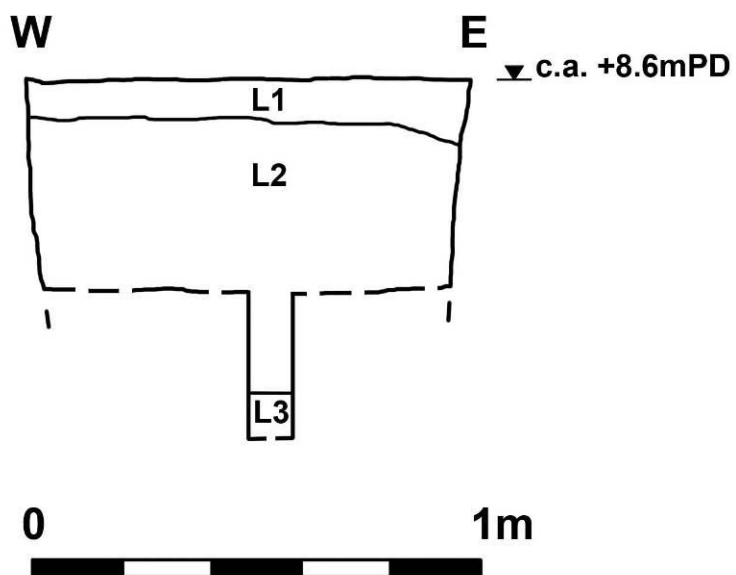
Test Pit Wall Photography



F8a Northern Profile with Soil from L3 near the top of the photo

Test Pit Wall Drawing

F8a Northern Profile



Date

10-Sep-2010


Log by

Patrick Lai and
Hon Yeung Suen

3. PC/TKL 坪輦／打鼓嶺

Location	Ping Che –Ta Kwu Ling	Area Code	PC/TKL	Test Pit No.	P1a
Test Pit Coordinate	834 628E	844 338N	Test Pit Measurement	1m x 1m	
Digging Method	Hand Digging		Ground Level	c.a. +15.6mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds		Chronology
L1	Clay	Greyish Brown	Nil		Modern
L2	Clayey Silt	Brown	Nil		
L3	Clayey Sand	Reddish Yellow	Nil		Regolith

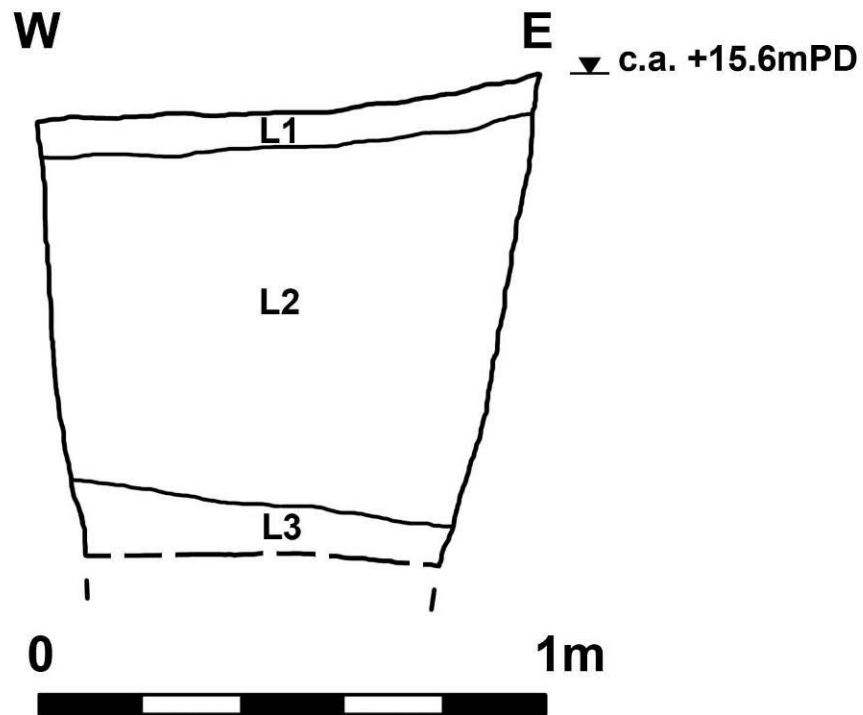
Test Pit Wall Photography



Northern Profile of P1a

Test Pit Wall Drawing

P1a Northern Profile



Date	17-Sep-2010	Log by	HON YEUNG SUEN
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Location	Ping Che –Ta Kwu Ling	Area Code	PC/TKL	Test Pit No.	P2a
Test Pit Coordinate	834 452E	843 790N	Test Pit Measurement	1.6m x 1m	
Digging Method	Hand Digging		Ground Level	c.a. +14.5mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds		Chronology
L1	Clay	Blackish Brown	Nil		
L2	Clay	Yellowish Brown	Nil		
L3	Clay	Light Yellowish Brown	Nil		Regolith

Test Pit Wall Photography



Northern Profile of P2a

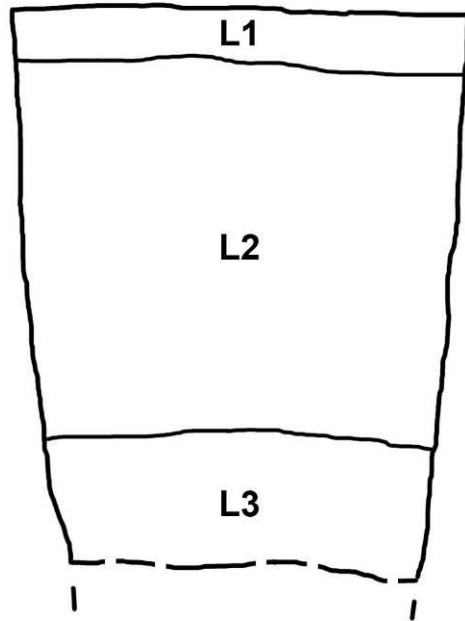
Test Pit Wall Drawing

P2a Northern Profile

W

E

▼ c.a. +14.5mPD



0

1m



Date


16-Sep-2010

Log by

KAM YUEN SHUM

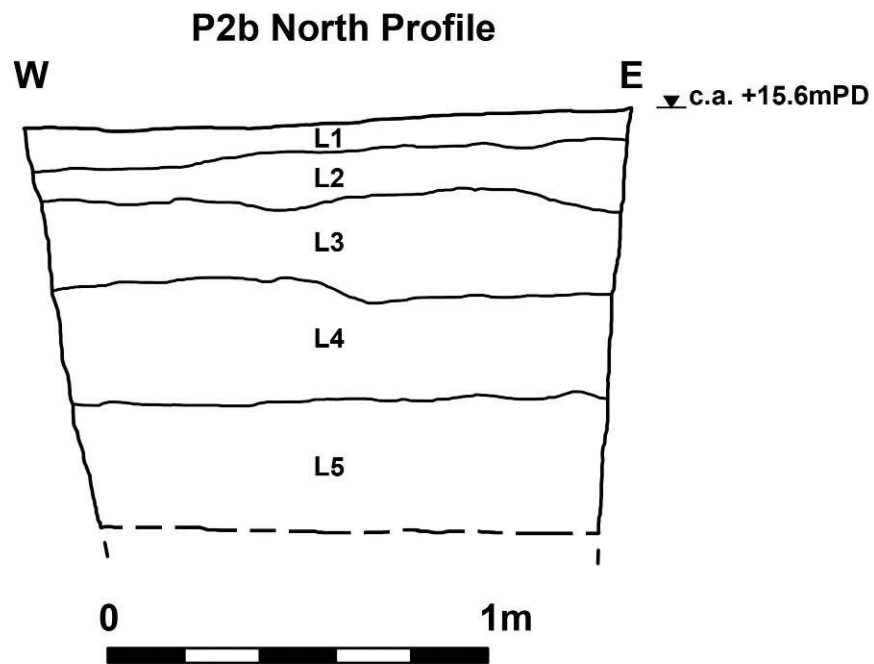
Location	Ping Che –Ta Kwu Ling	Area Code	PC/TKL	Test Pit No.	P2b
Test Pit Coordinate	834 512E	843 787N	Test Pit Measurement	1.6m x 1m	
Digging Method	Hand Digging		Ground Level	c.a. +15.6mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds	Chronology	
L1	Medium Sand	Dark Blackish Brown	Shreds of flowerpot	Modern	
L2	Medium Sand	Greyish Brown	Nil		
L3	Medium Sand	Light Greyish Brown	Nil		
L4	Medium Sand	Light Brownish Yellow	Nil		
L5	Silty Sand	Light Brownish Yellow	Nil	Regolith	

Test Pit Wall Photography



Northern Profile of P2b

Test Pit Wall Drawing



Date


16-Sep-2010

Log by

SIU TONG NG

Location	Ping Che –Ta Kwu Ling	Area Code	PC/TKL	Test Pit No.	P3b
Test Pit Coordinate	834343E	843626N	Test Pit Measurement	1m x 1m	
Digging Method	Hand Digging		Ground Level	c.a. +14.7mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds		Chronology
L1	Clayey Silt	Blackish Brown	Nil		Modern
L2	Sand with Pebbles	Light Brownish Grey	Nil		Modern
L3	Sand with Pebbles	Greyish Brown	Nil		Modern
L4	Clayey Silt	Dark Brown	Nil		Regolith
L5	Cobbles	Dark Brown	Nil		Regolith

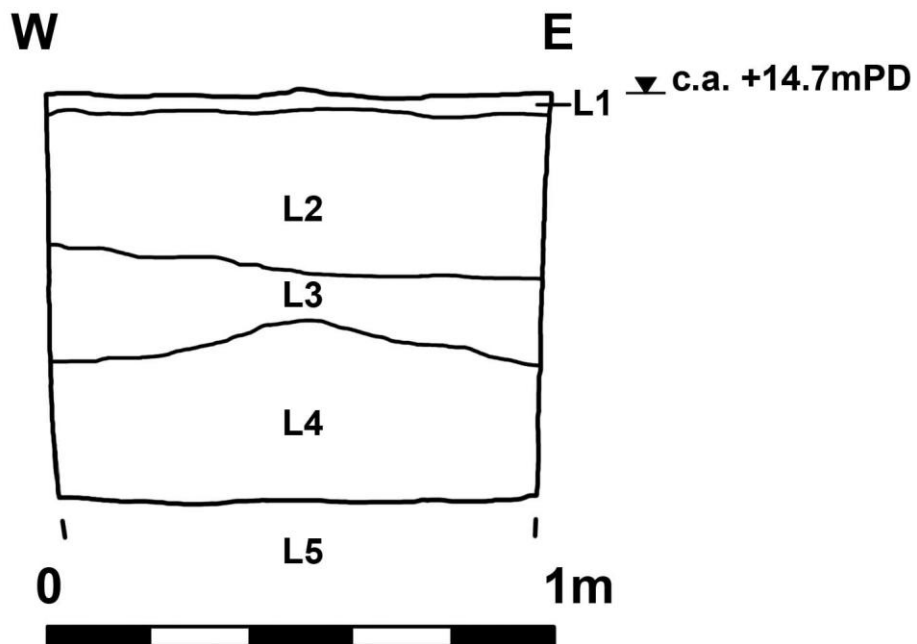
Test Pit Wall Photography



Northern Profile of P3b

Test Pit Wall Drawing

P3b Northern Profile



Date


16-Sep-2010

Log by

KAM YUEN SHUM

Location	Ping Che –Ta Kwu Ling	Area Code	PC/TKL	Test Pit No.	P4b
Test Pit Coordinate	833 427E	843 576N	Test Pit Measurement	1.5m x 1 m	
Digging Method	Hand Digging		Ground Level	c.a. +15.1mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds	Chronology	
L1	Sandy Silt		Nil	Modern	
L2	Sand		Concrete Rubbles	Modern	
L3	Clayey Silt		Eroded Quartz and Concrete Rubbles	Modern	
L4	Sandy Clay		Industrial waste	Modern	
L5	Silty Sand		Nil	Regolith	

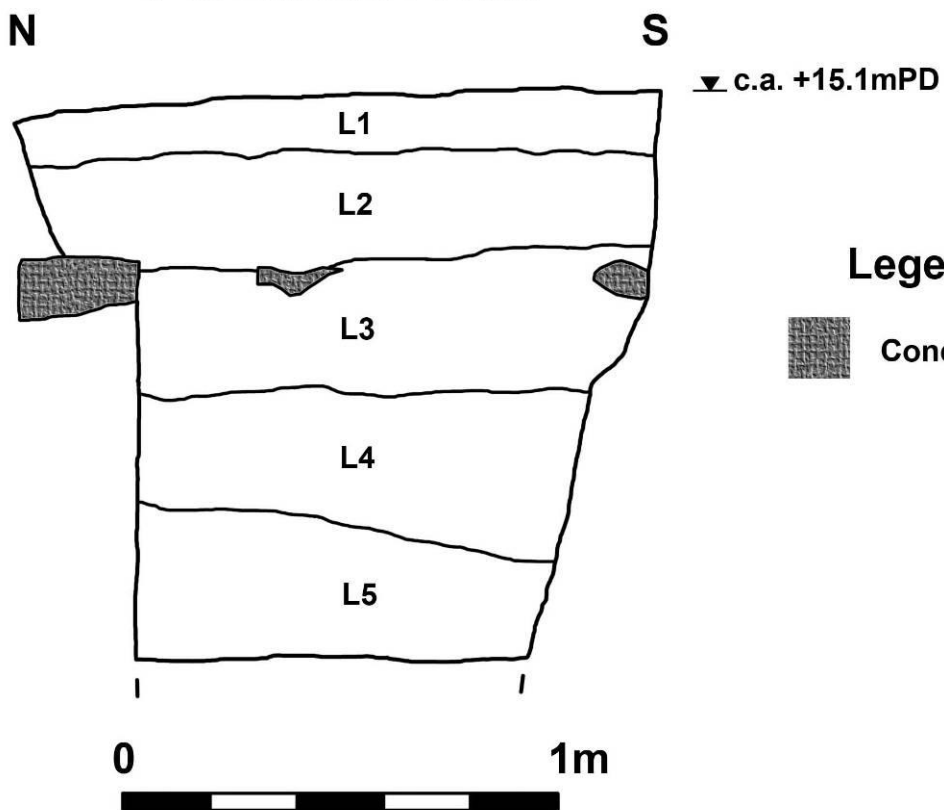
Test Pit Wall Photography



Eastern Profile of P4b

Test Pit Wall Drawing

P4b Eastern Profile



Legend



Concrete Rubbles

Date

28-Sep-2010

Log by

Patrick Lai

Location	Ping Che –Ta Kwu Ling	Area Code	PC/TKL	Test Pit No.	P4c
Test Pit Coordinate	833 495E	843 590N	Test Pit Measurement	1.5m x 1m	
Digging Method	Hand Digging		Ground Level	c.a. +15.5mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds		Chronology
L1	Clayey Silt		Nil		Modern
L2	Coarse Sand mix with Dark Reddish Brown		Nil		
L3	Coarse Sand mix with gravels		Nil		Regolith

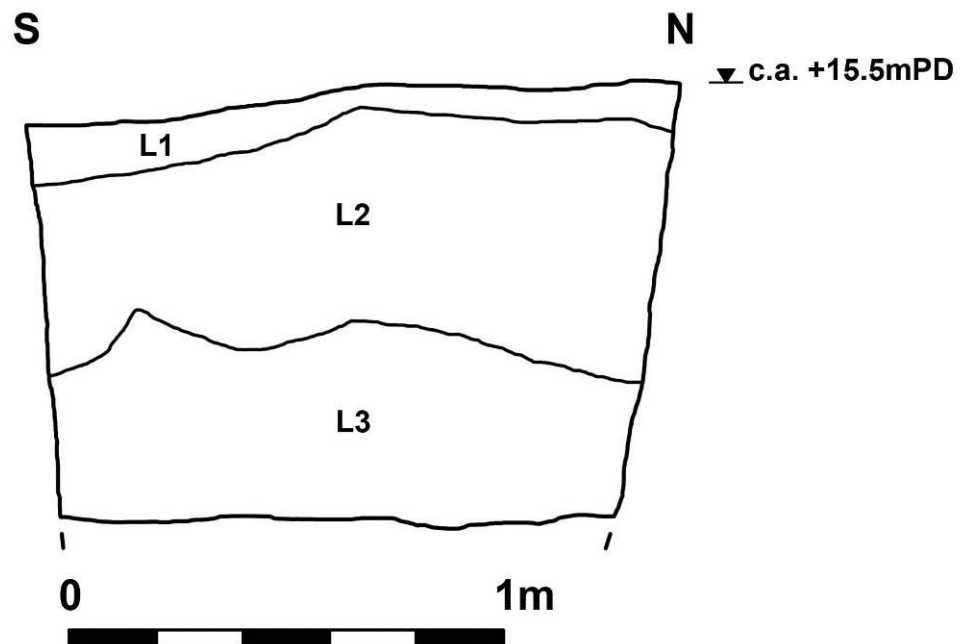
Test Pit Wall Photography



Western Profile of P4c

Test Pit Wall Drawing

P4c Western Profile



Date


28-Sep-2010

Log by

SIU TONG NG

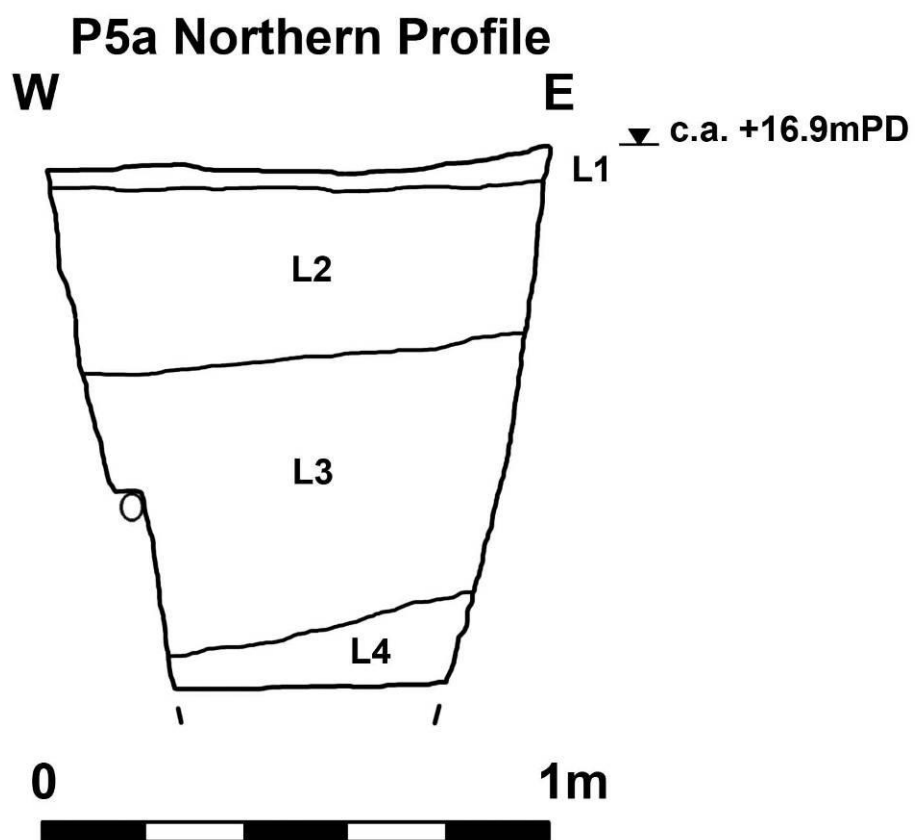
Location	Ping Che –Ta Kwu Ling	Area Code	PC/TKL	Test Pit No.	P5a
Test Pit Coordinate	833 455E	843 320N	Test Pit Measurement	1m x 1m	
Digging Method	Hand Digging		Ground Level	c.a. +16.9mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds		Chronology
L1	Sand with pebbles	Greyish Brown	Nil		Modern
L2	Sand with pebbles	Brown	Nil		
L3	Clay	Yellowish Brown			
L4	Clayey Silt	Reddish Brown	Nil		Regolith

Test Pit Wall Photography



Northern Profile of P5a

Test Pit Wall Drawing



Date

27-Sep-2010

Log by

HON YEUNG SUEN

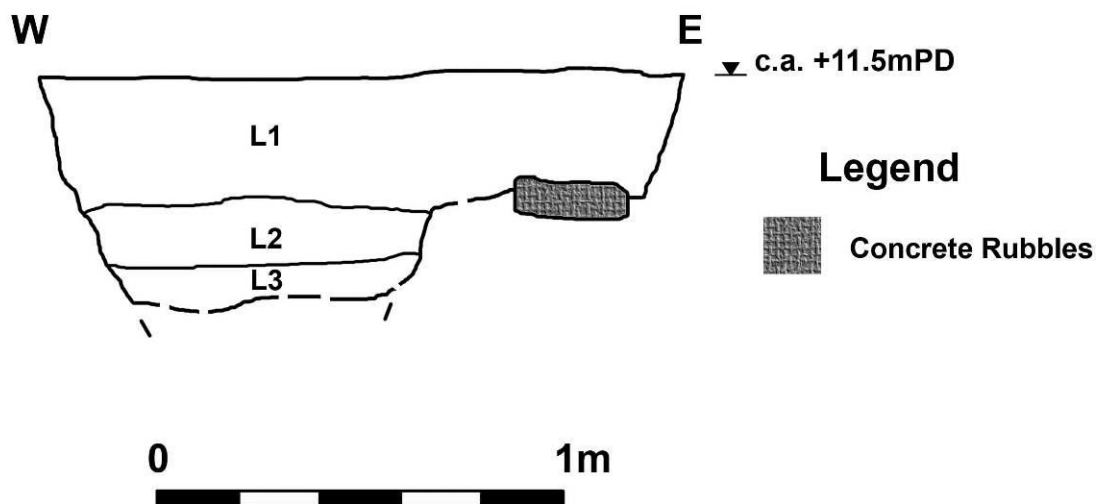
Location	Ping Che –Ta Kwu Ling	Area Code	PC/TKL	Test Pit No.	P6a
Test Pit Coordinate	833 975E	843 156N	Test Pit Measurement	1.6m x 1.1m	
Digging Method	Hand Digging		Ground Level	c.a. +11.5mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds		Chronology
L1	Sandy Silt	Dark Brown	Nil		Modern
L2	Clayey Sand with Quartz gravels	Brown	Concrete Rubbles		Modern
L3	Cobbles	Reddish Brown	Nil		Regolith

Test Pit Wall Photography

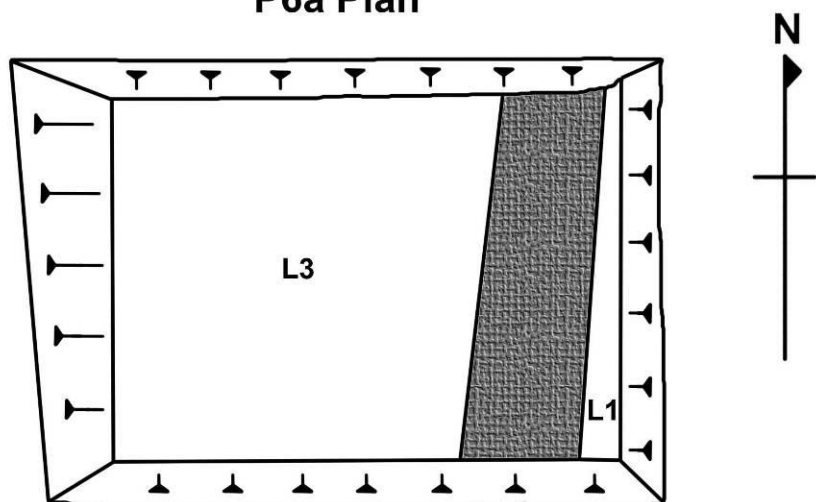
Northern Profile of P6a

Test Pit Wall Drawing

P6a Northern Profile



P6a Plan



Date

13-Sep-2010

Log by

KA LEUNG LO

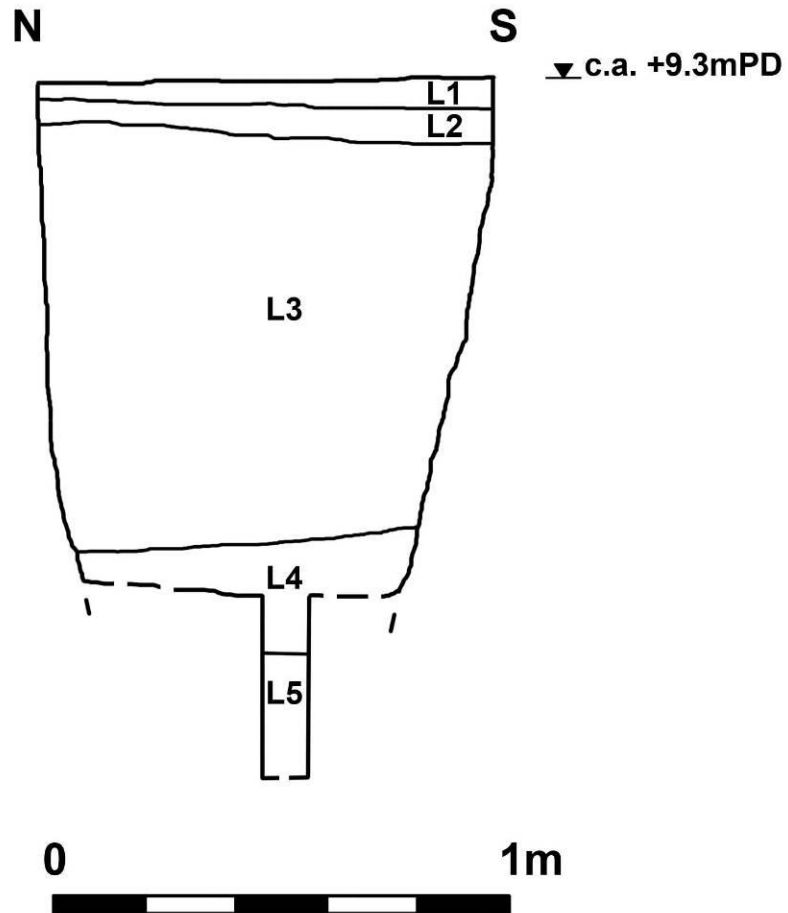
Location	Ping Che –Ta Kwu Ling	Area Code	PC/TKL	Test Pit No.	P6b
Test Pit Coordinate	833 917E	843 108N	Test Pit Measurement	1m x 1m	
Digging Method	Hand Digging		Ground Level	c.a. +9.3mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds		Chronology
L1	Clay	Dark Brown	Nil		Modern
L2	Clayey Sand	Brown	Nil		
L3	Clay	Greyish Brown	Nil		
L4	Sand	Yellow	Nil		
L5	Clayey Sand	Greyish Brown	Nil		Regolith

Test Pit Wall Photography

Eastern Profile of P6b

Test Pit Wall Drawing

P6b Eastern Profile



Date

13-Sep-2010

Log by

Patrick Lai

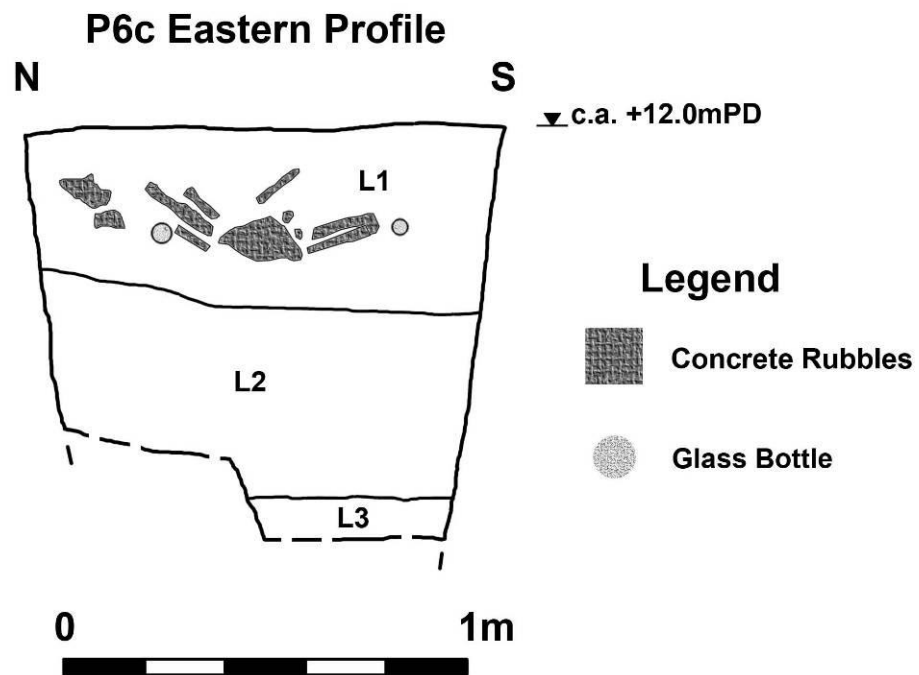
Location	Ping Che –Ta Kwu Ling	Area Code	PC/TKL	Test Pit No.	P6c
Test Pit Coordinate	834 082E	843 145N	Test Pit Measurement	1.2m x 1.2m	
Digging Method	Hand Digging		Ground Level	c.a. +12.0mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds		Chronology
L1	Clayey Silt	Dark Brown	Glass bottles, concrete rubbles, pot shreds, bricks		Modern
L2	Clayey Silt	Greyish Yellow	Nil		
L3	Clayey sand	Bright Greyish Yellow	Nil		Regolith

Test Pit Wall Photography



Eastern Profile of P6c

Test Pit Wall Drawing



Date

13-Sep-2010

Log by

HON YEUNG SUEN

Location	Ping Che –Ta Kwu Ling	Area Code	PC/TKL	Test Pit No.	P7a
Test Pit Coordinate	834 253E	843 071N	Test Pit Measurement	1m x 1m	
Digging Method	Hand Digging		Ground Level	c.a. +13.0mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds		Chronology
L1	Clayey Silt	Brown	Concrete fragments	Rubbles, glass	Modern
L2	Clayey Silt	Brown	Nil		
L3	Clayey Silt	Bright Brown	Nil		
L4	Clayey Silt	Yellowish Brown mix with Bright Reddish Brown	Nil		Regolith

Test Pit Wall Photography



Northwestern Profile of P7a

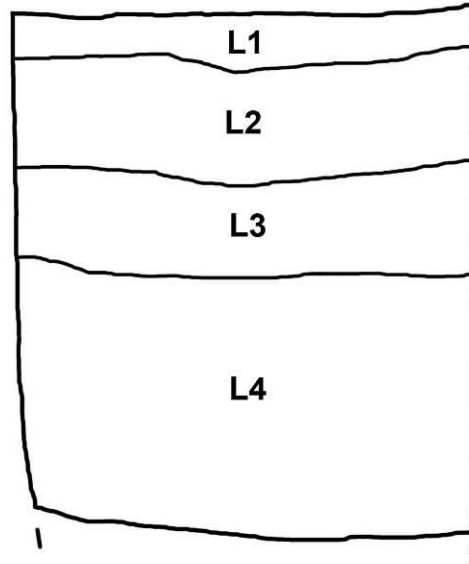
Test Pit Wall Drawing

P7a Northwestern Profile

SW

NE

▼ c.a. +13.0mPD



0

1m



Date


27-Sep-2010

Log by

SIU TONG NG

Location	Ping Che –Ta Kwu Ling	Area Code	PC/TKL	Test Pit No.	P8c
Test Pit Coordinate	834 485E	843 197N	Test Pit Measurement	1m x 1m	
Digging Method	Hand Digging		Ground Level	c.a. +15.5mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds	Chronology	
L1	Silty Sand	Brown	Pottery shards, tiles	Modern	
L2	Clayey Sand	Dark Brown	Blue-and-white Porcelain bowl fragment, plastic	Modern	
L3	Clayey Sand	Yellowish Brown	Blue-and-white Porcelain, pottery shreds, tile fragments	Qing	
L4	Clayey Silt	Yellowish Brown	Nil		
L5	Silty Clay	Reddish Brown	Nil	Regolith	

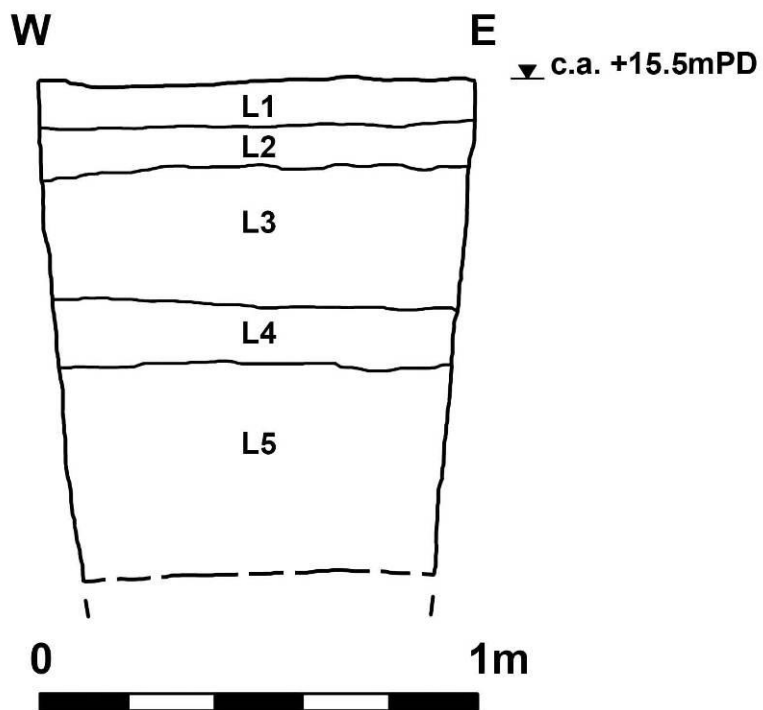
Test Pit Wall Photography



Northern Profile of P8c

Test Pit Wall Drawing

P8c Northern Profile



Date


14-Sep-2010

Log by

Patrick Lai

Location	Ping Che –Ta Kwu Ling	Area Code	PC/TKL	Test Pit No.	P8d
Test Pit Coordinate	834 644E	843 185N	Test Pit Measurement	1.2m x 1.2m	
Digging Method	Hand Digging		Ground Level	c.a. +15.3mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds	Chronology	
L1	Clayey Silt	Dark Brown	Tiles, bricks, porcelain and pot shreds	Qing to Modern	
L2	Clayey Silt	Orangish Yellow	Nil	Regolith	

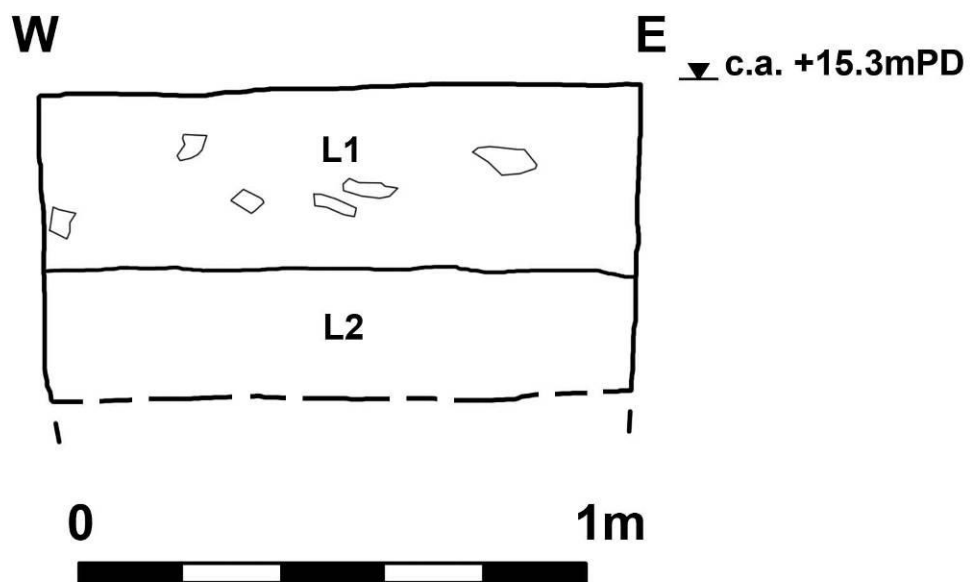
Test Pit Wall Photography



Northern Profile of P8d

Test Pit Wall Drawing

P8d Northern Profile



Date


14-Sep-2010

Log by

Kathy Chan

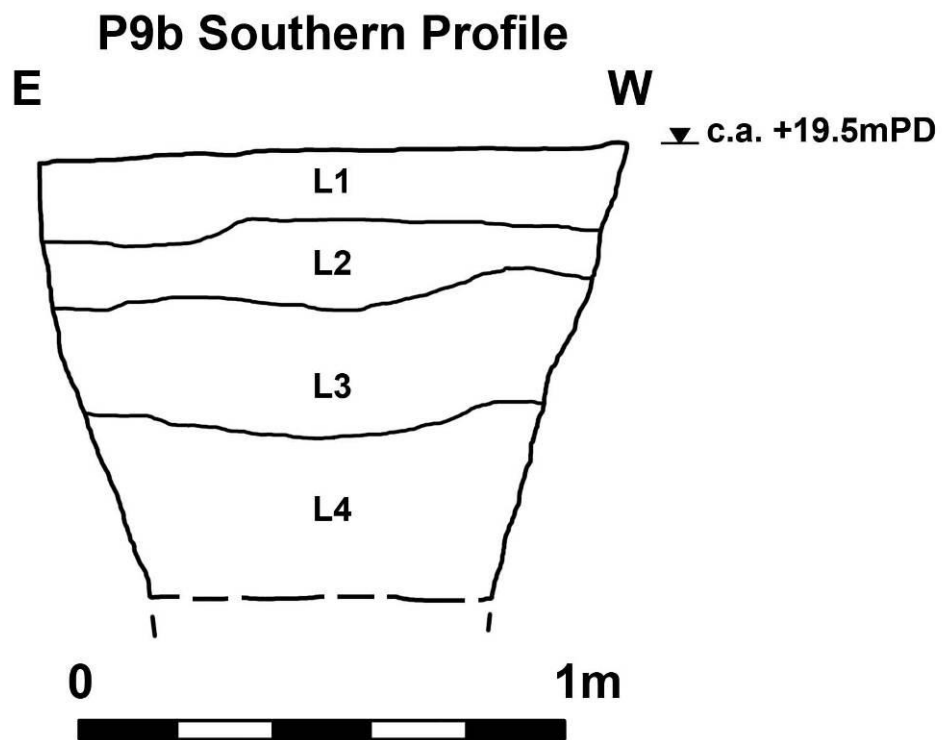
Location	Ping Che –Ta Kwu Ling	Area Code	PC/TKL	Test Pit No.	P9b
Test Pit Coordinate	833 687E	842 769N	Test Pit Measurement	1.2m x 1.2m	
Digging Method	Hand Digging		Ground Level	c.a. +19.5mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds		Chronology
L1	Coarse Sand	Dark Brown	Nil		
L2	Coarse Sand	Greyish Brown	Nil		
L3	Silty Sand	Bright Reddish Yellow	Nil		Regolith
L4	Clayey Silt	Reddish Yellow	Nil		Regolith

Test Pit Wall Photography



Southern Profile of P9b

Test Pit Wall Drawing



Date

15-Sep-2010

Log by

Kathy Chan

Location	Ping Che –Ta Kwu Ling	Area Code	PC/TKL	Test Pit No.	P9e
Test Pit Coordinate	833 720E	842 719N	Test Pit Measurement	1.6m × 1m	
Digging Method	Hand Digging		Ground Level	c.a. +21.7mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds		Chronology
L1	Clay	Dark Brown	Nil		Modern
L2	Clay	Yellowish Brown	Nil		Modern
L3	Clay	Orangish Brown	Nil		Modern
L4	Rock		Nil		Regolith

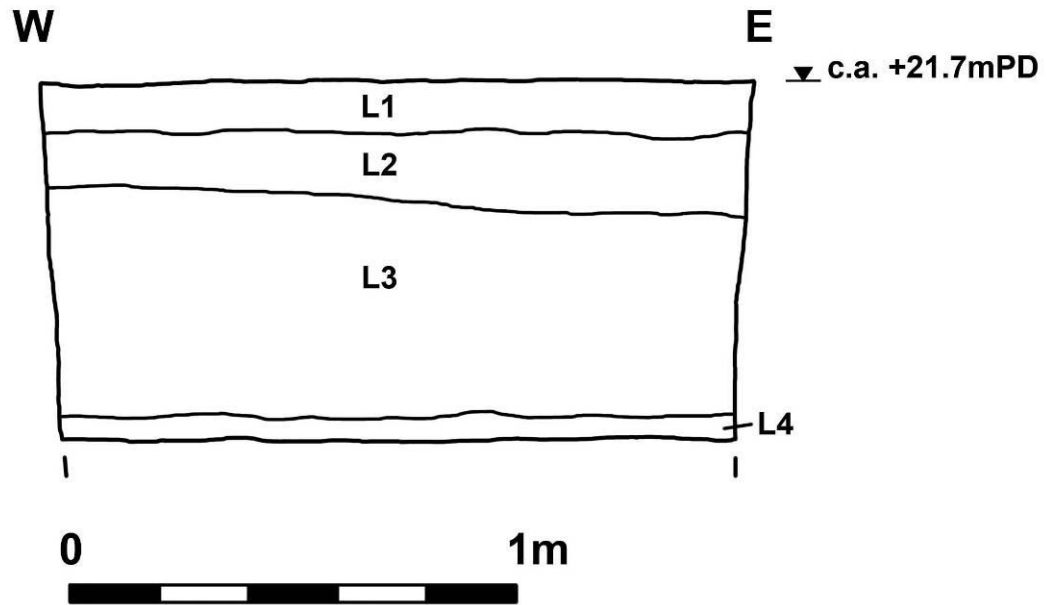
Test Pit Wall Photography



Northern Profile of P9e

Test Pit Wall Drawing

P9e Northern Profile



Date


15-Sep-2010

Log by

KAM YUEN SHUM

Location	Ping Che –Ta Kwu Ling	Area Code	PC/TKL	Test Pit No.	P11a
Test Pit Coordinate	833 970E	842 421N	Test Pit Measurement	1.56m x 1m	
Digging Method	Hand Digging		Ground Level	c.a. +24.5mPD	
Stratigraphy and Finds					
Layer	Soil Texture	Soil Colour	Finds		Chronology
L1	Clayey Silt	Dull Yellowish Brown	Nil		
L2	Sand Clay	Bright Brown	Nil		Regolith

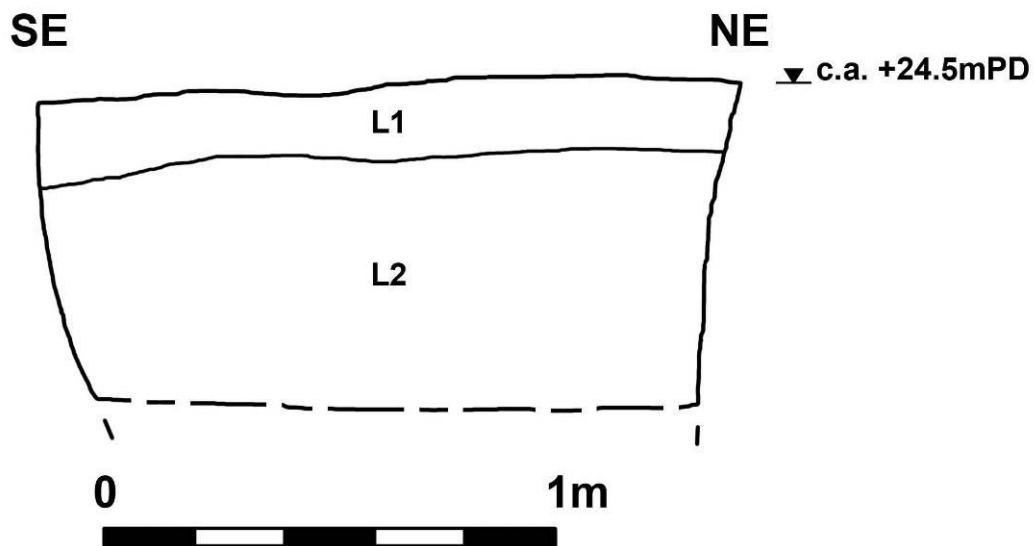
Test Pit Wall Photography



Southwestern Profile of P11a

Test Pit Wall Drawing

P11a Southwestern Profile



Date


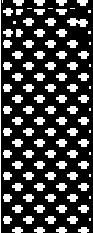
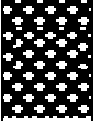

































17-Sep-2010

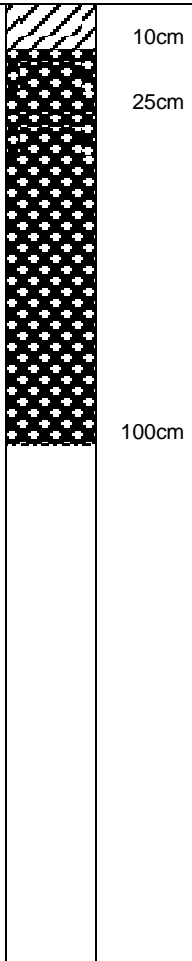
Log by

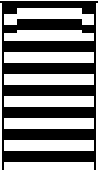
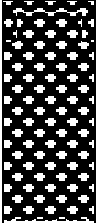











Kathy Chan













II. Auger Hole Records 鑽孔紀錄



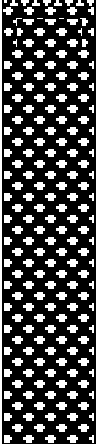











1. KTN 古洞北


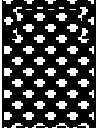











Location	Kwu Tung North	Area Code	KTN	Auger Hole No.	K1b																									
Auger Hole Coordinate	828005E	842150N	Auger Hole Drill Size	10cm diameter																										
Augering Method	Hand Augering		Ground Level	c.a. +11.3 mPD																										
SOIL PROFILE	DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS																								
Ground Surface																														
	10cm	L1	Light Black	Humus soil																										
	70cm	L2	Light Yellow	Loose clay																										
	90cm	L3	Reddish Yellow	Clay with quartz granules		Regolith																								
<div> <div> Legend </div> <div> <table border="1"> <tr> <td></td><td>=Concrete or Modern Fill</td> <td></td><td>=Loamy Soil</td> <td></td><td>=Regolith</td> </tr> <tr> <td></td><td>=Gravel</td> <td></td><td>=Clay</td> <td></td><td>=Humus</td> </tr> <tr> <td></td><td>=Sand</td> <td></td><td>=Sludge</td> <td></td><td>=Silt</td> </tr> <tr> <td></td><td>=Silty clay</td> <td></td><td>=Sandy clay</td> <td></td><td></td> </tr> </table> </div> </div> <div> <div> Interpretation </div> <div> Valley terrace deposit over slope alluvial clay; </div> </div>								=Concrete or Modern Fill		=Loamy Soil		=Regolith		=Gravel		=Clay		=Humus		=Sand		=Sludge		=Silt		=Silty clay		=Sandy clay		
	=Concrete or Modern Fill		=Loamy Soil		=Regolith																									
	=Gravel		=Clay		=Humus																									
	=Sand		=Sludge		=Silt																									
	=Silty clay		=Sandy clay																											
Date	6-Sep-2010		Log by	WANG Wenjian																										












Location	Kwu Tung North	Area Code	KTN	Auger Hole No.	K2b																									
Auger Hole Coordinate	828030E	841980N	Auger Hole Drill Size	10cm diameter																										
Augering Method	Hand Augering		Ground Level	c.a. +18.0 mPD																										
SOIL PROFILE	DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS																								
Ground Surface																														
	10cm	L1	Light Black	Loamy soil																										
	25cm	L2	Light Yellow	Loose clay																										
	100cm	L3	Reddish Yellow	Clay		Regolith																								
Legend			Interpretation																											
<table border="1"> <tr> <td></td><td>=Concrete or Modern Fill</td> <td></td><td>=Loamy Soil</td> <td></td><td>=Regolith</td> </tr> <tr> <td></td><td>=Gravel</td> <td></td><td>=Clay</td> <td></td><td>=Humus</td> </tr> <tr> <td></td><td>=Sand</td> <td></td><td>=Sludge</td> <td></td><td>=Silt</td> </tr> <tr> <td></td><td>=Silty clay</td> <td></td><td>=Sandy clay</td> <td></td><td></td> </tr> </table>				=Concrete or Modern Fill		=Loamy Soil		=Regolith		=Gravel		=Clay		=Humus		=Sand		=Sludge		=Silt		=Silty clay		=Sandy clay						
	=Concrete or Modern Fill		=Loamy Soil		=Regolith																									
	=Gravel		=Clay		=Humus																									
	=Sand		=Sludge		=Silt																									
	=Silty clay		=Sandy clay																											
Date		6-Sep-2010	Log by		WANG Wenjian																									











Location	Kwu Tung North	Area Code	KTN	Auger Hole No.	K3a	
Auger Hole Coordinate	828112E	841814N	Auger Hole Drill Size	10cm diameter		
Augering Method	Hand Augering		Ground Level	c.a. +14.7 mPD		
SOIL PROFILE	DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS
Ground Surface						
	0 4 8 12 16 20	L1	Black	Sludge		Ditch deposit
	40 60 80 90	L2	Pale yellow	Loose fine clay		Fluvial sediment
	100 120 140 160 180 200					
Legend			Interpretation			
 =Concrete or Modern Fill	 =Loamy Soil	 =Regolith				
 =Gravel	 = Clay	 =Humus				
 =Sand	 = Sludge	 =Silt				
 = Silty clay	 = Sandy clay					
Date	8-Sep-2010	Log by	WANG Wenjian			














Location	Kwu Tung North	Area Code	KTN		Auger Hole No.	K5a
Auger Hole Coordinate	828592E	841886N	Auger Hole Drill Size		10cm diameter	
Augering Method	Hand Augering		Ground Level		c.a. +25.4 mPD	
SOIL PROFILE		DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS
Ground Surface						
	15cm	0 4 8 12 16 20	L1	Gray	Gravels	
		20 40 60 80 100 120 140 160 180 200				
Legend				Interpretation		
	=Concrete or Modern Fill		=Loamy Soil		=Regolith	
	=Gravel		=Clay		=Humus	
	=Sand		=Sludge		=Silt	
	=Silty clay		=Sandy clay			
Date		9-Sep-2010		Log by		WANG Wenjian


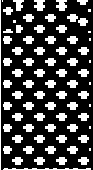











Location	Kwu Tung North	Area Code	KTN	Auger Hole No.	K5d	
Auger Hole Coordinate	828759E	841789N	Auger Hole Drill Size	10cm diameter		
Augering Method	Hand Augering		Ground Level	c.a. +32.0 mPD		
SOIL PROFILE	DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS
Ground Surface						
 15cm	0 4 8 12 16 20	L1	Light Black	Humus soil		
 35cm	20 40 60 80 100 120 140 160 180 200	L2	Yellow	Silty clay		
 135cm		L3	Reddish Yellow	Clay		Regolith; hit rock
Legend			Interpretation			
 =Concrete or Modern Fill	 =Loamy Soil	 =Regolith				
 =Gravel	 = Clay	 =Humus				
 =Sand	 = Sludge	 =Silt				
 = Silty clay	 = Sandy clay					
Date	9-Sep-2010	Log by	WANG Wenjian			

Location	Kwu Tung North	Area Code	KTN	Auger Hole No.	K6a	
Auger Hole Coordinate	829380E	841747N	Auger Hole Drill Size	10cm diameter		
Augering Method	Hand Augering		Ground Level	c.a. +11.4 mPD		
SOIL PROFILE	DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS
Ground Surface						
 5cm	0	L1	Black	Humus soil		
 35cm	4 8 12 16 20	L2	Reddish Yellow	Clay		Regolith, hit rock
	24 28 32 36 40 44 48 52 56 60 64 68 72 76 80 84 88 92 96 100 104 108 112 116 120 124 128 132 136 140 144 148 152 156 160 164 168 172 176 180 184 188 192 196 200					
Legend			Interpretation			
 =Concrete or Modern Fill	 =Loamy Soil	 =Regolith				
 =Gravel	 = Clay	 =Humus				
 =Sand	 = Sludge	 =Silt				
 = Silty clay	 = Sandy clay					
Date	20-Sep-2010	Log by	WANG Wenjian			

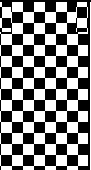
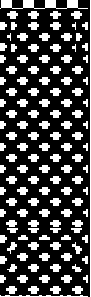

































Location	Kwu Tung North	Area Code	KTN	Auger Hole No.	K7c		
Auger Hole Coordinate	828490E	841512N	Auger Hole Drill Size	10cm diameter			
Augering Method	Hand Augering		Ground Level	c.a. +24.0 mPD			
SOIL PROFILE		DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS
Ground Surface							
		0 4 8 12 16 20 20cm	L1	Grayish black	Mortar and gravel fill		The entire surrounding area is a deserted parking place covered with mortar, gravel and garbage
		40 60 80 100 120 140 160 180 200					
Legend				Interpretation			
	=Concrete or Modern Fill		=Loamy Soil		=Regolith		
	=Gravel		=Clay		=Humus		
	=Sand		=Sludge		=Silt		
	=Silty clay		=Sandy clay				
Date				Log by			
10-Sep-2010				WANG Wenjian			

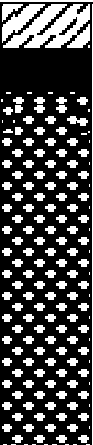
Location	Kwu Tung North	Area Code	KTN	Auger Hole No.	K8c	
Auger Hole Coordinate	828508E	841533N	Auger Hole Drill Size	10cm diameter		
Augering Method	Hand Augering		Ground Level	c.a. +24.0 mPD		
SOIL PROFILE	DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS
Ground Surface						
 10cm	0	L1	Black	Humus soil		
 30cm	4 8 12 16 20	L2	Reddish Yellow	Clay with cobbles		Regolith, hit rock
	24 28 32 36 40 44 48 52 56 60 64 68 72 76 80 84 88 92 96 100 104 108 112 116 120 124 128 132 136 140 144 148 152 156 160 164 168 172 176 180 184 188 192 196 200					
Legend				Interpretation		
 =Concrete or Modern Fill	 =Loamy Soil					
 =Gravel	 = Clay					
 =Sand	 = Sludge					
 = Silty clay	 = Sandy clay					
Date		16-Sep-2010	Log by		WANG Wenjian	













Location	Kwu Tung North	Area Code	KTN	Auger Hole No.	K9b	
Auger Hole Coordinate	828315E	841528N	Auger Hole Drill Size	10cm diameter		
Augering Method	Hand Augering		Ground Level	c.a. +18.0 mPD		
SOIL PROFILE	DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS
Ground Surface						
 20cm	0 4 8 12 16 20	L1	Red	Silt		Slope debris flow
 35cm	20 40 60 80 100 120 140 160 180 200	L2	Reddish Yellow	Clay with cobbles		Regolith
Legend			Interpretation			
 =Concrete or Modern Fill	 =Loamy Soil	 =Regolith				
 =Gravel	 = Clay	 =Humus				
 =Sand	 = Sludge	 =Silt				
 = Silty clay	 = Sandy clay					
Date	11-Sep-2010	Log by	WANG Wenjian			

Location	Kwu Tung North	Area Code	KTN	Auger Hole No.	K10c	
Auger Hole Coordinate	828459E	841134N	Auger Hole Drill Size	10cm diameter		
Augering Method	Hand Augering		Ground Level	c.a. +11.3 mPD		
SOIL PROFILE		DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	REMARKS
Ground Surface						
	5cm	0	L1	Light Black	Loamy surface	
	45cm	40	L2	Blackish Brown	Clay with brick and cobbles	Hit cement layer underneath
		200				
Legend				Interpretation		
	=Concrete or Modern Fill		=Loamy Soil		=Regolith	
	=Gravel		=Clay		=Humus	
	=Sand		=Sludge		=Silt	
	=Silty clay		=Sandy clay			
				Deserted storage place with thick layers of modern landfill		
Date	13-Sep-2010		Log by	WANG Wenjian		

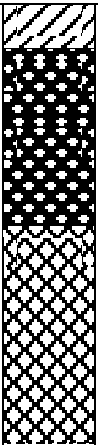

Location	Kwu Tung North	Area Code	KTN	Auger Hole No.	K11a																									
Auger Hole Coordinate	827896E	842227N	Auger Hole Drill Size	10cm diameter																										
Augering Method	Hand Augering		Ground Level	c.a. +13.2 mPD																										
SOIL PROFILE	DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS																								
Ground Surface																														
	0 4 8 12 16 20	L1	Light Black	Coarse sand with rock granules																										
	40 60	L2	Yellow	Silt with rock granules																										
	80 100 120 140 160 180 200	L3	Reddish Yellow	Clay with cobbles		Regolith, hit rock																								
Legend				Interpretation																										
<table border="1"> <tr> <td></td><td>=Concrete or Modern Fill</td> <td></td><td>=Loamy Soil</td> <td></td><td>=Regolith</td> </tr> <tr> <td></td><td>=Gravel</td> <td></td><td>=Clay</td> <td></td><td>=Humus</td> </tr> <tr> <td></td><td>=Sand</td> <td></td><td>=Sludge</td> <td></td><td>=Silt</td> </tr> <tr> <td></td><td>=Silty clay</td> <td></td><td>=Sandy clay</td> <td></td><td></td> </tr> </table>					=Concrete or Modern Fill		=Loamy Soil		=Regolith		=Gravel		=Clay		=Humus		=Sand		=Sludge		=Silt		=Silty clay		=Sandy clay					
	=Concrete or Modern Fill		=Loamy Soil		=Regolith																									
	=Gravel		=Clay		=Humus																									
	=Sand		=Sludge		=Silt																									
	=Silty clay		=Sandy clay																											
Date	11-Sep-2010		Log by	WANG Wenjian																										


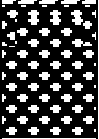












Location	Kwu Tung North	Area Code	KTN	Auger Hole No.	K11c																									
Auger Hole Coordinate	828019E	842148N	Auger Hole Drill Size	10cm diameter																										
Augering Method	Hand Augering		Ground Level	c.a. +14.3 mPD																										
SOIL PROFILE	DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS																								
Ground Surface																														
 40cm  90cm 105cm	0 4 8 12 16 20 40 60 80 100 120 140 160 180 200	L1	Brown	Sandy clay																										
		L2	Light Brown	Loose and fine clay																										
		L3	Reddish Yellow	Clay		Regolith																								
Legend				Interpretation																										
<table border="1"> <tr> <td></td><td>=Concrete or Modern Fill</td> <td></td><td>=Loamy Soil</td> <td></td><td>=Regolith</td> </tr> <tr> <td></td><td>=Gravel</td> <td></td><td>=Clay</td> <td></td><td>=Humus</td> </tr> <tr> <td></td><td>=Sand</td> <td></td><td>=Sludge</td> <td></td><td>=Silt</td> </tr> <tr> <td></td><td>=Silty clay</td> <td></td><td>=Sandy clay</td> <td></td><td></td> </tr> </table>					=Concrete or Modern Fill		=Loamy Soil		=Regolith		=Gravel		=Clay		=Humus		=Sand		=Sludge		=Silt		=Silty clay		=Sandy clay					
	=Concrete or Modern Fill		=Loamy Soil		=Regolith																									
	=Gravel		=Clay		=Humus																									
	=Sand		=Sludge		=Silt																									
	=Silty clay		=Sandy clay																											
Date	11-Sep-2010		Log by	WANG Wenjian																										












Location	Kwu Tung North	Area Code	KTN	Auger Hole No.	K11e																									
Auger Hole Coordinate	828157E	842102N	Auger Hole Drill Size	10cm diameter																										
Augering Method	Hand Augering		Ground Level	c.a. +10.5 mPD																										
SOIL PROFILE		DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS																							
Ground Surface																														
	10cm	0	L1	Light Black	Loamy surface soil																									
	20cm	4	L2	Light Yellow	Silt																									
	100cm	200	L3	Yellow	Clay		Regolith																							
		20																												
		40																												
		60																												
		80																												
		100																												
		120																												
		140																												
		160																												
		180																												
		200																												
Legend				Interpretation																										
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	=Concrete or Modern Fill		=Loamy Soil		=Regolith																									
	=Gravel		=Clay		=Humus																									
	=Sand		=Sludge		=Silt																									
	=Silty clay		=Sandy clay																											
Date		15-Sep-2010		Log by		WANG Wenjian																								

Location	Kwu Tung North	Area Code	KTN	Auger Hole No.	K12b	
Auger Hole Coordinate	829000E	841205N	Auger Hole Drill Size	10cm diameter		
Augering Method	Hand Augering		Ground Level	c.a. +8.8 mPD		
SOIL PROFILE		DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS
Ground Surface						
	10cm	0	L1	Light Black	Loamy surface soil	
	30cm	20	L2	Grayish Yellow	Fill with cobbles	Hit rock, reached water table
		40				
		60				
		80				
		100				
		120				
		140				
		160				
		180				
		200				
Legend				Interpretation		
	=Concrete or Modern Fill		=Loamy Soil		=Regolith	
	=Gravel		=Clay		=Humus	
	=Sand		=Sludge		=Silt	
	=Silty clay		=Sandy clay			
Date	24-Sep-2010		Log by	WANG Wenjian		



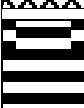
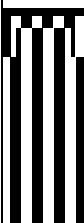











Location	Kwu Tung North	Area Code	KTN	Auger Hole No.	K13b																									
Auger Hole Coordinate	828611E	841111N	Auger Hole Drill Size	10cm diameter																										
Augering Method	Hand Augering		Ground Level	c.a. +9.4 mPD																										
SOIL PROFILE	DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS																								
Ground Surface																														
	15cm	L1	Light Black	Loamy surface soil																										
	40cm	L2	Yellow	Silty clay																										
	75cm	L3	Blackish brown	Sticky clay																										
	100cm	L4	Yellowish white	Sandy clay		Reached water table																								
Legend				Interpretation																										
<table border="1"> <tr> <td></td><td>=Concrete or Modern Fill</td> <td></td><td>=Loamy Soil</td> <td></td><td>=Regolith</td> </tr> <tr> <td></td><td>=Gravel</td> <td></td><td>=Clay</td> <td></td><td>=Humus</td> </tr> <tr> <td></td><td>=Sand</td> <td></td><td>=Sludge</td> <td></td><td>=Silt</td> </tr> <tr> <td></td><td>=Silty clay</td> <td></td><td>=Sandy clay</td> <td></td><td></td> </tr> </table>					=Concrete or Modern Fill		=Loamy Soil		=Regolith		=Gravel		=Clay		=Humus		=Sand		=Sludge		=Silt		=Silty clay		=Sandy clay					
	=Concrete or Modern Fill		=Loamy Soil		=Regolith																									
	=Gravel		=Clay		=Humus																									
	=Sand		=Sludge		=Silt																									
	=Silty clay		=Sandy clay																											
Date	15-Sep-2010		Log by	WANG Wenjian																										

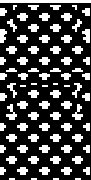
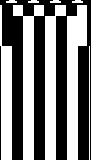











Location	Kwu Tung North	Area Code	KTN	Auger Hole No.	K15a																									
Auger Hole Coordinate	829392E	841085N	Auger Hole Drill Size	10cm diameter																										
Augering Method	Hand Augering		Ground Level	c.a. +6.5 mPD																										
SOIL PROFILE	DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS																								
Ground Surface																														
	10cm	L1	Light Black	Loamy surface soil																										
	25cm	L2	Brown	Clay																										
	50cm	L3	Reddish Yellow	Clay		Regolith																								
	100cm	L4	Yellowish Brown	Silty clay		Regolith, Hit rock																								
																														
Legend				Interpretation																										
<table border="1"> <tr> <td></td><td>=Concrete or Modern Fill</td> <td></td><td>=Loamy Soil</td> <td></td><td>=Regolith</td> </tr> <tr> <td></td><td>=Gravel</td> <td></td><td>=Clay</td> <td></td><td>=Humus</td> </tr> <tr> <td></td><td>=Sand</td> <td></td><td>=Sludge</td> <td></td><td>=Silt</td> </tr> <tr> <td></td><td>=Silty clay</td> <td></td><td>=Sandy clay</td> <td></td><td></td> </tr> </table>					=Concrete or Modern Fill		=Loamy Soil		=Regolith		=Gravel		=Clay		=Humus		=Sand		=Sludge		=Silt		=Silty clay		=Sandy clay					
	=Concrete or Modern Fill		=Loamy Soil		=Regolith																									
	=Gravel		=Clay		=Humus																									
	=Sand		=Sludge		=Silt																									
	=Silty clay		=Sandy clay																											
Date	24-Sep-2010		Log by	WANG Wenjian																										

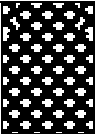



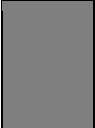











Location	Kwu Tung North	Area Code	KTN		Auger Hole No.	K17b
Auger Hole Coordinate	829171E	840469N	Auger Hole Drill Size		10cm diameter	
Augering Method	Hand Augering		Ground Level		c.a. +6.1m PD	
SOIL PROFILE		DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS
Ground Surface						
 10cm  40cm  55cm	0	L1	Light Black	Loamy surface soil		
	20	L2	Grayish Yellow	Clay		
	40	L3	Gray	Concrete		
	60					
	80					
	100					
	120					
	140					
	160					
	180					
	200					
Legend				Interpretation		
 =Concrete or Modern Fill	 =Loamy Soil	 =Regolith	The location of this auger hole is aside a concrete village path and a tree with robber tires and other modern garbage nearby. There is no other available location to apply another auger test in the surrounding area			
 =Gravel	 = Clay	 =Humus				
 =Sand	 = Sludge	 =Silt				
 = Silty clay	 = Sandy clay					
Date		24-Sep-2010		Log by		WANG Wenjian












Location	Kwu Tung North	Area Code	KTN	Auger Hole No.	K18a		
Auger Hole Coordinate	829025E	840365N	Auger Hole Drill Size	10cm diameter			
Augering Method	Hand Augering		Ground Level	c.a. +10.0 mPD			
SOIL PROFILE		DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS
Ground Surface							
		0					
		4					
		8					
		12					
		16					
		20	L1	Black	Concrete and mortar fill		Storage place
		25cm					
		40cm	L2	Yellow	Silt with quartz		Regolith alluvium, hit
		40					
		60					
		80					
		100					
		120					
		140					
		160					
		180					
		200					
Legend				Interpretation			
	=Concrete or Modern Fill		=Loamy Soil		=Regolith	The surface layer is ground floor of a storage/parking place, underneath is the slope alluvium deposit.	
	=Gravel		=Clay		=Humus		
	=Sand		=Sludge		=Silt		
	=Silty clay		=Sandy clay				
Date		25-Sep-2010		Log by		WANG Wenjian	











2. FLN 粉嶺北

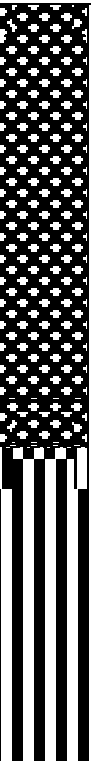











Location	Fanling North	Area Code	FLN	Auger Hole No.	F1a		
Auger Hole Coordinate	830376E	841741N	Auger Hole Drill Size	10cm diameter			
Augering Method	Hand Augering		Ground Level	c.a. +7.4mPD			
SOIL PROFILE		DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS
Ground Surface							
		0 4 8 12 16 20 40 60 80 100 120 140 160 180 200	L1	Dark Grey	Sandy Silt		
		55cm	L2	Yellow	Sandy Clay		
		85cm	L3	Greyish Yellow	Clayey Sand		
		112cm	L4	Bright Yellow	Clay		Regolith
		160cm					
Legend				Interpretation			
<div><div> =Concrete or Modern Fill</div><div> =Gravel</div><div> =Sand</div><div> =Sandy Soil</div><div> =Loamy Soil</div><div> =Clayey Soil</div><div> =Clayey Sand</div><div> =Cobbles and Pebbles</div><div> =Regolith</div><div> =Humus</div></div>							
Date		6-Sep-2010		Log by		Steven Ng	

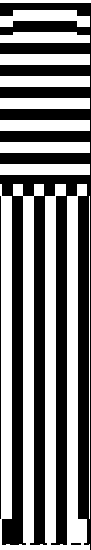
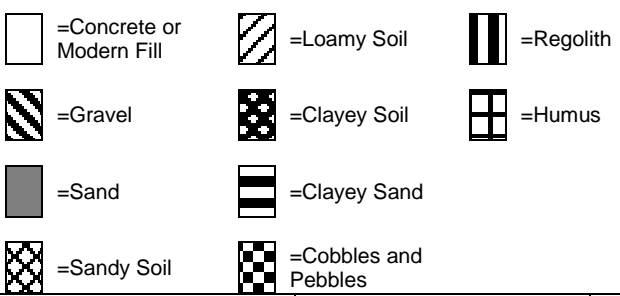
Location	Fanling North	Area Code	FLN	Auger Hole No.	F2c	
Auger Hole Coordinate	830700E	841927N	Auger Hole Drill Size	10cm diameter		
Augering Method	Hand Augering		Ground Level	c.a. +8.5mPD		
SOIL PROFILE	DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS
Ground Surface						
 15cm	0	L1	Dark Brown	Clay		
 40cm	20	L2	Greyish Brown	Clay		
 85cm	40	L3	Reddish Brown	Clay		Regolith
	60					
	80					
	100					
	120					
	140					
	160					
	180					
	200					
Legend			Interpretation			
 =Concrete or Modern Fill  =Loamy Soil  =Regolith  =Gravel  =Clayey Soil  =Humus  =Sand  =Clayey Sand  =Sandy Soil  =Cobbles and Pebbles						
Date	6-Sep-2010	Log by	Steven Ng			














Location	Fanling North	Area Code	FLN	Auger Hole No.	F2d	
Auger Hole Coordinate	830697E	841852N	Auger Hole Drill Size	10cm diameter		
Augering Method	Hand Augering		Ground Level	c.a. +11.3mPD		
SOIL PROFILE	DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS
Ground Surface						
	30cm	L1	Yellowish Brown	Clay		
	50cm	L2	Yellowish Brown	Sand		Aluvium
	65cm	L3	Reddish Brown	Sand		
	90cm	L4	Greyish Brown	Sand		
	120cm	L5	Greyish Black	Sand	Brick	
	140cm	L6	Reddish Brown	Clayey Sand		Regolith
<div> <div> Legend <div> <div></div> <div>=Concrete or Modern Fill</div> </div> <div> <div></div> <div>=Loamy Soil</div> </div> <div> <div></div> <div>=Regolith</div> </div> </div> <div> <div> <div></div> <div>=Gravel</div> </div> <div> <div></div> <div>=Clayey Soil</div> </div> <div> <div></div> <div>=Humus</div> </div> </div> <div> <div> <div></div> <div>=Sand</div> </div> <div> <div></div> <div>=Clayey Sand</div> </div> </div> <div> <div> <div></div> <div>=Sandy Soil</div> </div> <div> <div></div> <div>=Cobbles and Pebbles</div> </div> </div> </div> <div> Interpretation </div>						
Date	6-Sep-2010		Log by	Steven Ng		

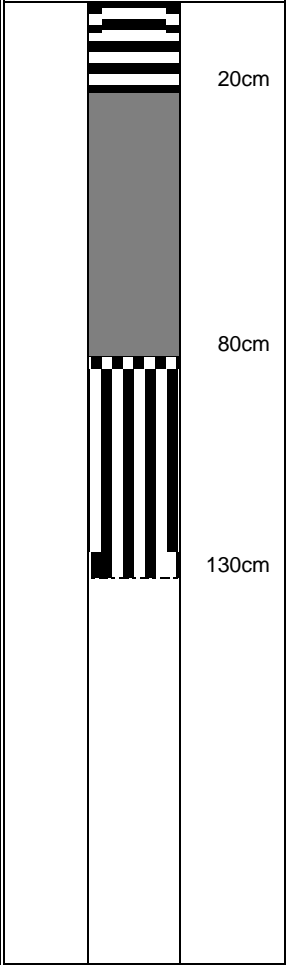
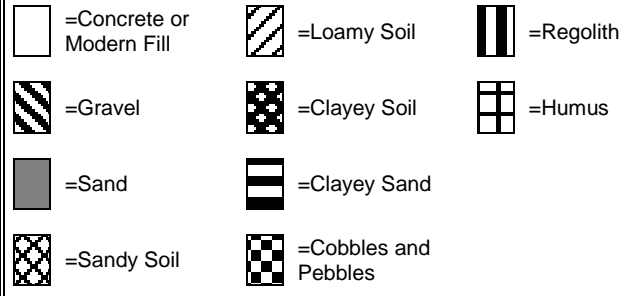
Location	Fanling North	Area Code	FLN	Auger Hole No.	F3a	
Auger Hole Coordinate	831072E	841914N	Auger Hole Drill Size	10cm diameter		
Augering Method	Hand Augering		Ground Level	c.a. +8.0mPD		
SOIL PROFILE	DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS
Ground Surface						
	0 4 8 12 16 20 30cm 40 60 70cm 80 100 120 140 160 180 200	L1	Greyish Black	Sand		
		L2	Bright Yellow	Sandy Clay		Regolith. Augering stops due to blockade by gravel materials.
Legend						
<div> <div> =Concrete or Modern Fill</div> <div> =Loamy Soil</div> <div> =Regolith</div> <div> =Gravel</div> <div> =Clayey Soil</div> <div> =Humus</div> <div> =Sand</div> <div> =Clayey Sand</div> <div> =Sandy Soil</div> <div> =Cobbles and Pebbles</div> </div>						
Interpretation						
Date	7-Sep-2010		Log by	Steven Ng		













Location	Fanling North	Area Code	FLN	Auger Hole No.	F4c		
Auger Hole Coordinate	831085E	841889N	Auger Hole Drill Size	10cm diameter			
Augering Method	Hand Augering		Ground Level	c.a. +7.0mPD			
SOIL PROFILE		DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS
Ground Surface							
		0 4 8 12 16 20	L1	Greyish Black	Modern Fill		
	60cm	40 60	L2	Light Yellow	Sandy Clay		Regolith
	80cm	80 100 120 140 160 180 200					
Legend				Interpretation			
<div> <div> =Concrete or Modern Fill</div> <div> =Loamy Soil</div> <div> =Regolith</div> <div> =Gravel</div> <div> =Clayey Soil</div> <div> =Humus</div> <div> =Sand</div> <div> =Clayey Sand</div> <div> =Sandy Soil</div> <div> =Cobbles and Pebbles</div> </div>							
Date		7-Sep-2010	Log by		Steven Ng		

Location	Fanling North	Area Code	FLN	Auger Hole No.	F5a	
Auger Hole Coordinate	831349E	841950N	Auger Hole Drill Size	10cm diameter		
Augering Method	Hand Augering		Ground Level	c.a. +9.0mPD		
SOIL PROFILE	DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS
Ground Surface						
 <div style="position: absolute; left: 260px; top: 415px;">90cm</div> <div style="position: absolute; left: 260px; top: 430px;">95cm</div> <div style="position: absolute; left: 260px; top: 585px;">170cm</div>		L1	Light Yellowish Orange	Clayey Soil		
	L2	Orange Yellow	Clayey Soil			
	L3	Light Yellow	Sandy Clay		Regolith	
Legend			Interpretation			
<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;">  =Concrete or Modern Fill </div> <div style="width: 33%;">  =Loamy Soil </div> <div style="width: 33%;">  =Regolith </div> <div style="width: 33%;">  =Gravel </div> <div style="width: 33%;">  =Clayey Soil </div> <div style="width: 33%;">  =Humus </div> <div style="width: 33%;">  =Sand </div> <div style="width: 33%;">  =Clayey Sand </div> <div style="width: 33%;">  =Sandy Soil </div> <div style="width: 33%;">  =Cobbles and Pebbles </div> </div>						
Date	7-Sep-2010		Log by	Steven Ng		


Location	Fanling North	Area Code	FLN	Auger Hole No.	F6b	
Auger Hole Coordinate	831939E	841444N	Auger Hole Drill Size	10cm diameter		
Augering Method	Hand Augering		Ground Level	c.a. +11.0mPD		
SOIL PROFILE	DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS
Ground Surface						
	0 4 8 12 16 20 40 60 80 100 120 140 160 180 200	L1	Yellowish Brown	Clayey Sand		
		L2	Reddish Brown	Clayey Sand		Regolith. Augering stops due to blockade by gravel materials.
Legend				Interpretation		
						
Date		9-Sep-2010		Log by		Hon Yeung Suen

Location	Fanling North	Area Code	FLN	Auger Hole No.	F6d	
Auger Hole Coordinate	831990E	841438E	Auger Hole Drill Size	10cm diameter		
Augering Method	Hand Augering		Ground Level	c.a. +16.8mPD		
SOIL PROFILE	DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS
Ground Surface						
 10cm	0	L1	Brown	Humus		
 30cm	4	L2	Bright Reddish Brown	Loamy Soil		
 115cm	8	L3	Bright Yellowish Brown	Clayey Soil		Regolith
	12					
	16					
	20					
	24					
	28					
	32					
	36					
	40					
	44					
	48					
	52					
	56					
	60					
	64					
	68					
	72					
	76					
	80					
	84					
	88					
	92					
	96					
	100					
	104					
	108					
	112					
	116					
	120					
	124					
	128					
	132					
	136					
	140					
	144					
	148					
	152					
	156					
	160					
	164					
	168					
	172					
	176					
	180					
	184					
	188					
	192					
	196					
	200					
Legend			Interpretation			
 =Concrete or Modern Fill  =Gravel  =Sand  =Sandy Soil  =Loamy Soil  =Clayey Soil  =Clayey Sand  =Cobbles and Pebbles  =Regolith  =Humus						
Date	8-Sep-2010	Log by	Hon Yeung Suen			

Location	Fanling North	Area Code	FLN	Auger Hole No.	F6f	
Auger Hole Coordinate	832030E	841487N	Auger Hole Drill Size	10cm diameter		
Augering Method	Hand Augering		Ground Level	c.a. +17.0mPD		
SOIL PROFILE	DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS
Ground Surface						
	0 4 8 12 16 20 40 60 80 100 120 140 160 180 200	L1	Reddish Brown	Clayey Sand		
		L2	Yellowish Brown	Sand		
		L3	Reddish Brown	Clayey Sand		Regolith
Legend			Interpretation			
						
Date		8-Sep-2010	Log by		Patrick Lai	

Location	Fanling North	Area Code	FLN	Auger Hole No.	F10a	
Auger Hole Coordinate	833183E	840352N	Auger Hole Drill Size	10cm diameter		
Augering Method	Hand Augering		Ground Level	c.a. +10.4mPD		
SOIL PROFILE		DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS
Ground Surface						
		0				
		4				
70cm		8				
		12				
90cm		16				
		20				
		40	L1	Dark Brown	Silt	
		60				
		80	L2	Light Brownish Yellow	Silt	Tiles
		100				
		120				
		140				
		160				
		180				
		200				
Legend				Interpretation		
<div> <div> =Concrete or Modern Fill</div> <div> =Loamy Soil</div> <div> =Regolith</div> <div> =Gravel</div> <div> =Clayey Soil</div> <div> =Humus</div> <div> =Sand</div> <div> =Clayey Sand</div> <div> =Silt</div> <div> =Sandy Soil</div> <div> =Cobbles and Pebbles</div> </div>						
Date		8-Sep-2010	Log by		Kathy Chan	

3. TKL 打鼓嶺

Location	Ping Che-Ta Kwu Ling	Area Code	PC/TKL	Auger Hole No.	P1b																								
Auger Hole Coordinate	834 641E	844 295N	Auger Hole Drill Size	10cm diameter																									
Augering Method	Hand Augering		Ground Level	c.a. +15.1mPD																									
SOIL PROFILE		DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS																							
Ground Surface																													
 25cm		0 4 8 12 16 20 40 60 80 100 120 140 160 180 200	L1	Brown	Silty Sand	Augering stops due to blockade by gravel materials.																							
<table border="0"> <tr> <td colspan="3">Legend</td> <td colspan="4">Interpretation</td> </tr> <tr> <td> =Concrete or Modern Fill</td> <td> =Loamy Soil</td> <td> =Regolith</td> <td colspan="4" rowspan="4"></td> </tr> <tr> <td> =Gravel</td> <td> =Clayey Soil</td> <td> =Humus</td> </tr> <tr> <td> =Sand</td> <td> =Clayey Sand</td> <td> =Silt</td> </tr> <tr> <td> =Sandy Soil</td> <td> =Cobbles and Pebbles</td> <td></td> </tr> </table>							Legend			Interpretation				=Concrete or Modern Fill	=Loamy Soil	=Regolith					=Gravel	=Clayey Soil	=Humus	=Sand	=Clayey Sand	=Silt	=Sandy Soil	=Cobbles and Pebbles	
Legend			Interpretation																										
=Concrete or Modern Fill	=Loamy Soil	=Regolith																											
=Gravel	=Clayey Soil	=Humus																											
=Sand	=Clayey Sand	=Silt																											
=Sandy Soil	=Cobbles and Pebbles																												
Date		17-Sep-2010	Log by		HON YEUNG SUEN																								

Location	Ping Che-Ta Kwu Ling	Area Code	PC/TKL	Auger Hole No.	P3c	
Auger Hole Coordinate	843 610E	834 404N	Auger Hole Drill Size	10cm diameter		
Augering Method	Hand Augering		Ground Level	c.a. +15mPD		
SOIL PROFILE		DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS
Ground Surface						
	10cm	L1	Mid Brown	Clayey Silt		
	70cm	L2	Reddish Yellow	Clayey Silt		
	110cm	L3	Light Reddish Yellow	Sandy Silt		Regolith
Legend				Interpretation		
<div> <div>=Concrete or Modern Fill</div> <div>=Loamy Soil</div> <div>=Regolith</div> <div>=Gravel</div> <div>=Clayey Soil</div> <div>=Humus</div> <div>=Sand</div> <div>=Clayey Sand</div> <div>=Silt</div> <div>=Sandy Soil</div> <div>=Cobbles and Pebbles</div> </div>						
Date	16-Sep-2010		Log by	SIU TONG NG		

[illegible]

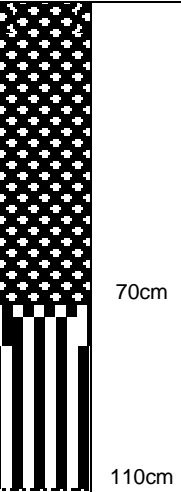











Location	Ping Che-Ta Kwu Ling	Area Code	PC/TKL	Auger Hole No.	P5b	
Auger Hole Coordinate	833 589E	843 329N	Auger Hole Drill Size	10cm diameter		
Augering Method	Hand Augering		Ground Level	c.a. +10.9mPD		
SOIL PROFILE	DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS
Ground Surface						
	34cm	L1	Greyish Yellow	Clayey Sand		
	120cm	L2	Greyish Brown	Clay		
	145cm	L3	Yellowish Brown	Clayey Silt		Regolith
Legend				Interpretation		
<div> <div></div> =Concrete or Modern Fill <div></div> =Loamy Soil <div></div> =Regolith </div> <div> <div></div> =Gravel <div></div> =Clayey Soil <div></div> =Humus </div> <div> <div></div> =Sand <div></div> =Clayey Sand <div></div> =Silt </div> <div> <div></div> =Sandy Soil <div></div> =Cobbles and Pebbles </div>						
Date	27-Sep-2010	Log by	HON YEUNG SUEN			

Location	Ping Che-Ta Kwu Ling	Area Code	PC/TKL	Auger Hole No.	P5c	
Auger Hole Coordinate	833 487E	843 212N	Auger Hole Drill Size	10cm diameter		
Augering Method	Hand Augering		Ground Level	c.a. +11.9mPD		
SOIL PROFILE	DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS
Ground Surface						
	20cm	L1	Greyish Brown	Silty Sand		
	64cm	L2	Brown	Sandy Clay		
	140cm	L3	Yellowish Brown	Clayey Sand		Regolith
Legend			Interpretation			
<div> <div></div> =Concrete or Modern Fill <div></div> =Loamy Soil <div></div> =Regolith </div> <div> <div></div> =Gravel <div></div> =Clayey Soil <div></div> =Humus </div> <div> <div></div> =Sand <div></div> =Clayey Sand <div></div> =Silt </div> <div> <div></div> =Sandy Soil <div></div> =Cobbles and Pebbles </div>						
Date	27-Sep-2010		Log by	HON YEUNG SUEN		

Location	Ping Che-Ta Kwu Ling	Area Code	PC/TKL	Auger Hole No.	P7b	
Auger Hole Coordinate	834 249E	843 074N	Auger Hole Drill Size	10cm diameter		
Augering Method	Hand Augering		Ground Level	c.a. +11.4mPD		
SOIL PROFILE	DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS
Ground Surface					Ming to Qing Blue-and-White porcelain	
	40cm	L1	Dark Brown	Silty Clay		
	60cm	L2	Light Greyish Brown	Silty Clay		
	80cm	L3	Brownish Black	Clay	Pot sherds found, tile fragments	
	100cm	L4	Dull Yellowish Orange	Clay	Pot sherds found	
	137cm	L5	Light mixed with Light Yellowish Orange	Clay		Regolith
Legend				Interpretation		
Date	27-Sep-2010		Log by	SIU TONG NG		

Location	Ping Che-Ta Kwu Ling	Area Code	PC/TKL	Auger Hole No.	P8a	
Auger Hole Coordinate	834 496E	843 281N	Auger Hole Drill Size	10cm diameter		
Augering Method	Hand Augering		Ground Level	c.a. +16.8mPD		
SOIL PROFILE		DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS
Ground Surface						
	29cm	0	L1	Greyish Brown	Clayey Sand	
		4				
		8				
		12				
		16				
		20				
		24				
		28				
		32				
		36				
		40				
		44				
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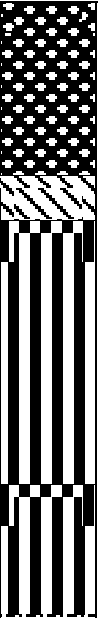
Location	Ping Che-Ta Kwu Ling	Area Code	PC/TKL	Auger Hole No.	P8b	
Auger Hole Coordinate	834 480E	843 237N	Auger Hole Drill Size	10cm diameter		
Augering Method	Hand Augering		Ground Level	c.a. +16.8mPD		
SOIL PROFILE	DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS
Ground Surface						
	86cm	L1	Brown	Clayey Sand		
	140cm	L2	Reddish Brown	Clayey Silt		Regolith
Legend			Interpretation			
<div> <div></div> =Concrete or Modern Fill <div></div> =Loamy Soil <div></div> =Regolith </div> <div> <div></div> =Gravel <div></div> =Clayey Soil <div></div> =Humus </div> <div> <div></div> =Sand <div></div> =Clayey Sand <div></div> =Silt </div> <div> <div></div> =Sandy Soil <div></div> =Cobbles and Pebbles </div>						
Date	14-Sep-2010		Log by	HON YEUNG SUEN		














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Auger Hole Coordinate	834 667E	843 177N	Auger Hole Drill Size	10cm diameter		
Augering Method	Hand Augering		Ground Level	c.a. +15.8mPD		
SOIL PROFILE	DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS
Ground Surface						
	0 4 8 12 16 20 40 60 80 100 120 140 160 180 200	L1	Dark Brown	Clay		
		L2	Orangish Brown	Clay		Regolith
Legend			Interpretation			
 =Concrete or Modern Fill  =Gravel  =Sand  =Sandy Soil  =Loamy Soil  =Clayey Soil  =Clayey Sand  =Cobbles and Pebbles  =Regolith  =Humus  =Silt						
Date	14-Sep-2010	Log by	HON YEUNG SUEN			

Location	Ping Che-Ta Kwu Ling	Area Code	PC/TKL	Auger Hole No.	P9c	
Auger Hole Coordinate	833 763E	842 760N	Auger Hole Drill Size	10cm diameter		
Augering Method	Hand Augering		Ground Level	c.a. +19.9mPD		
SOIL PROFILE	DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS
Ground Surface						
	20cm	L1	Yellowish Brown	Sand		
	90cm	L2	Reddish Brown	Clay with gravel		
	125cm	L3	Reddish Brown	Clay		Regolith
Legend				Interpretation		
<div> <div> =Concrete or Modern Fill</div> <div> =Loamy Soil</div> <div> =Regolith</div> <div> =Gravel</div> <div> =Clayey Soil</div> <div> =Humus</div> <div> =Sand</div> <div> =Clayey Sand</div> <div> =Silt</div> <div> =Sandy Soil</div> <div> =Cobbles and Pebbles</div> </div>						
Date	15-Sep-2010		Log by	Patrick Lai		

Location	Ping Che-Ta Kwu Ling	Area Code	PC/TKL	Auger Hole No.	P9d	
Auger Hole Coordinate	833 713E	842 729N	Auger Hole Drill Size	10cm diameter		
Augering Method	Hand Augering		Ground Level	c.a. +15.5mPD		
SOIL PROFILE	DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS
Ground Surface						
	0 4 8 12 16 20 40 60 80 100 120 140 160 180 200	L1	Orangish Brown	Clay		
	60cm 135cm	L2	Yellowish Brown	Clay		Regolith
Legend			Interpretation			
Date	15-Sep-2010		Log by	KAM YUEN SHUM		

Location	Ping Che-Ta Kwu Ling	Area Code	PC/TKL	Auger Hole No.	P10a	
Auger Hole Coordinate	833666E	842443N	Auger Hole Drill Size	10cm diameter		
Augering Method	Hand Augering		Ground Level	c.a. +14mPD		
SOIL PROFILE		DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS
Ground Surface						
	10cm	0	L1	Brown	Clayey Silt	
	15cm	4 8 12 16 20	L2	Reddish	Clayey Silt	Regolith
		20 40 60 80 100 120 140 160 180 200				
Legend				Interpretation		
=Concrete or Modern Fill =Loamy Soil =Regolith =Gravel =Clayey Soil =Humus =Sand =Clayey Sand =Silt =Sandy Soil =Cobbles and Pebbles						
Date		29-Sep-2010		Log by		Kathy Chan

Location	Ping Che-Ta Kwu Ling	Area Code	PC/TKL	Auger Hole No.	P11b		
Auger Hole Coordinate	833 989E	842 431N	Auger Hole Drill Size	10cm diameter			
Augering Method	Hand Augering		Ground Level	c.a. +21mPD			
SOIL PROFILE		DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS	REMARKS
Ground Surface							
		0 4 8 12 16 20 40 60 80 100 120 140 160 180 200	L1	Yellowish Brown	Sandy Clay		
40cm			L2	Yellowish Brown	Clayey Silt		
50cm			L3	Bright Reddish Brown	Silt		Regolith
110cm			L4	Greyish Yellow mixed with Orange	Silt		Regolith
140cm							
Legend				Interpretation			
<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> =Concrete or Modern Fill =Gravel =Sand =Sandy Soil </div> <div style="width: 33%;"> =Loamy Soil =Clayey Soil =Clayey Sand =Cobbles and Pebbles </div> <div style="width: 33%;"> =Regolith =Humus =Silt </div> </div>							
Date		17-Sep-2010		Log by		KA LEUNG LO	

Location	Ping Che-Ta Kwu Ling	Area Code	PC/TKL	Auger Hole No.	P13c	
Auger Hole Coordinate	835202E	841572N	Auger Hole Drill Size	10cm diameter		
Augering Method	Hand Augering		Ground Level	c.a. +14.8mPD		
SOIL PROFILE		DEPTH (CM)	STRATUM	SOIL COLOUR	SOIL TEXTURE	FINDS
Ground Surface						
 29cm		0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60 64 68 72 76 80 84 88 92 96 100 104 108 112 116 120 124 128 132 136 140 144 148 152 156 160 164 168 172 176 180 184 188 192 196 200	L1	Light Yellowish Orange	Clayey Silt	
 39cm			L2	Brownish Black	Clayey Silt	
						Cloth pieces and glass fragment found in L2. Hard surface reached beneath L2
Legend				Interpretation		
<div> <div> =Concrete or Modern Fill</div> <div> =Loamy Soil</div> <div> =Regolith</div> <div> =Gravel</div> <div> =Clayey Soil</div> <div> =Humus</div> <div> =Sand</div> <div> =Clayey Sand</div> <div> =Silt</div> <div> =Sandy Soil</div> <div> =Cobbles and Pebbles</div> </div>						
Date	29-Sep-2010		Log by	Kathy Chan		

APPENDIX B

附錄二

Location Plans on Field Scanning and Field Survey 地表調查與鑽孔及探方發掘地點 分布圖

Contents 目錄

I. KTN 古洞北

1. Figures on Surface Scanning 地表調查範圍圖
2. Figures on Surface Survey 鉗孔及探方發掘地點分布圖

II. FLN 粉嶺北

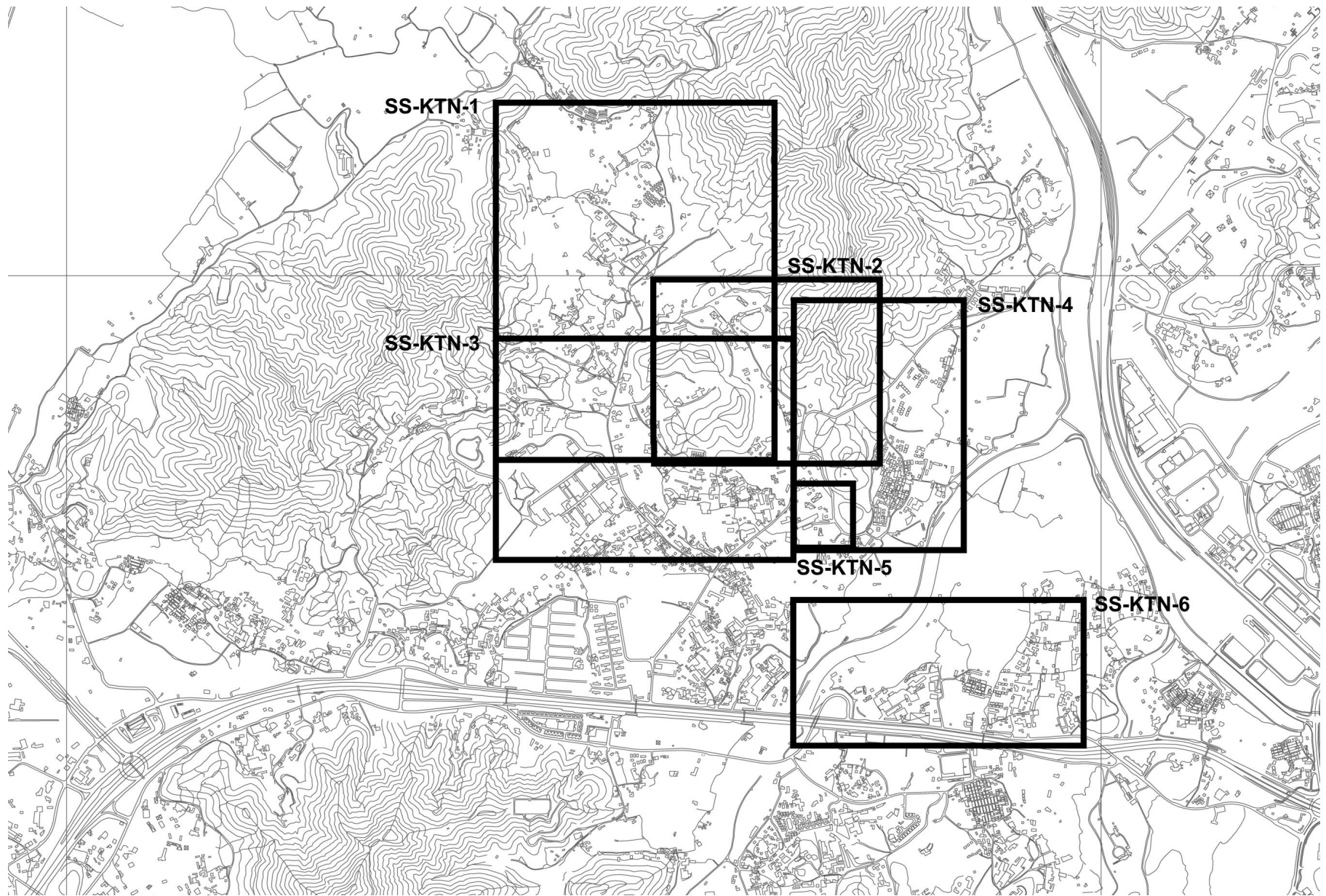
1. Figures on Surface Scanning 地表調查範圍圖
2. Figures on Surface Survey 鉗孔及探方發掘地點分布圖

III. PC/TKL 坪輦／打鼓嶺

1. Figures on Surface Scanning 地表調查範圍圖
2. Figures on Surface Survey 鉗孔及探方發掘地點分布圖

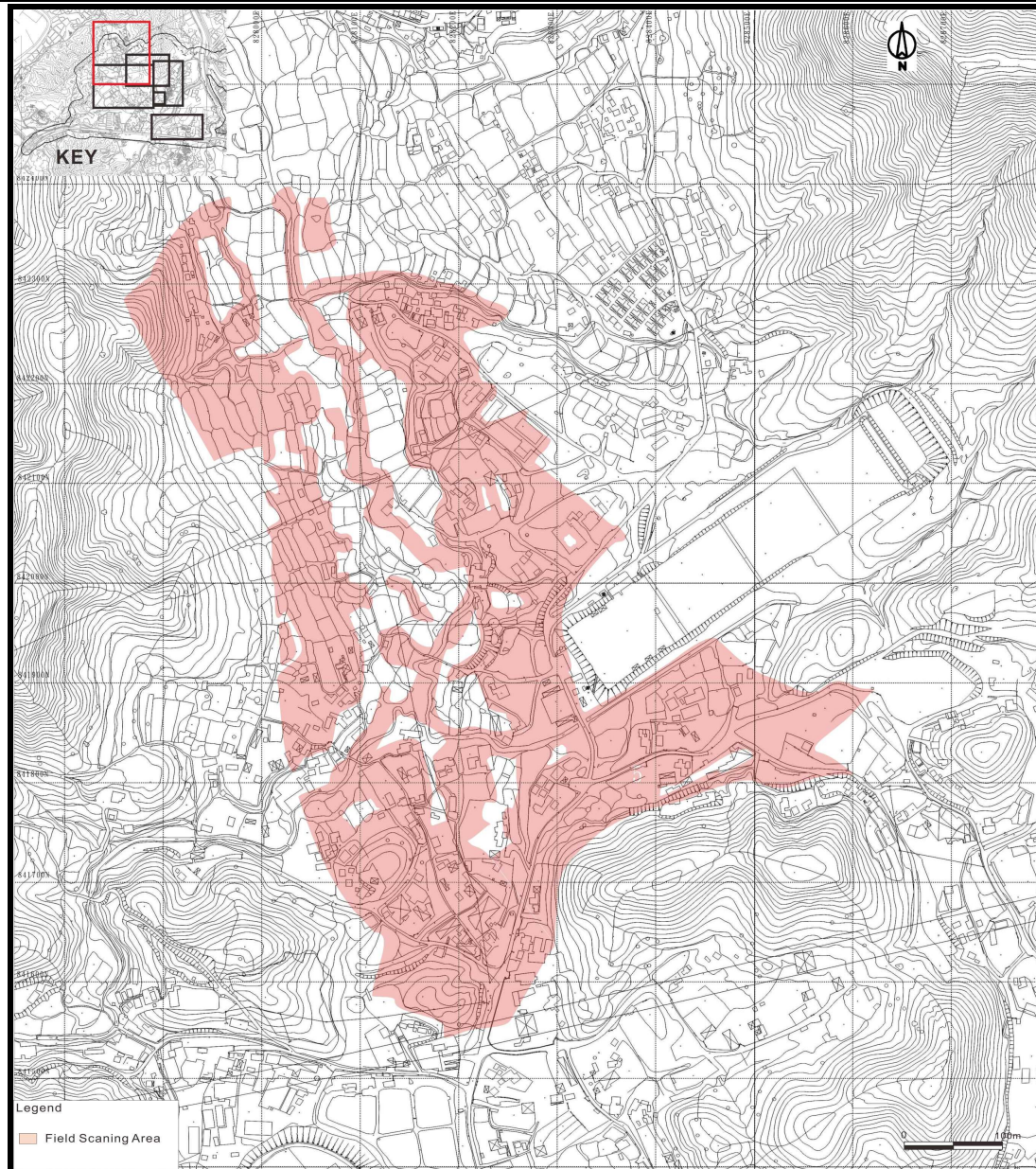
I. KTN 古洞北

1. **Figures on Surface Scanning 地表調查範圍圖**



Surface Scanning Area at Kwu Tung North

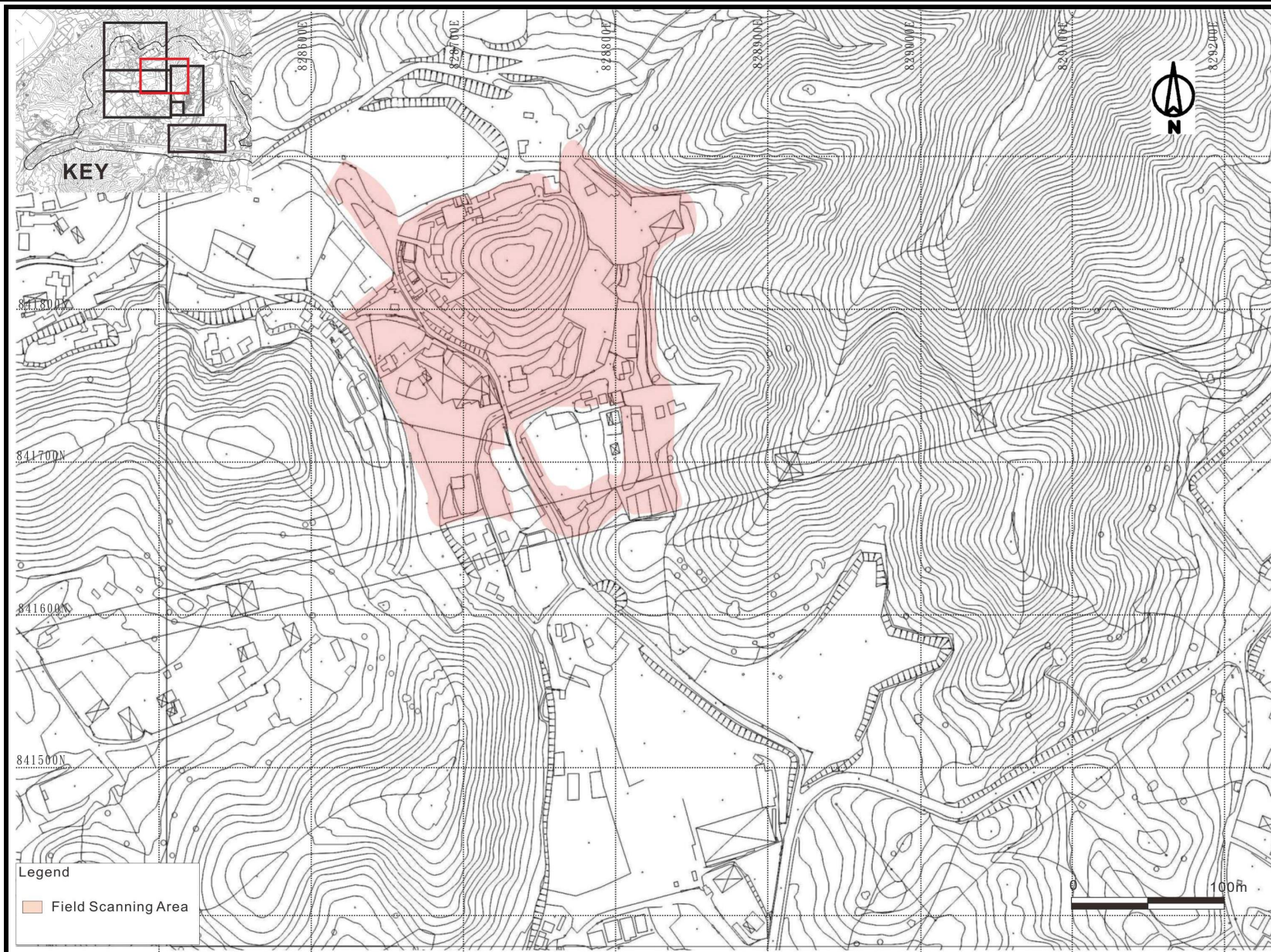
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JOB NO.	60157433	DRAWING NO.	SS-KTN-0
		REV	.



AECOM

Surface Scanning Location near Ma Tso Lung Road

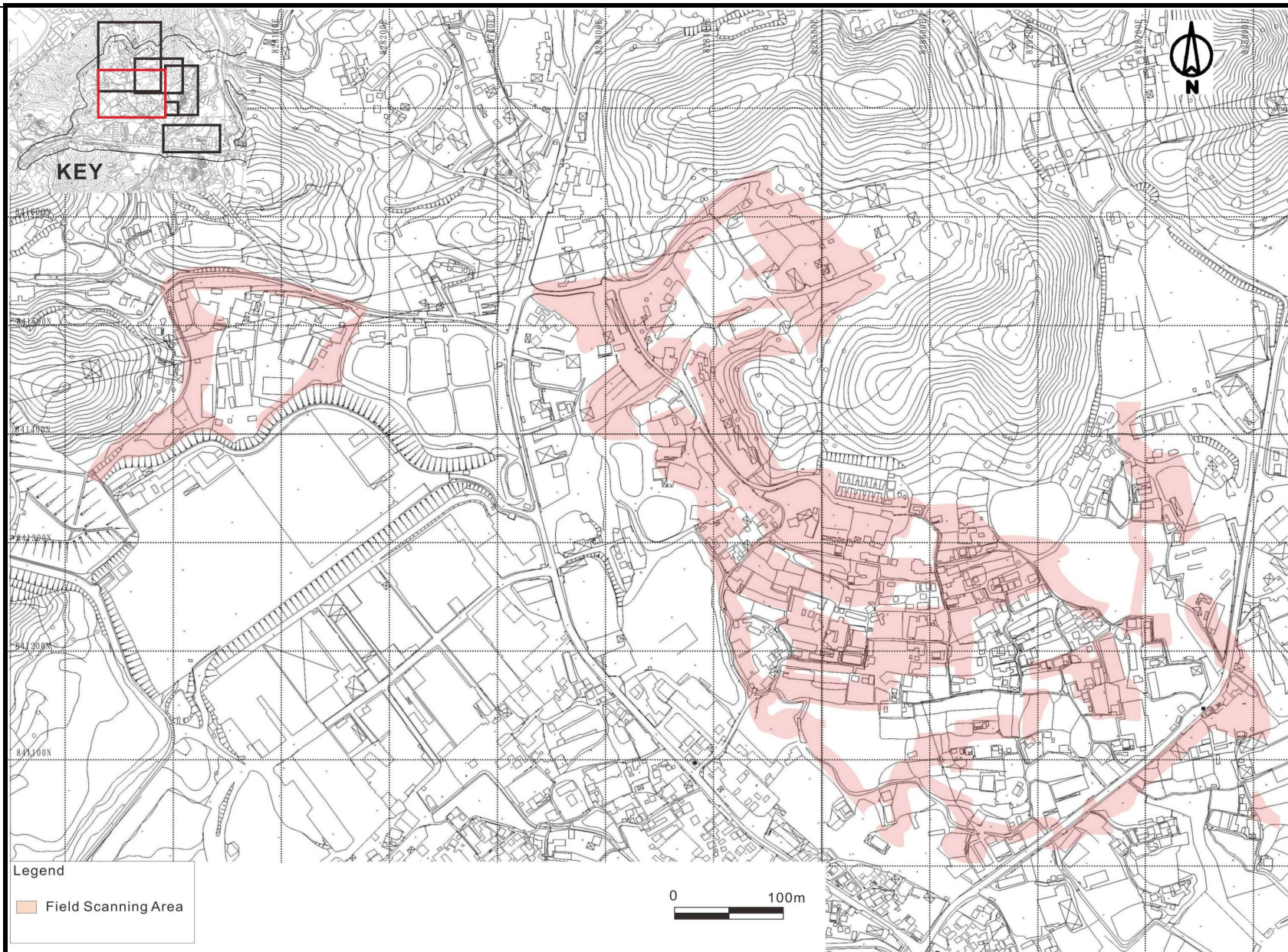
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AECOM

Surface Scanning Location near Fung Kong Shan

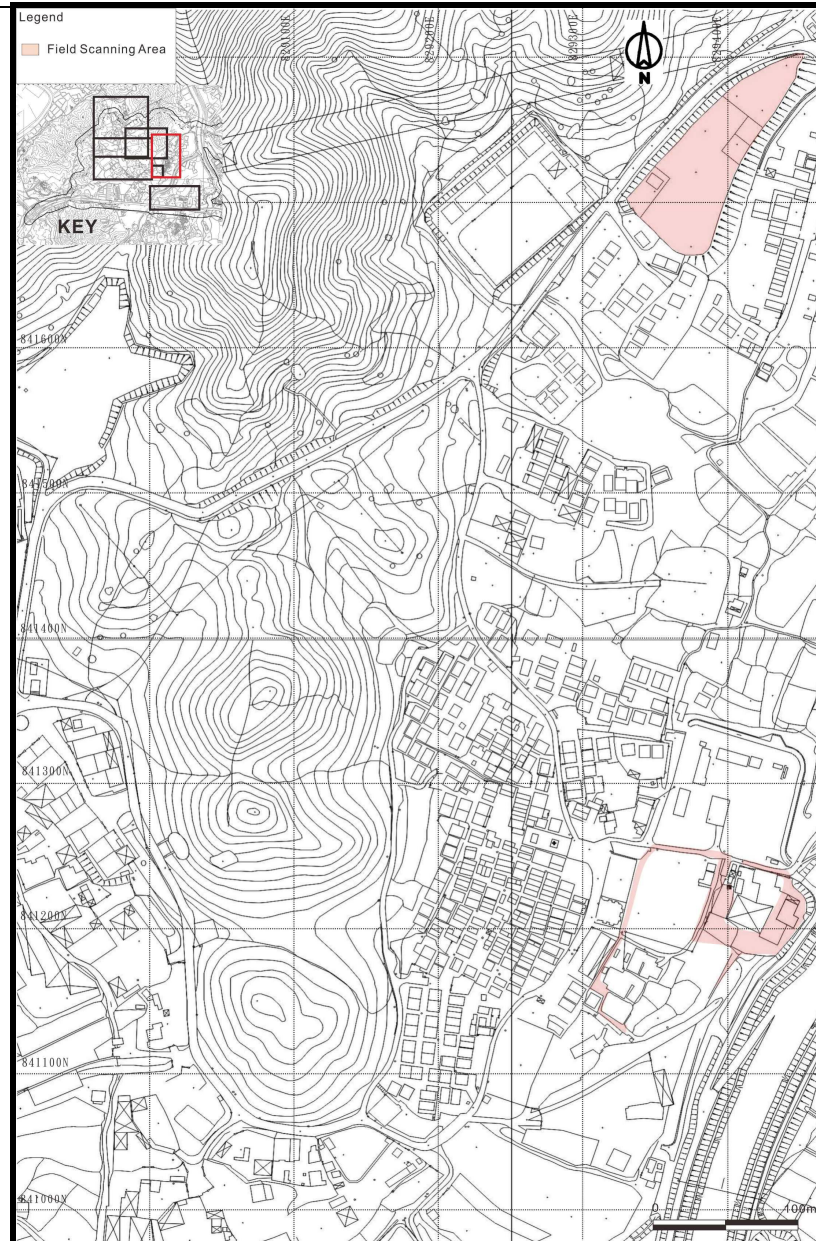
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JOB NO.	60157433	DRAWING NO.	SS-KTN-2
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AECOM

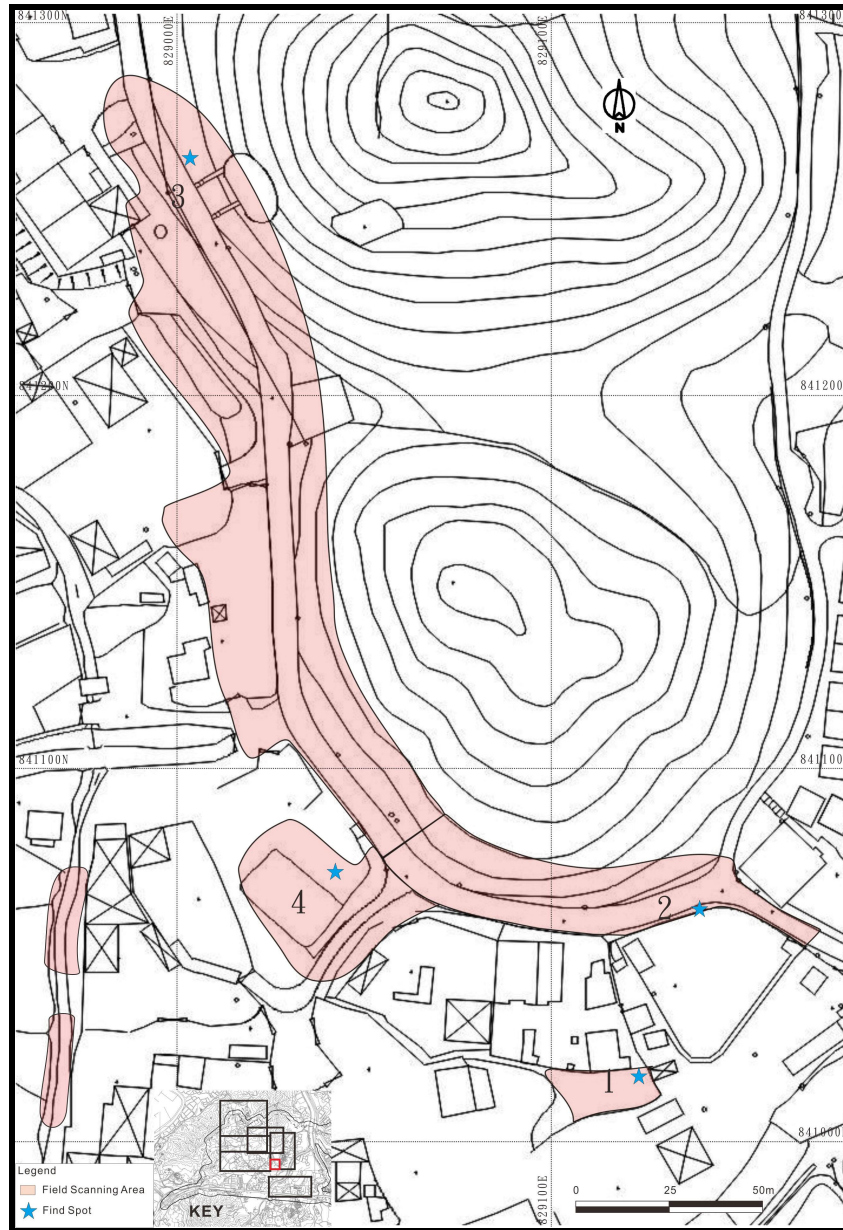
Surface Scanning Location near Ho Sheung Heung

SCALE	1:7000	DATE	30/NOV/2010
CHECK	NGWHS	DRAWN	SIUMW
JOB NO.	60157433	DRAWING NO.	SS-KTN-3
		REV	-



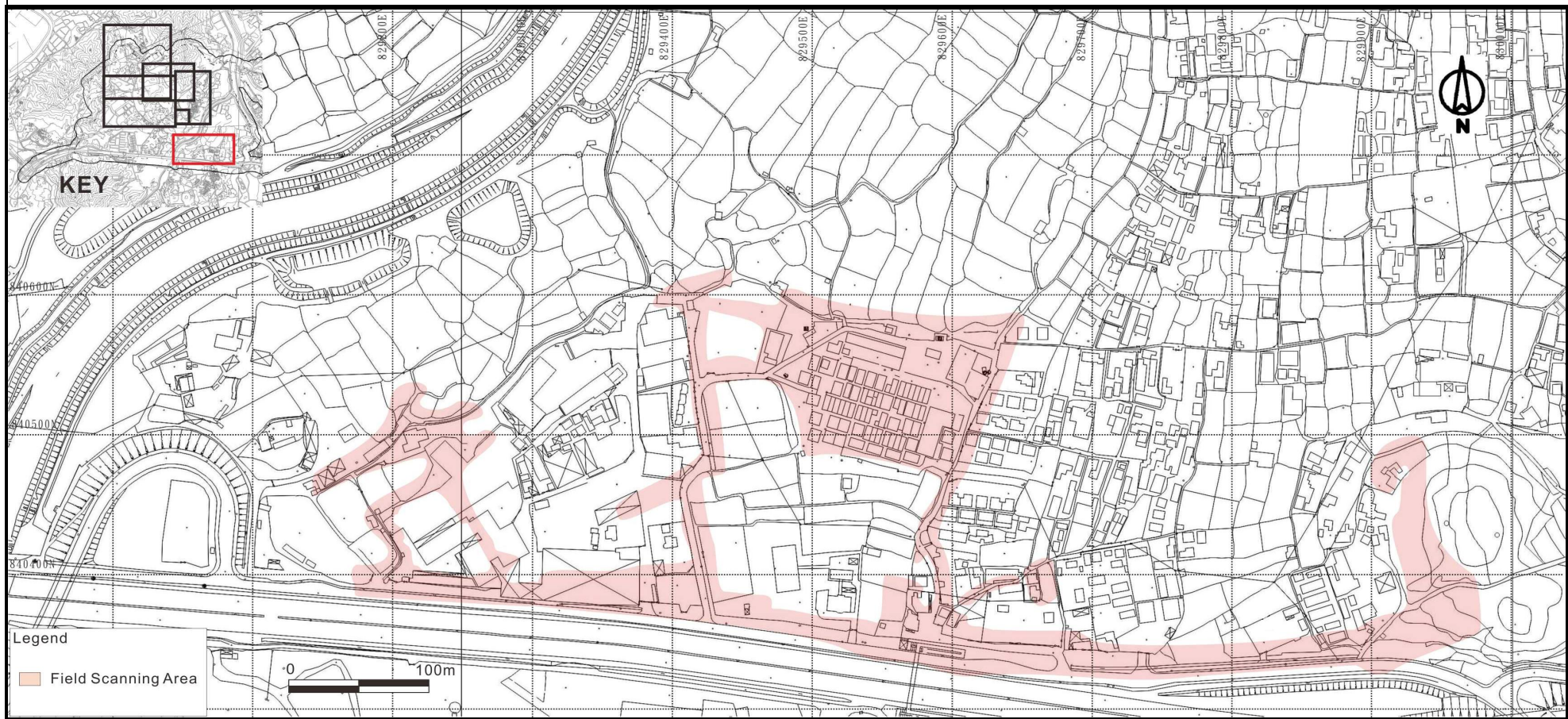
Suface Scanning Location at Lo Wu Saddle Club

SCALE	1:3000	DATE	30/NOV/2010
CHECK	NGWHS	DRAWN	SIUMW
JOB NO.	60157433	DRAWING NO.	SS-KTN-4
		REV	-



Surface Scanning Location near Ho Sheung Heung

SCALE	1:1000	DATE	30/NOV/2010
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JOB NO.	60157433	DRAWING NO.	SS-KTN-5
		REV	-



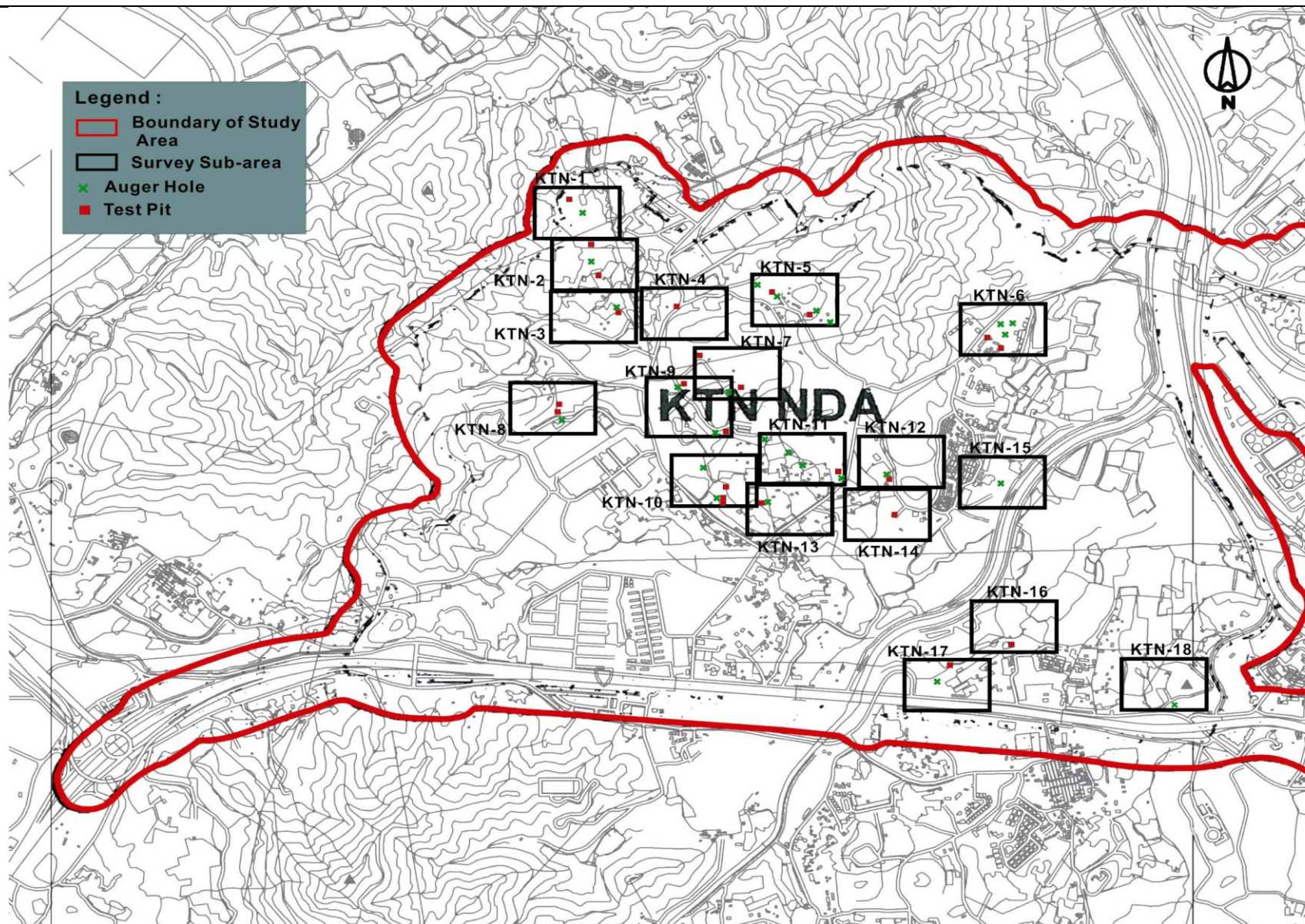
AECOM

Surface Scanning Location near Yin Kong Tsuen

SCALE	1:4000	DATE	30/NOV/2010
CHECK	NGWHS	DRAWN	SIUMW
JOB NO.	60157433	DRAWING NO.	SS-KTN-6
		REV	-

I. KTN 古洞北

2. Figures on Surface Survey 鑽孔及探方發掘地點分布圖



AECOM

Field Survey Area at Kwu Tung North

SCALE	1:15000	DATE	18/Oct/2010
CHECK	WANGWW	DRAWN	SIUMW
JOB NO.	60157433	DRAWING NO.	KTN-0
		REV	-



Legend

- Test Pit
- x Auger Hole

AECOM

Field Survey Location near Ma Tso Lung Road

SCALE	1:1000	DATE	09/Feb/2011
CHECK	WANGWW	DRAWN	SIUMW
JOB NO.	60157433	DRAWING NO.	KTN-1
		REV	-



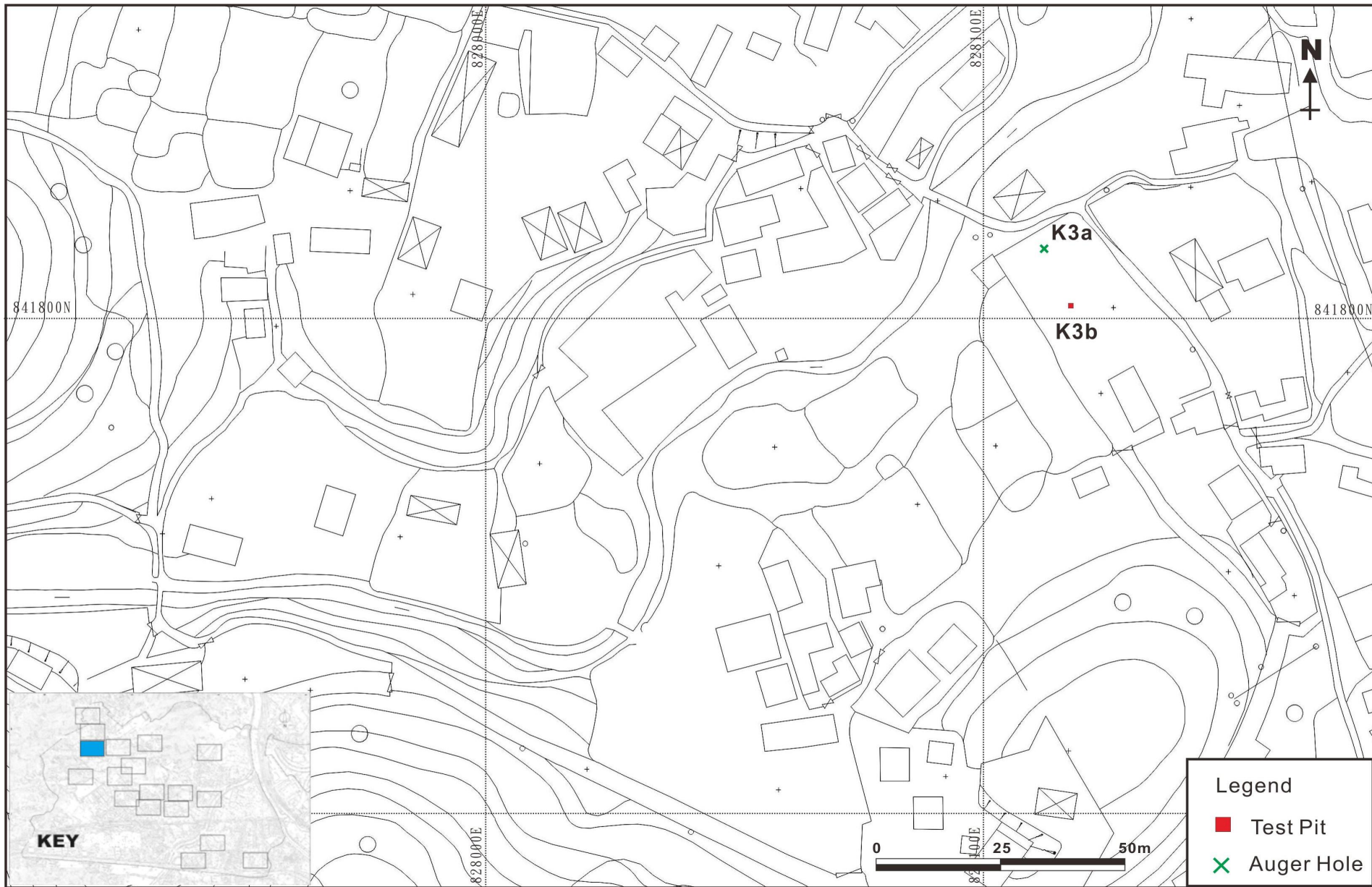
Legend

- Test Pit
- x Auger Hole

AECOM

Field Survey Location near Ma Tso Lung Road

SCALE	1:1000	DATE	09/Feb/2011
CHECK	WANGWW	DRAWN	SIUMW
JOB NO.	60157433	DRAWING NO.	KTN-2
		REV	-



Legend

■ Test Pit

× Auger Hole



Field Survey Location near Ma Tso Lung Road

SCALE	1:1000	DATE	09/Feb/2011
CHECK	WANGWW	DRAWN	SIUMW
JOB NO.	60157433	DRAWING NO.	KTN-3
		REV	-



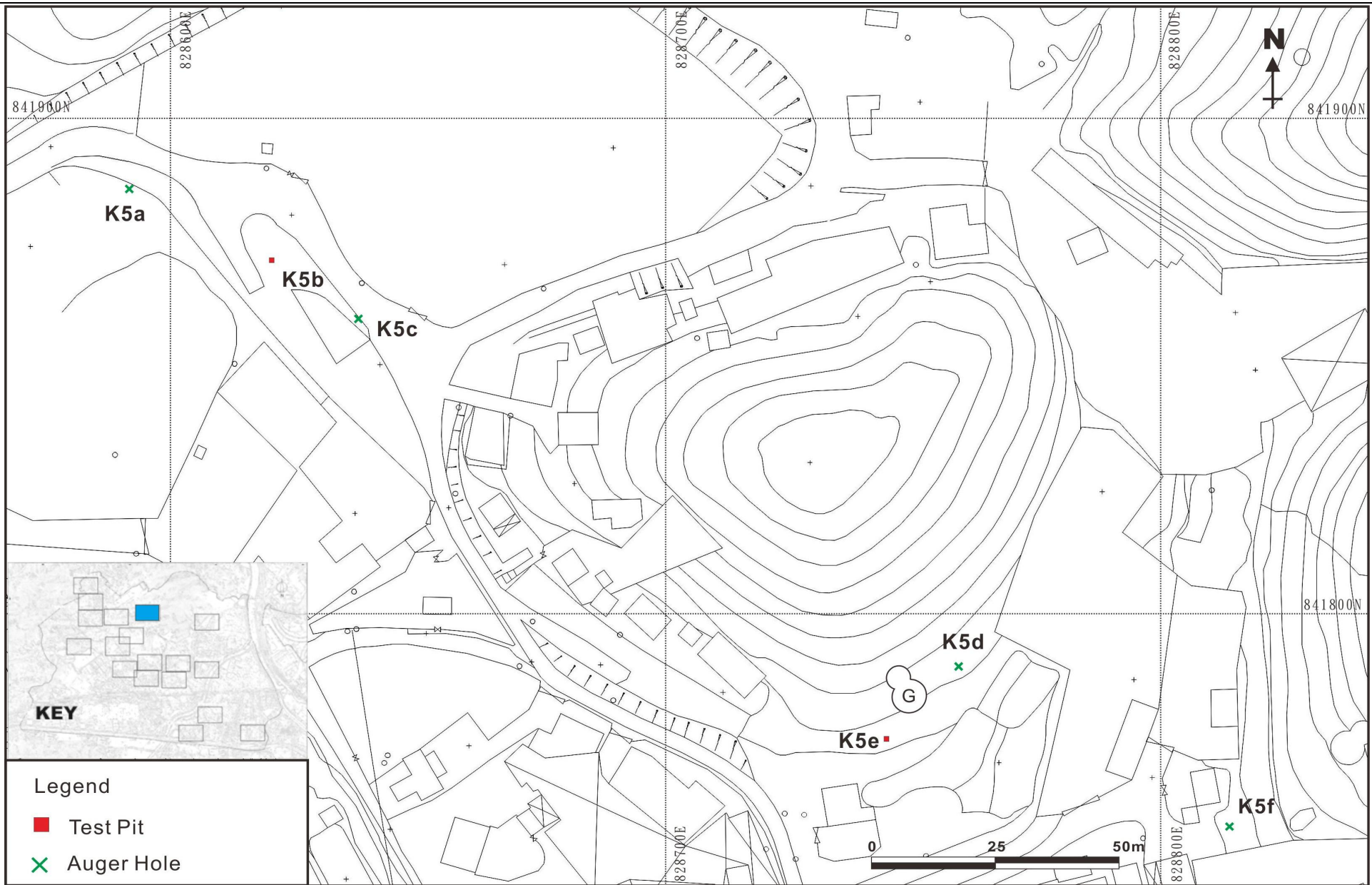
Legend

- Test Pit
- X Auger Hole



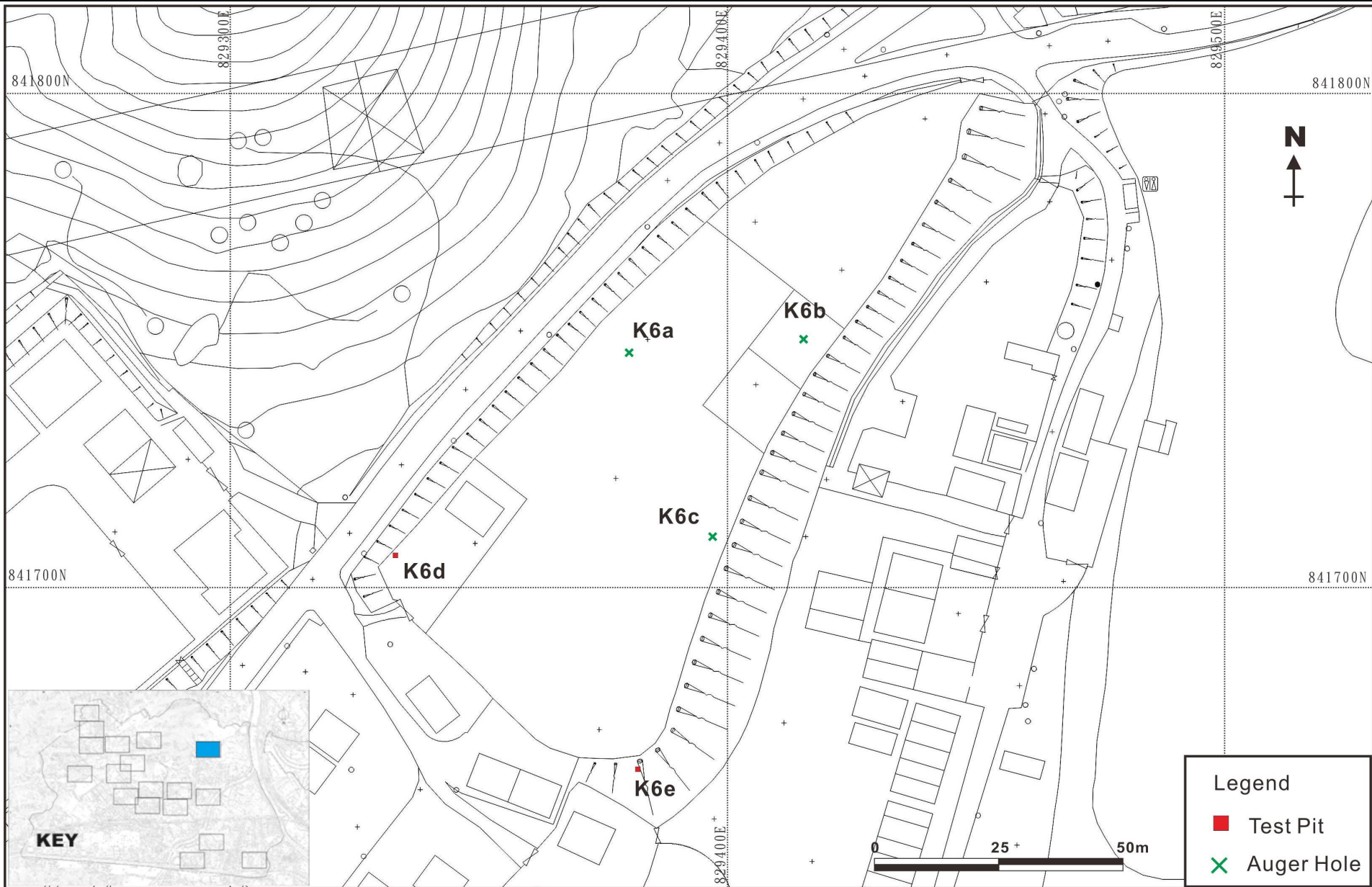
Field Survey Location at Ma Tso Lung Road

SCALE	1:1000	DATE	09/Feb/2010
CHECK	WANGWW	DRAWN	SIUMW
JOB NO.	60157433	DRAWING NO.	KTN-4
		REV	-



Field Survey Location at Ma Tso Lung Road

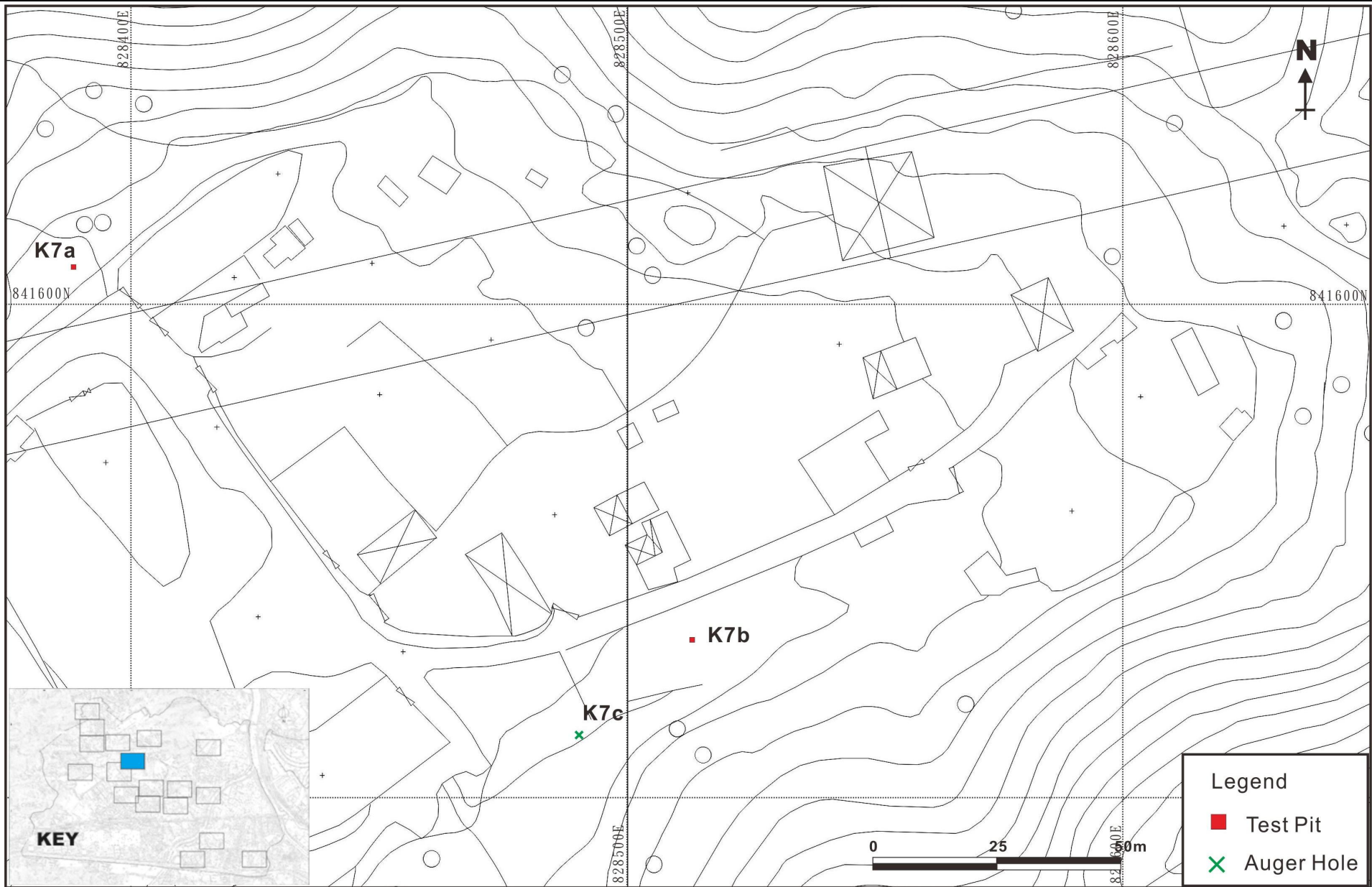
SCALE	1:1000	DATE	09/Feb/2011	
CHECK	WANGWW	DRAWN	SIUMW	
JOB NO.	60157433	DRAWING NO.	KTN-5	REV
				-



AECOM

Field Survey Location at Lo Wu Saddle Club

SCALE	1:1000	DATE	09/Feb/2011
CHECK	WANGWW	DRAWN	SIUMW
JOB NO.	60157433	DRAWING NO.	KTN-6
		REV	-



AECOM

Field Survey Location to the north of Fung Kong

SCALE	1:1000	DATE	09/Feb/2011
CHECK	WANGWW	DRAWN	SIUMW
JOB NO.	60157433	DRAWING NO.	KTN-7
		REV	-



Field Survey Location to the north of Sheung Shui Community Sports

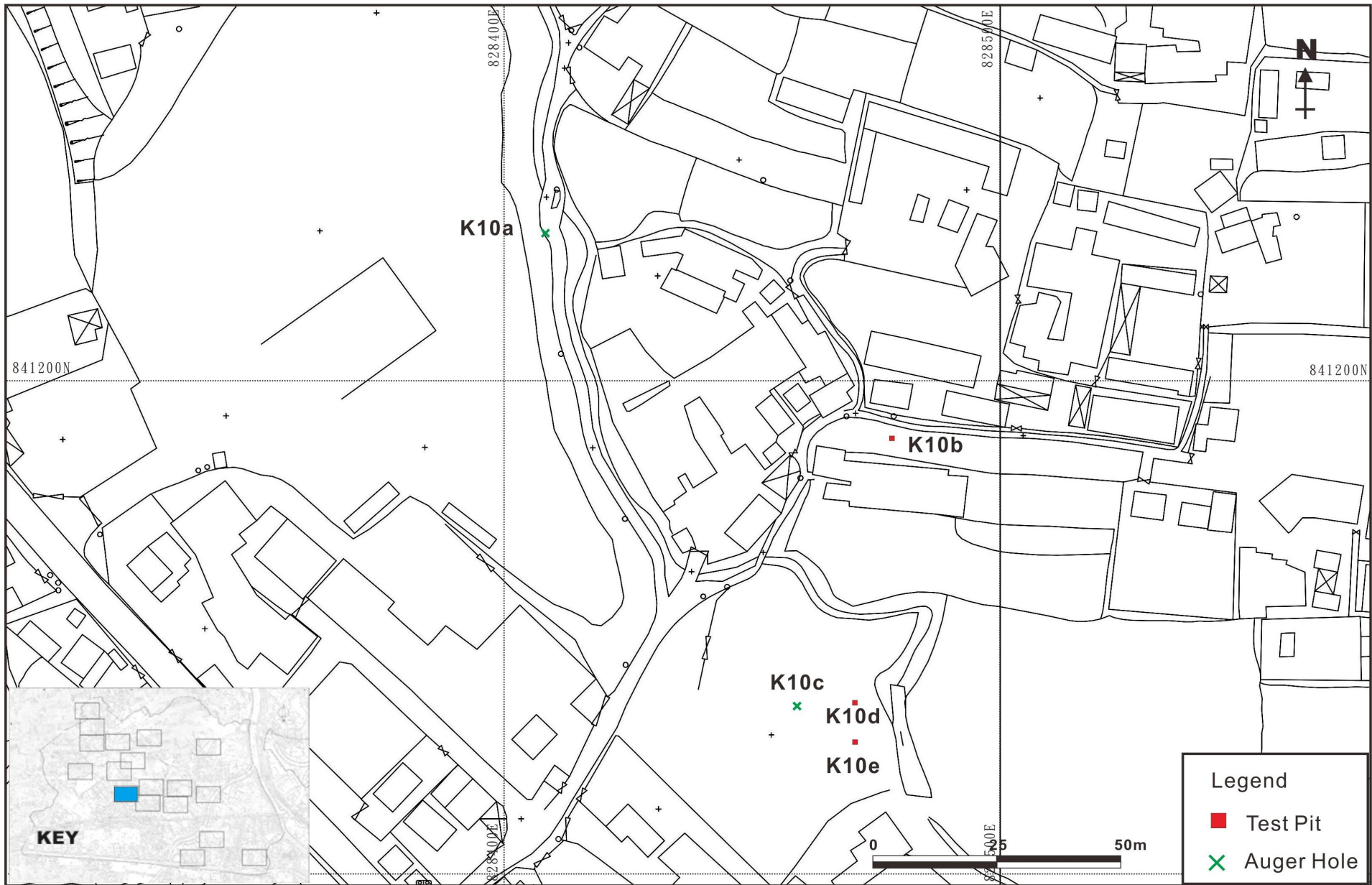
SCALE	1:1000	DATE	09/Feb/2011
CHECK	WANGWW	DRAWN	SIUMW
JOB NO.	60157433	DRAWING NO.	KTN-8
		REV	-



AECOM

**Field Survey Location between Sheung Shui Community Sports
and Fung Kong Shan**

SCALE	1:1000	DATE	09/Feb/2011
CHECK	WANGWW	DRAWN	SIUMW
JOB NO.	60157433	DRAWING NO.	KTN-9
		REV	-



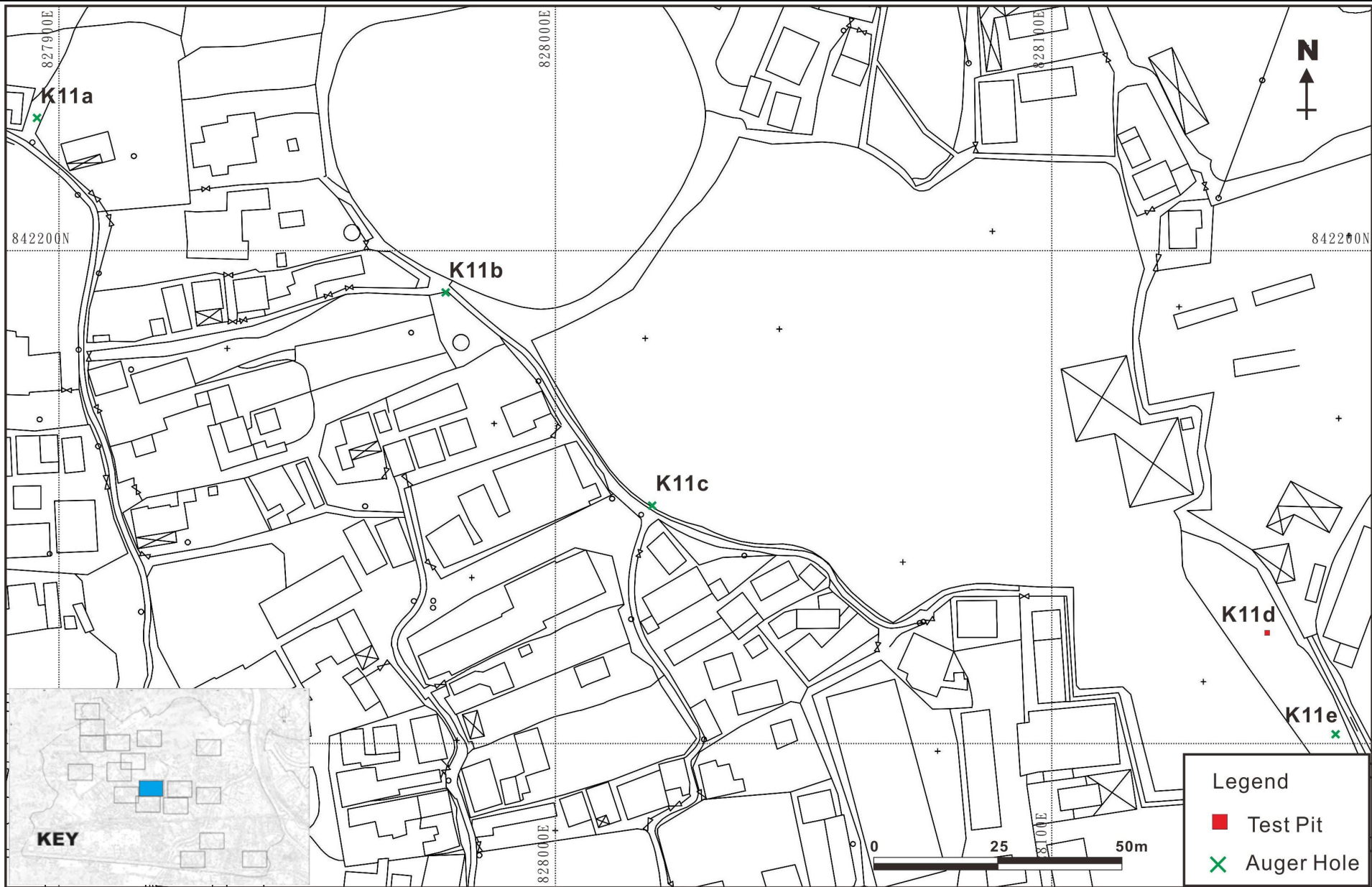
Legend

- Test Pit
- x Auger Hole



Field Survey Location near Fung Kong Shan

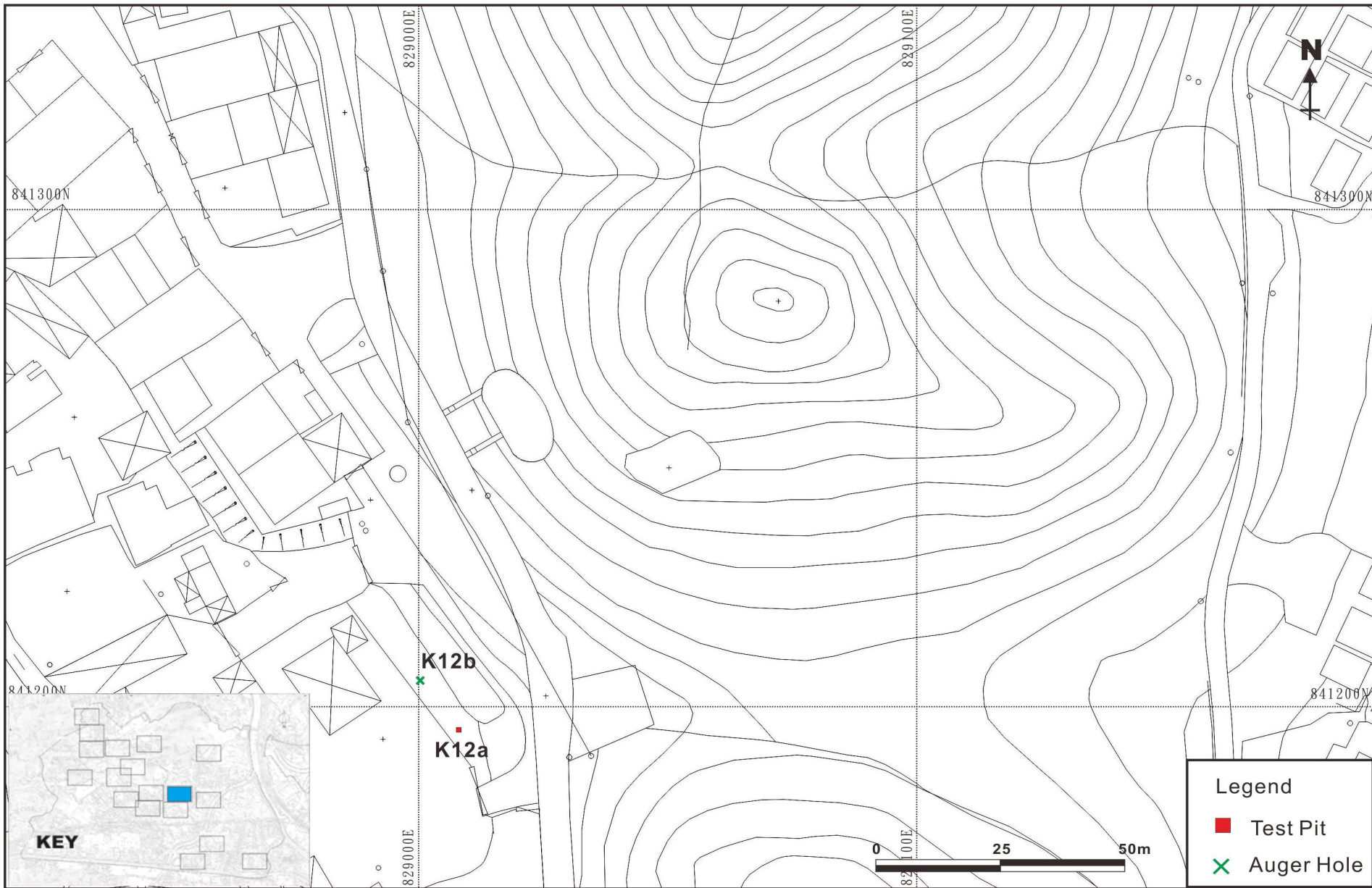
SCALE	1:1000	DATE	09/Feb/2011
CHECK	WANGWW	DRAWN	SIUMW
JOB NO.	60157433	DRAWING NO.	KTN-10
		REV	-



AECOM

Field Survey Location at Fung Kong

SCALE	1:1000	DATE	09/Feb/2011
CHECK	WANGWW	DRAWN	SIUMW
JOB NO.	60157433	DRAWING NO.	KTN-11
		REV	-



AECOM

Field Survey Location at Ho Sheung Heung Pai Fung Road

SCALE	1:1000	DATE	09/Feb/2011
CHECK	WANGWW	DRAWN	SIUMW
JOB NO.	60157433	DRAWING NO.	KTN-12
		REV	-



**Field Survey Location near the junction of Ma Tso Lung Road and
Ho Sheung Heung Road**

SCALE	1:1000	DATE	09/Feb/2011	
CHECK	WANGWW	DRAWN	SIUMW	
JOB NO.	60157433	DRAWING NO.	KTN-13	REV
				-



Legend

- Test Pit
- ✕ Auger Hole

AECOM

Field Survey Location near Ho Sheung Heung

SCALE	1:1000	DATE	09/Feb/2011
CHECK	WANGWW	DRAWN	SIUMW
JOB NO.	60157433	DRAWING NO.	KTN-14
		REV	-



Field Survey Location in Ho Sheung Heung

SCALE	1:1000	DATE	09/Feb/2011	
CHECK	WANGWW	DRAWN	SIUMW	
JOB NO.	60157433	DRAWING NO.	KTN-15	REV
				-



Legend

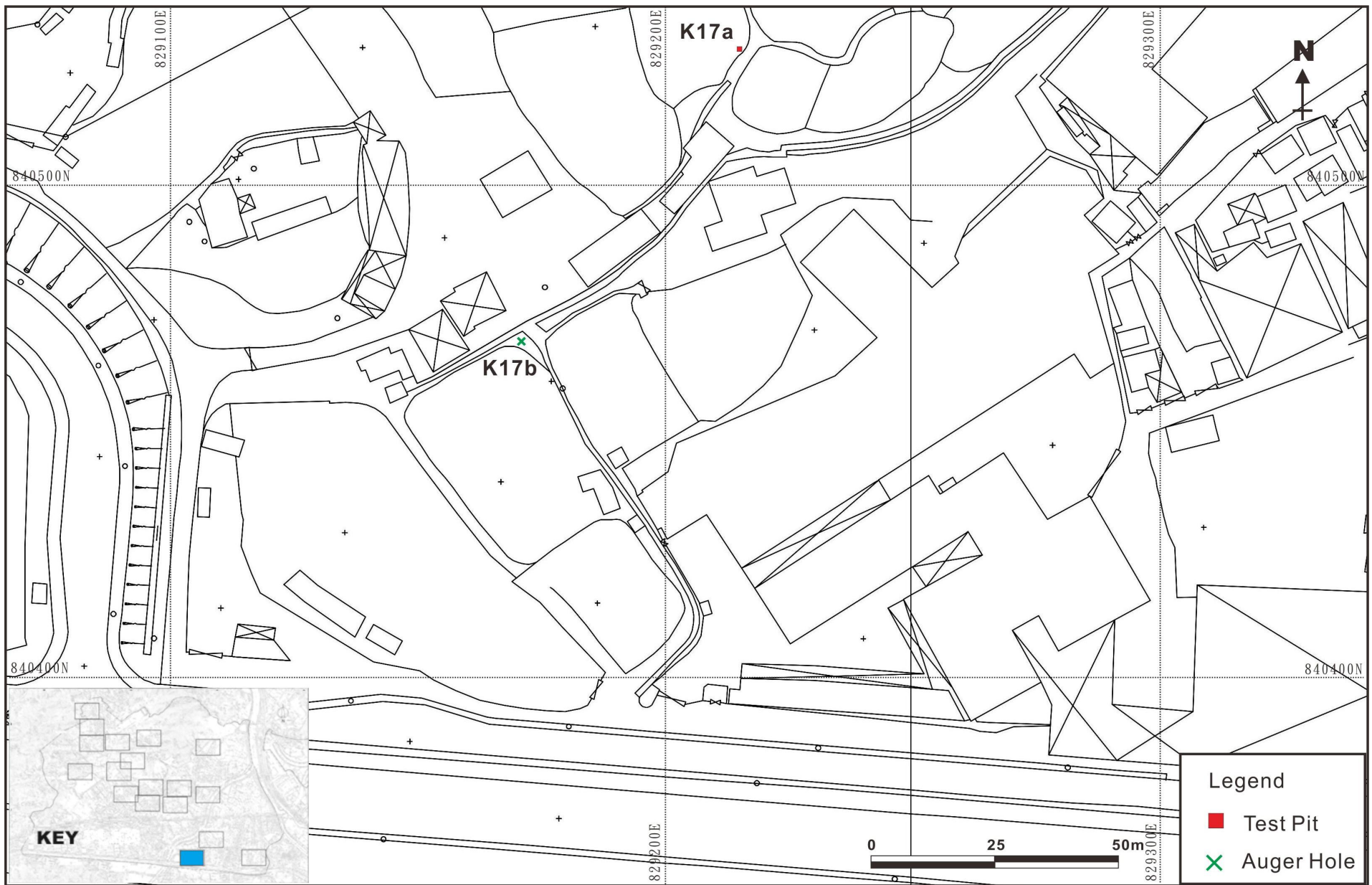
■ Test Pit

✕ Auger Hole



Field Survey Location near Yin Kong Tsuen

SCALE	1:1000	DATE	09/Feb/2011
CHECK	WANGWW	DRAWN	SIUMW
JOB NO.	60157433	DRAWING NO.	KTN-16
		REV	-



Legend

- Test Pit
- ✕ Auger Hole

AECOM

Field Survey Location near Yin Kong Tsuen

SCALE	1:1000	DATE	09/Feb/2011
CHECK	WANGWW	DRAWN	SIUMW
JOB NO.	60157433	DRAWING NO.	KTN-17
		REV	-

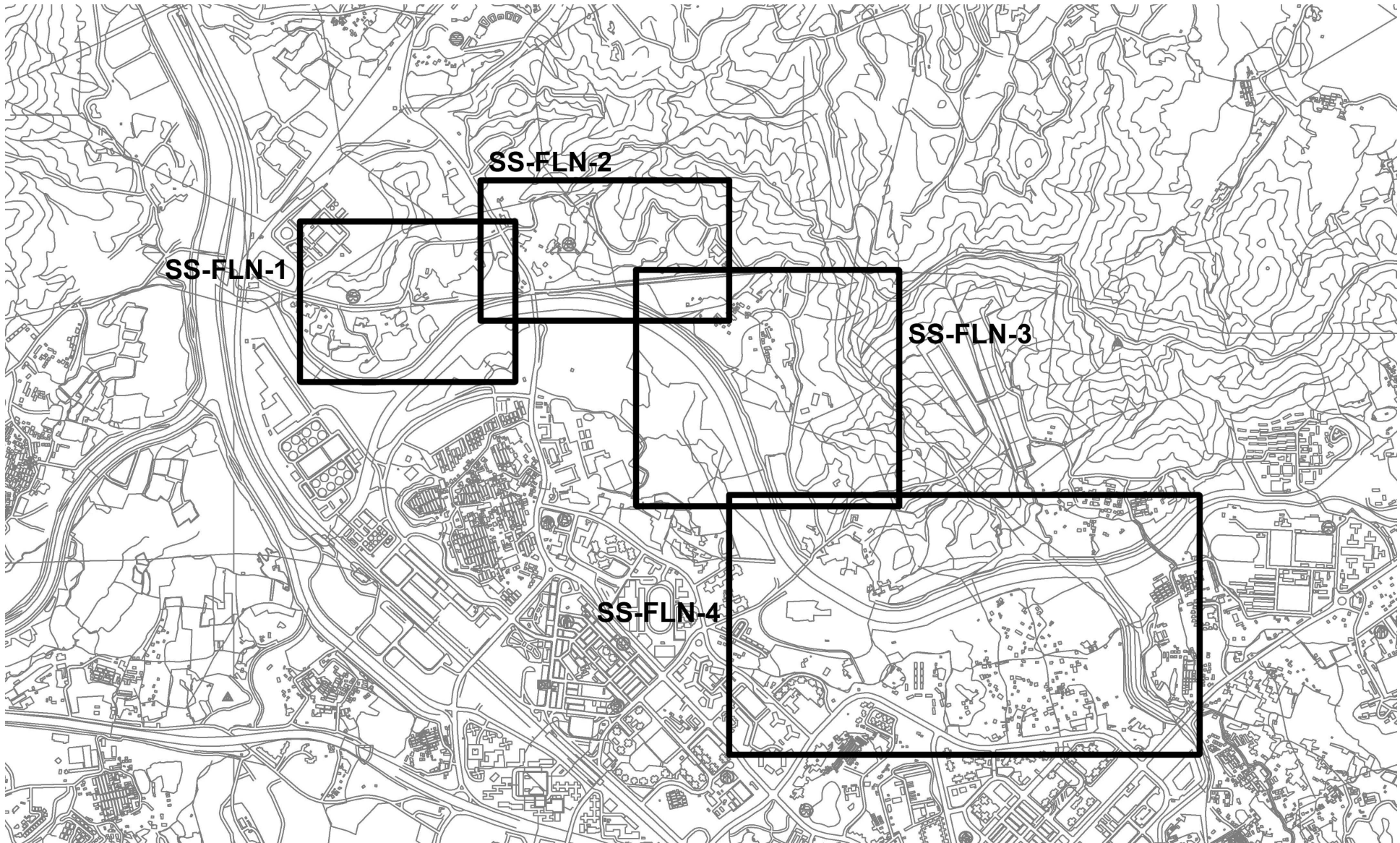


Field Survey Location near Yin Kong Tsuen

SCALE	1:1000	DATE	09/Feb/2011
CHECK	WANGWW	DRAWN	SIUMW
JOB NO.	60157433	DRAWING NO.	KTN-18
		REV	-

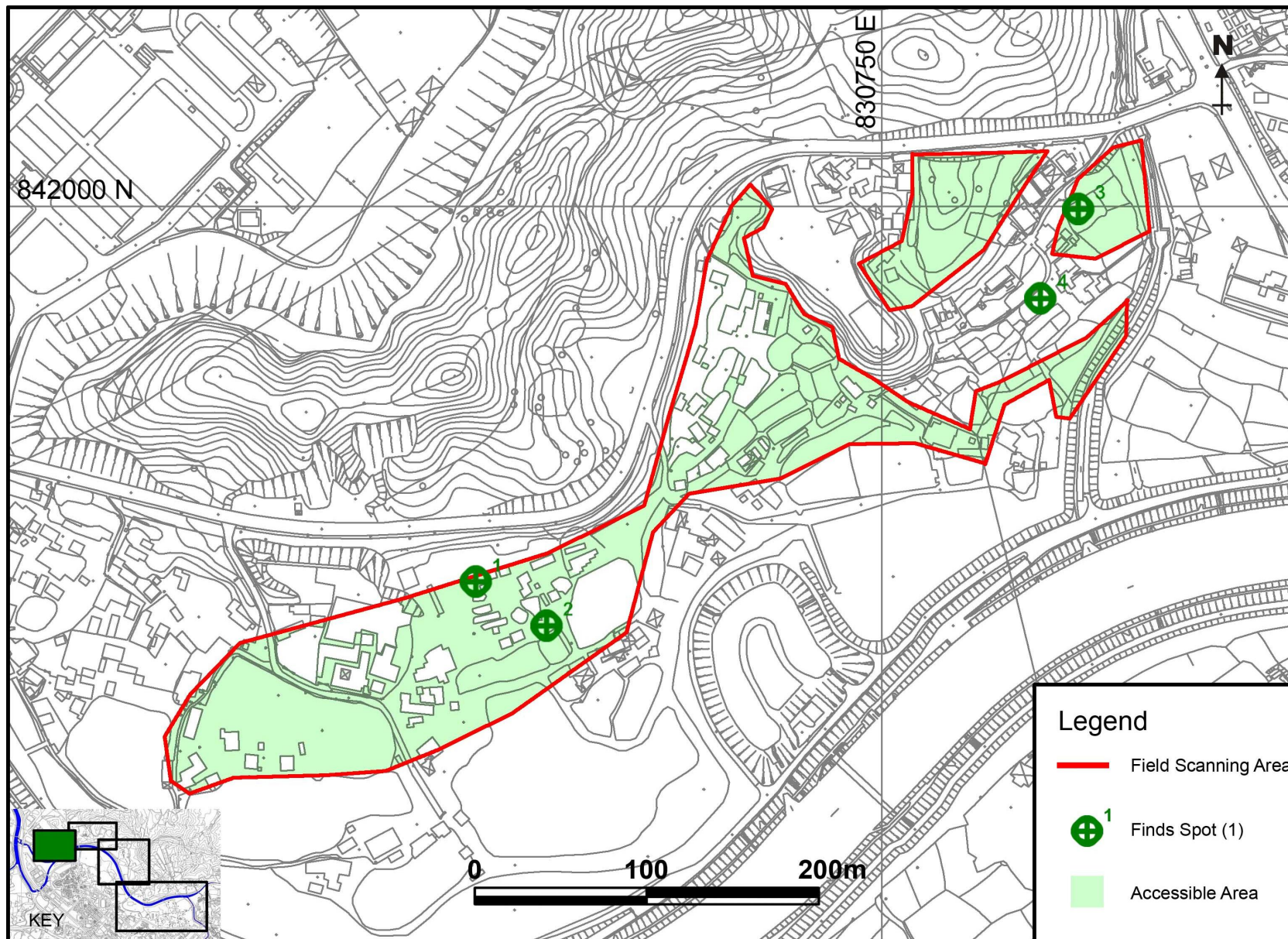
II. FLN 粉嶺北

1. Figures on Surface Scanning 地表調查範圍圖



Surface Scanning Area at Fanling North

SCALE	1:15000	DATE	18/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	SS-FLN-0
		REV	-



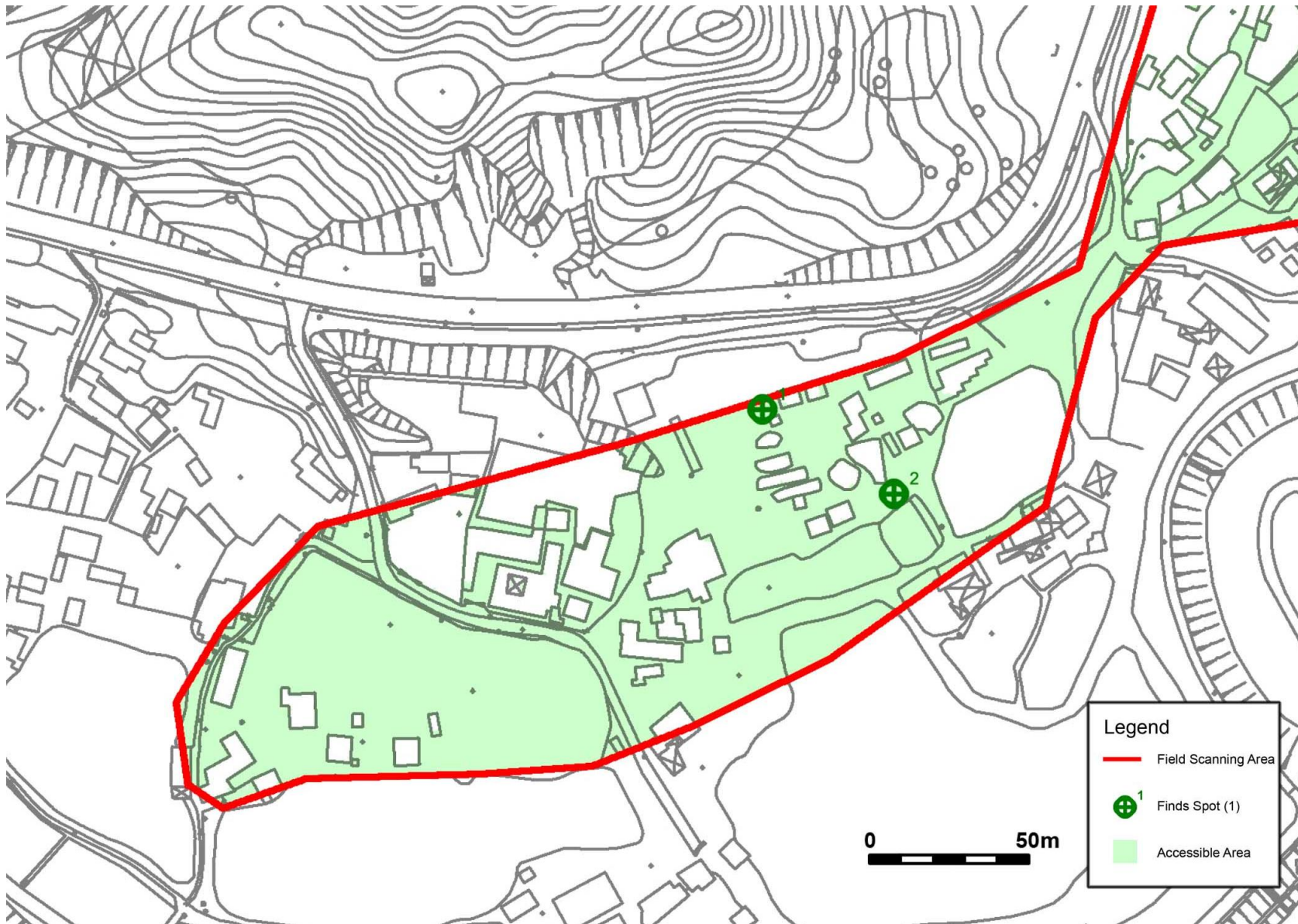
Legend

- Field Scanning Area
- ⊕¹ Finds Spot (1)
- Accessible Area

AECOM

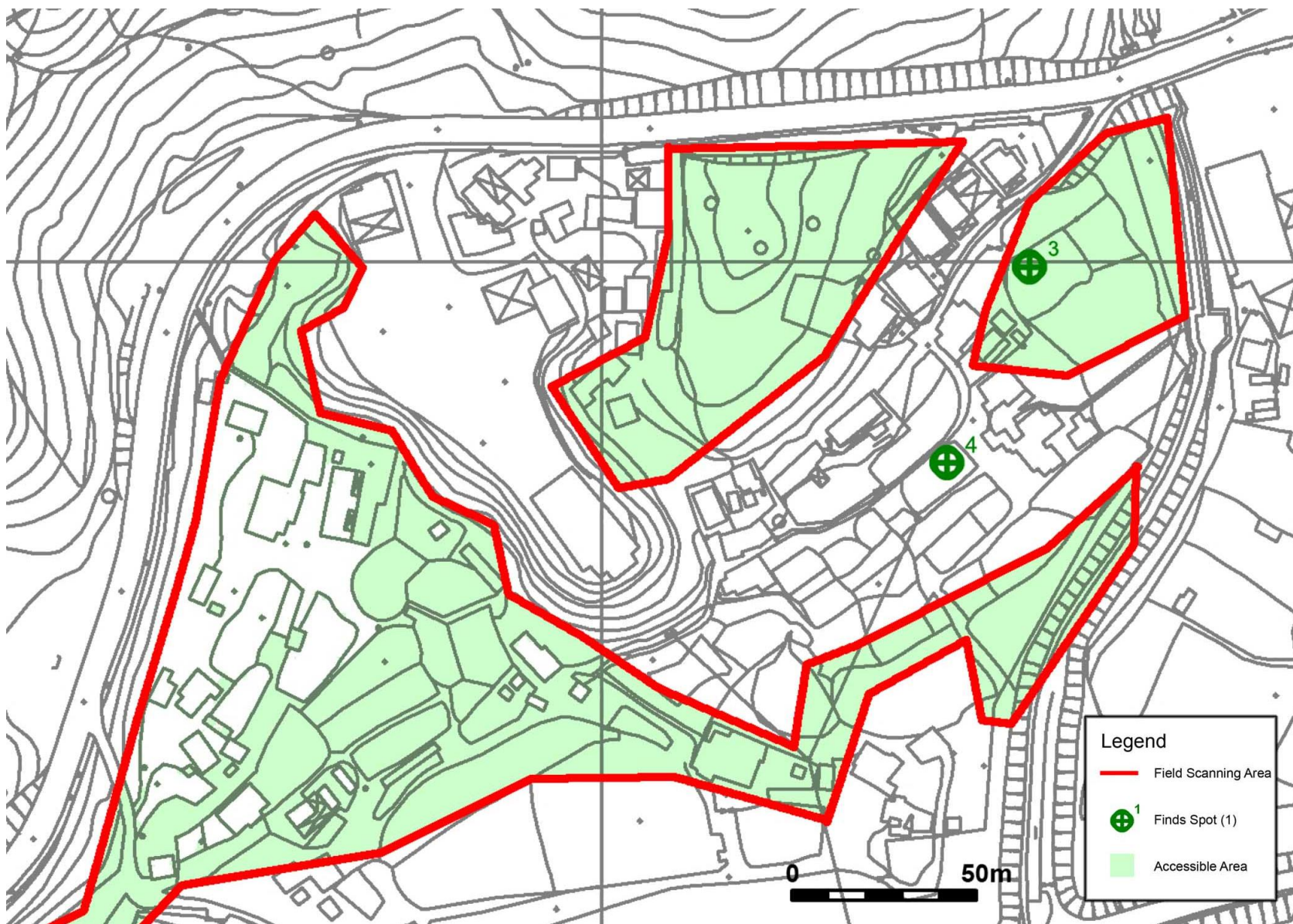
Surface Scanning Area at Fu Tei Au, Fanling North

SCALE	See Figure	DATE	18/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	SS-FLN-1
		REV	.



Surface Scanning Area at Fu Tei Au, Fanling North

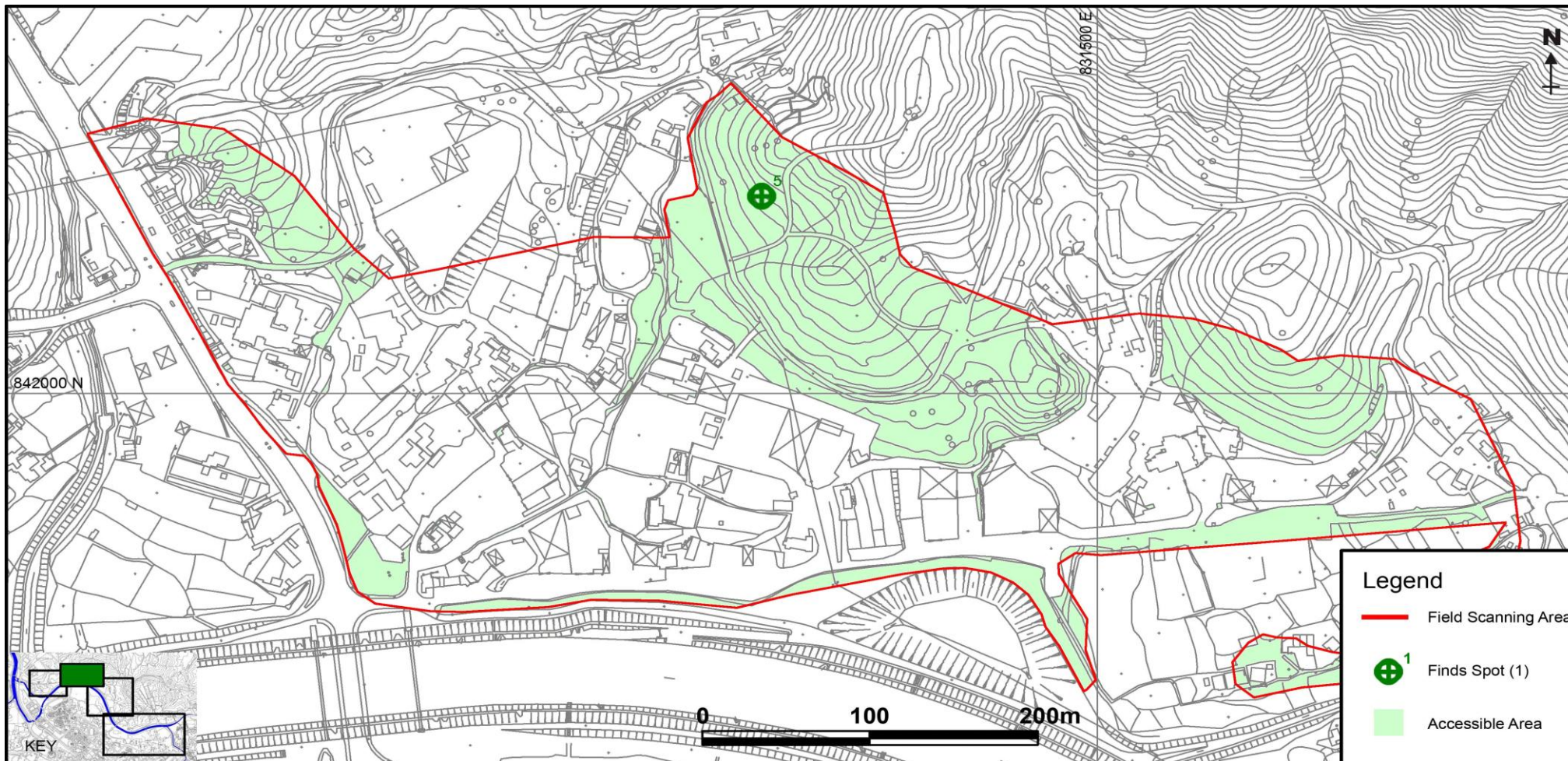
SCALE	1:1000 on A3	DATE	30/Dec/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	SS-FLN-1a
		REV	.



AECOM

Surface Scanning Area at Fu Tei Au, Fanling North

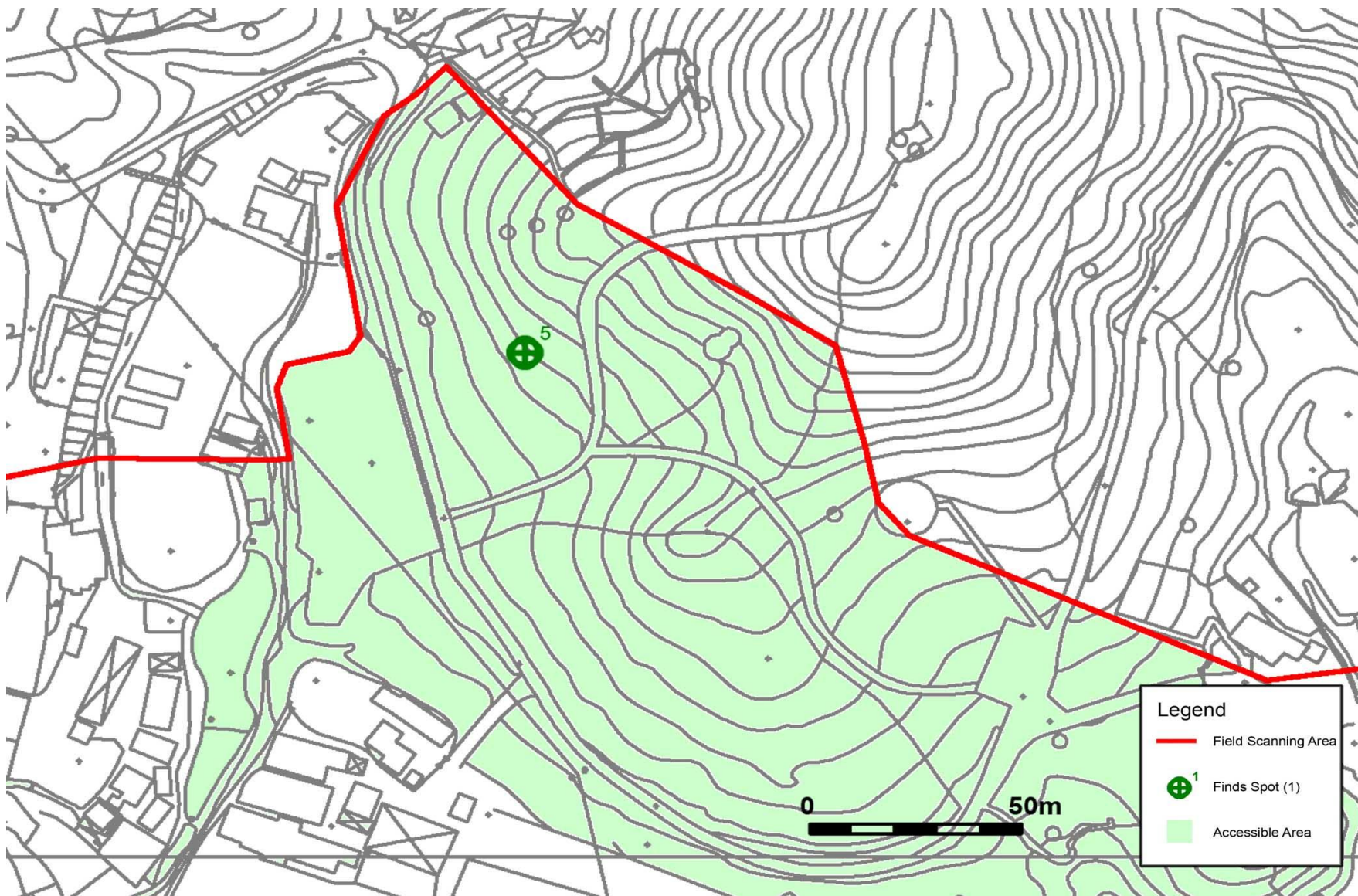
SCALE	1:1000 on A3	DATE	30/Dec/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	SS-FLN-1b
		REV	-



AECOM

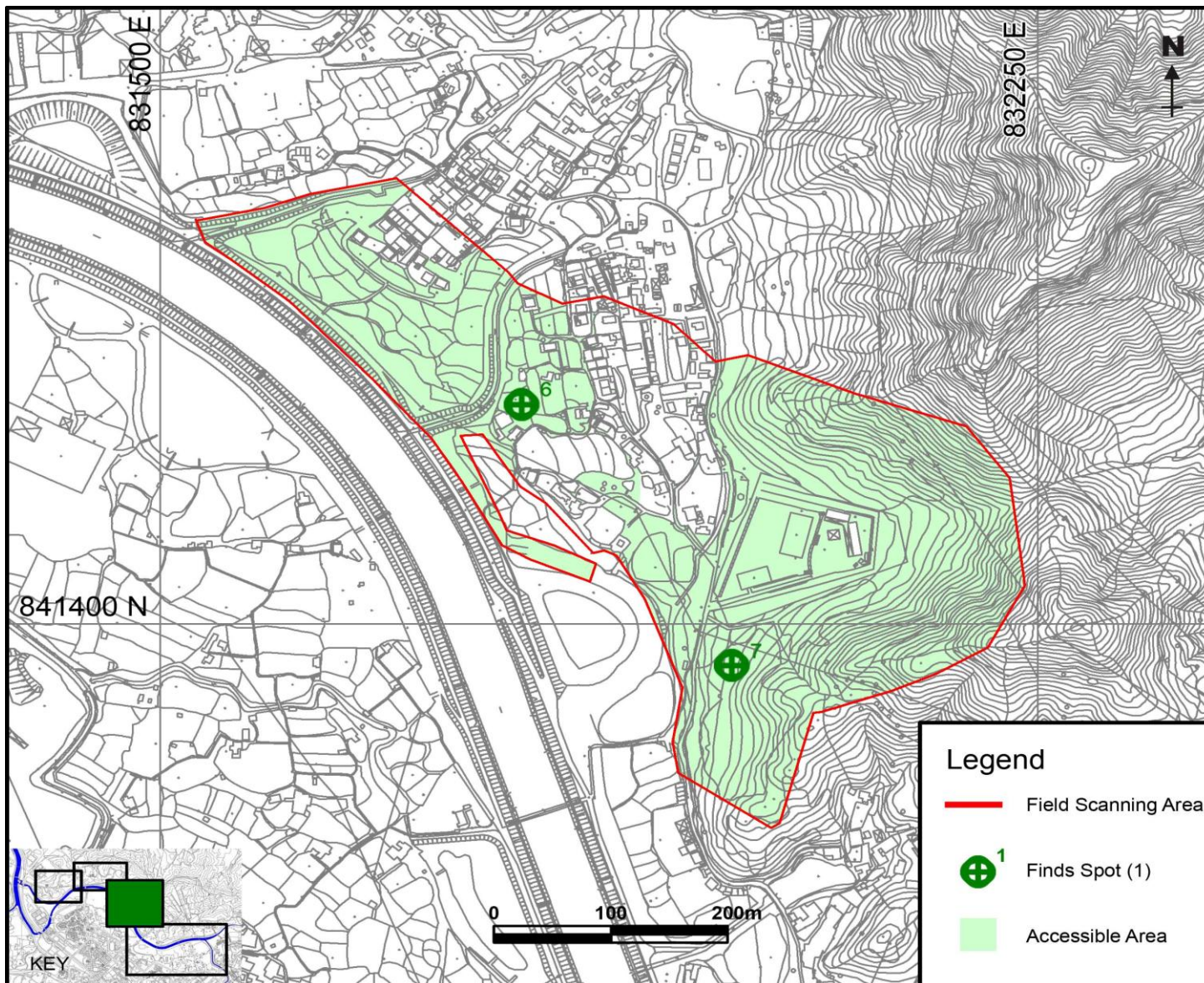
**Surface Scanning Area between Hung Kiu San Tsuen
and Sheung Shui Wa Shan, Fanling North**

SCALE	See Drawing	DATE	18/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	SS-FLN-2
		REV	-



**Surface Scanning Area between Hung Kiu San Tsuen and Sheung
Shui Wa Shan, Fanling North**

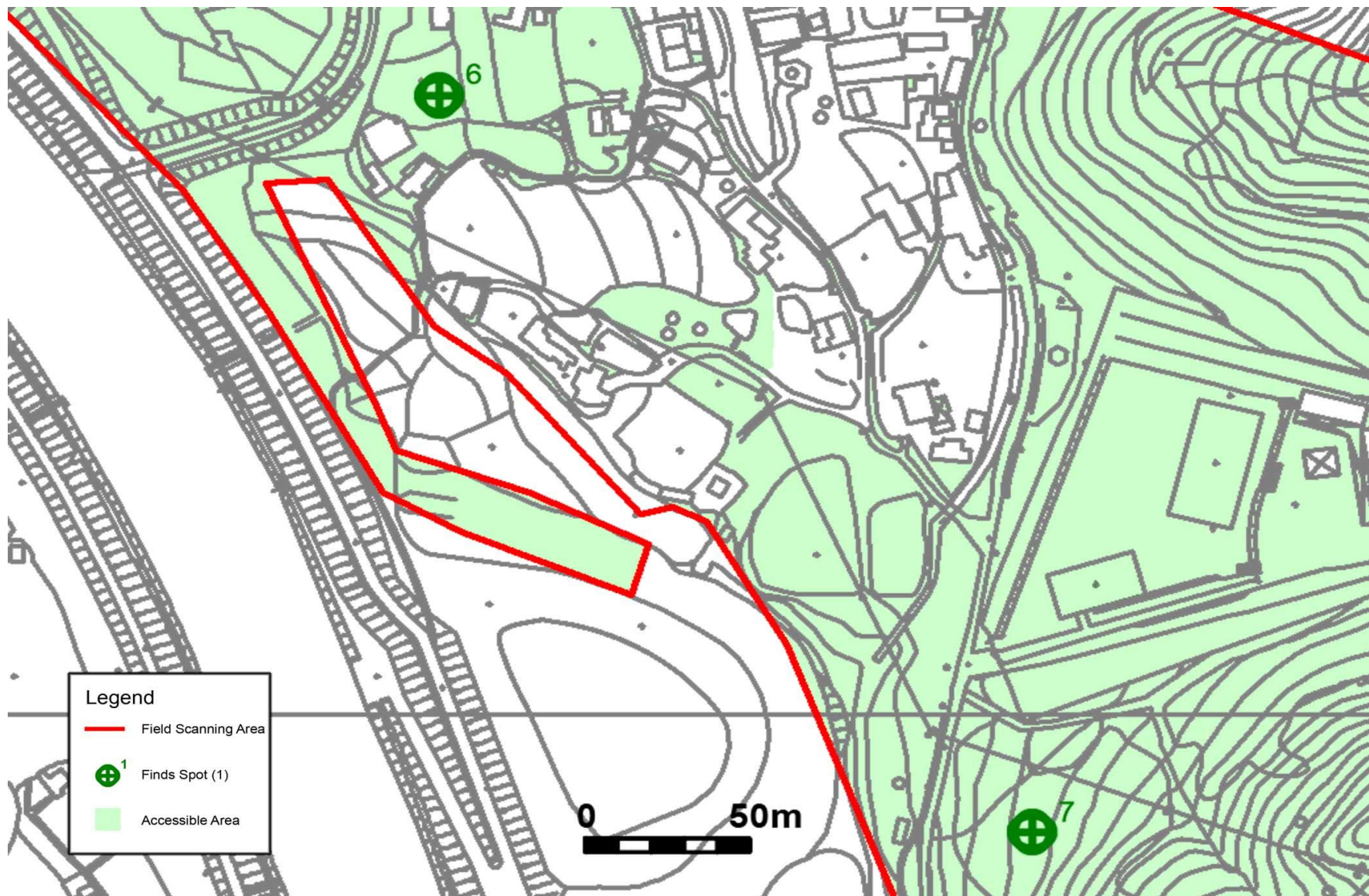
SCALE	1:1000 on A3	DATE	30/Dec/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	SS-FLN-2a
		REV	-



AECOM

Surface Scanning Area near Wa Shan Public School
Fanling North

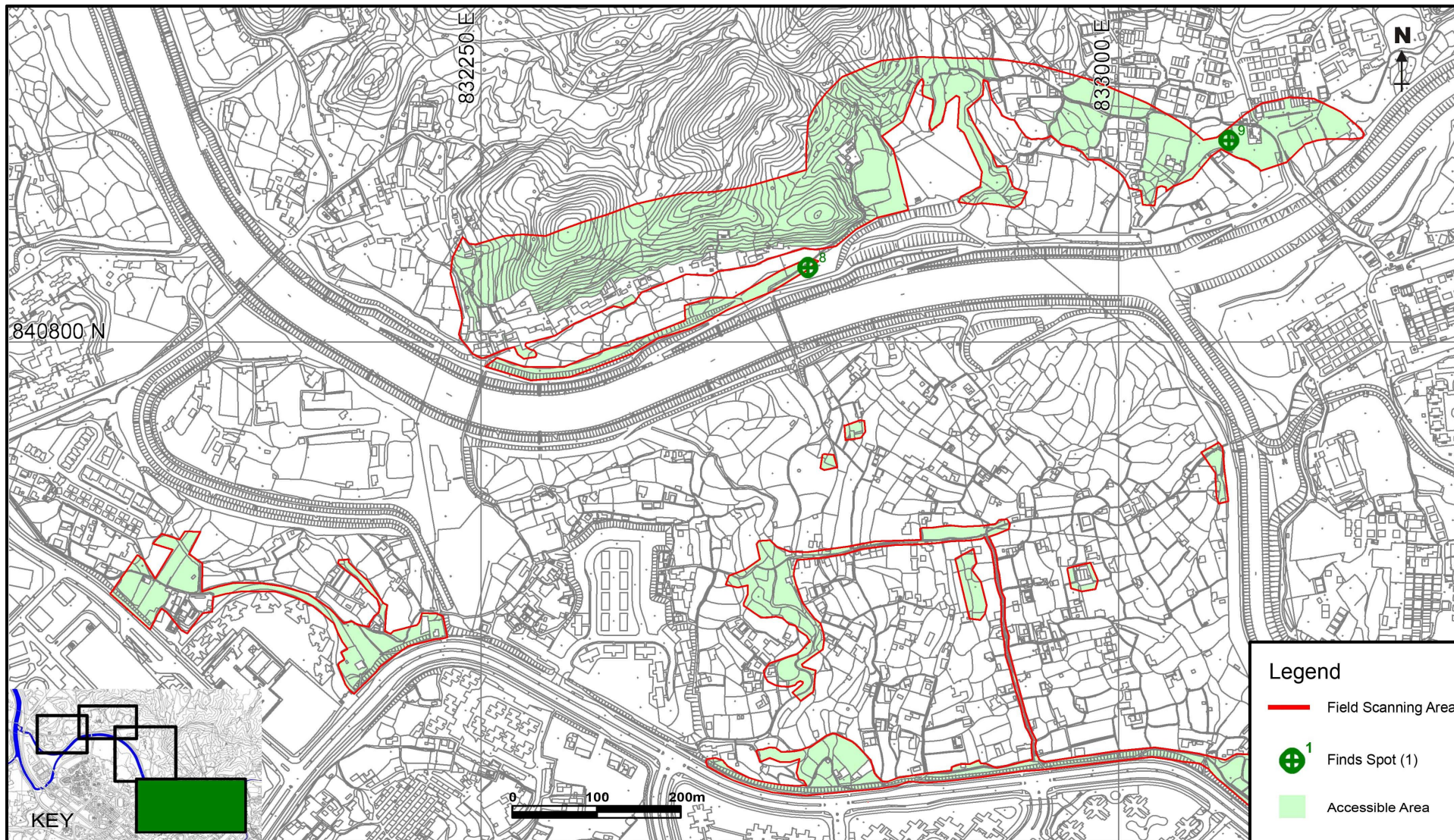
SCALE	See Drawing	DATE	18/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	SS-FLN-3
		REV	-



AECOM

Surface Scanning Area near Wa Shan Public School
Fanling North

SCALE	1:1000 on A3	DATE	30/Dec/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	SS-FLN-3a
		REV	-



AECOM

**Surface Scanning Area near Siu Hang San Tsuen around Ng Tung
River, Fanling North**

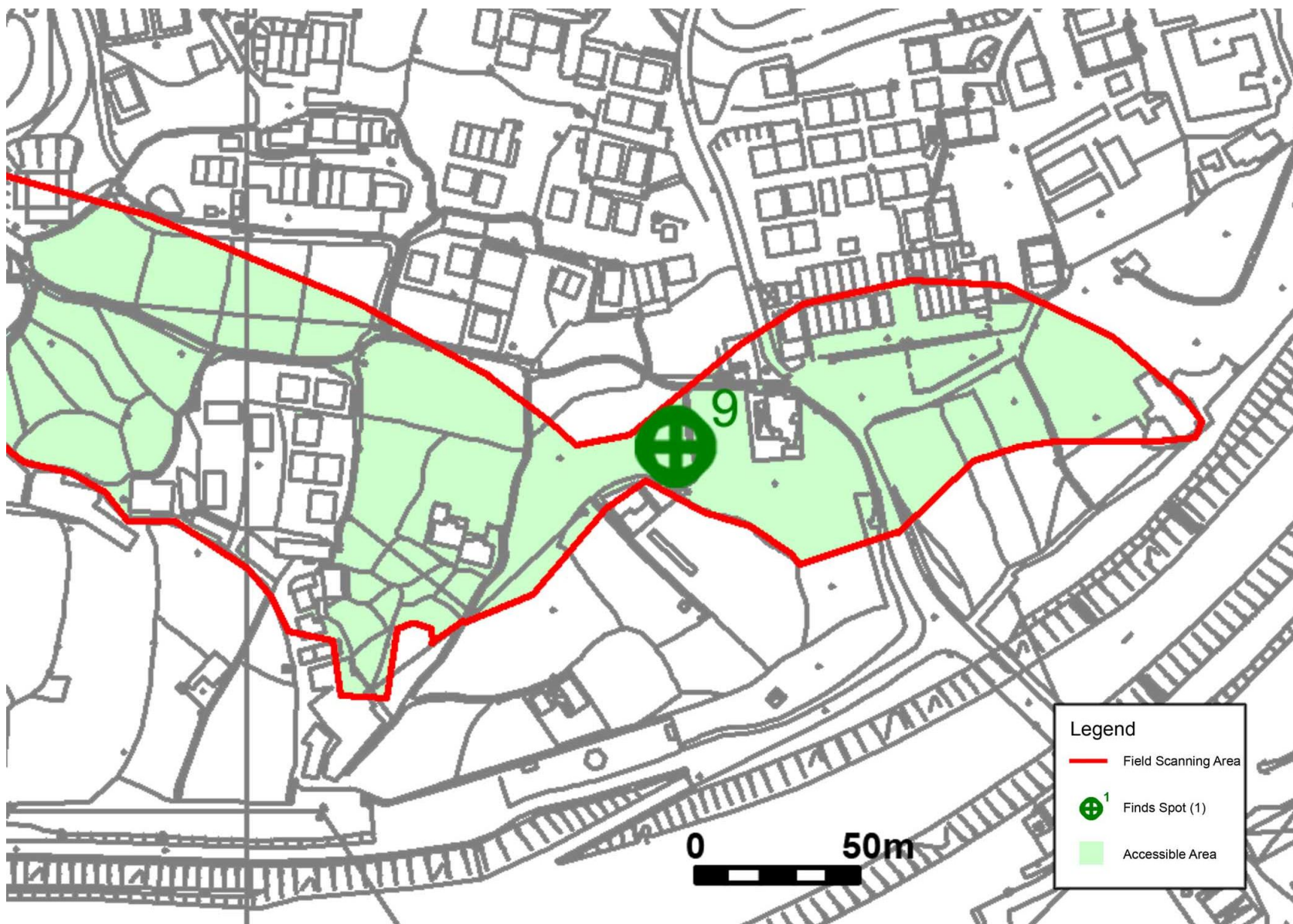
SCALE	See Drawing	DATE	18/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	SS-FLN-4
		REV	-



AECOM

Surface Scanning Area near Siu Hang San Tsuen around Ng Tung
River, Fanling North

SCALE	1:1000 on A3	DATE	30/Dec/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	SS-FLN-4a
		REV	-

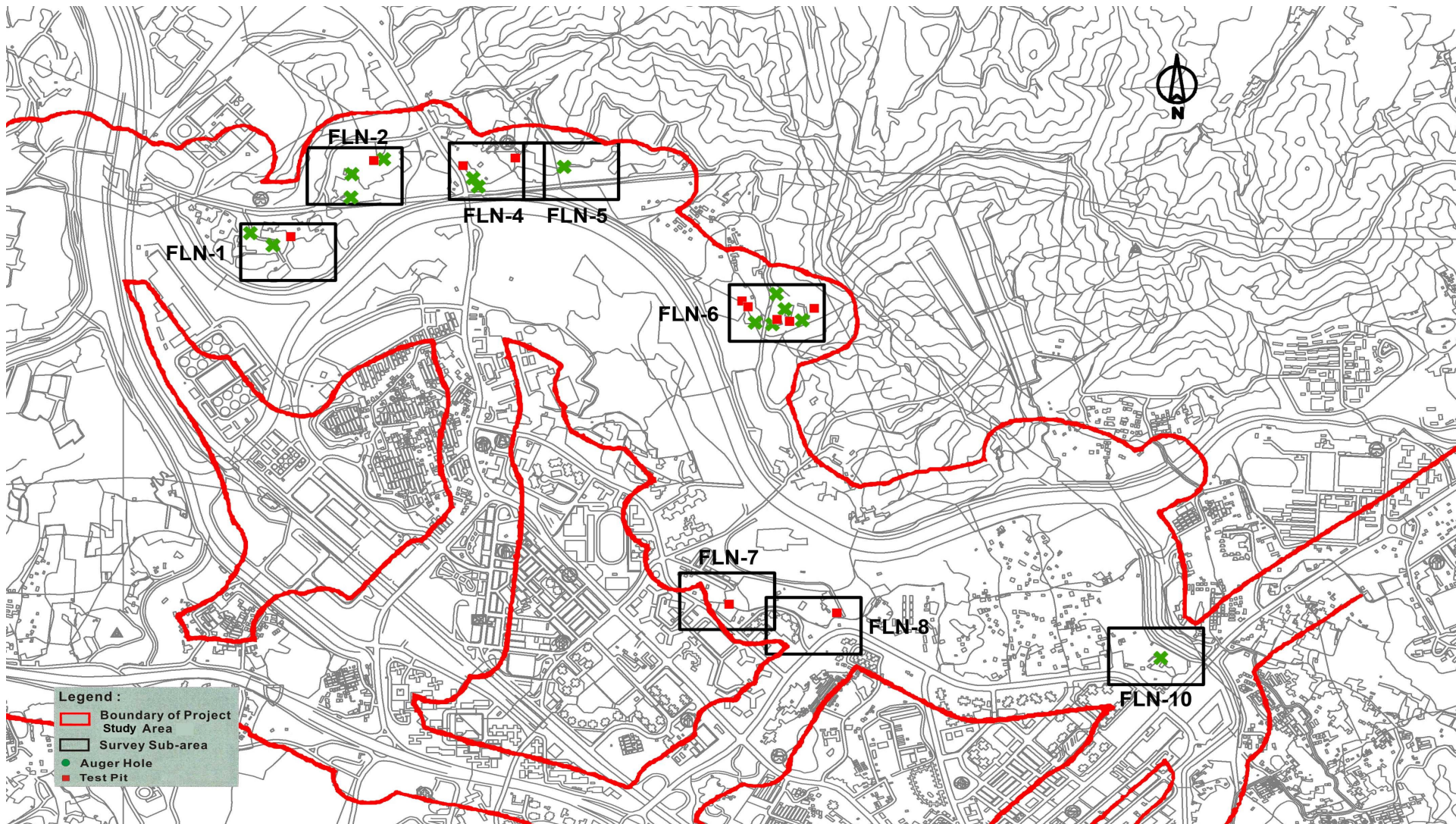


**Surface Scanning Area near Siu Hang San Tsuen around Ng Tung
River, Fanling North**

SCALE	1:1000 on A3	DATE	30/Dec/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	SS-FLN-4b
		REV	-

II. FLN 粉嶺北

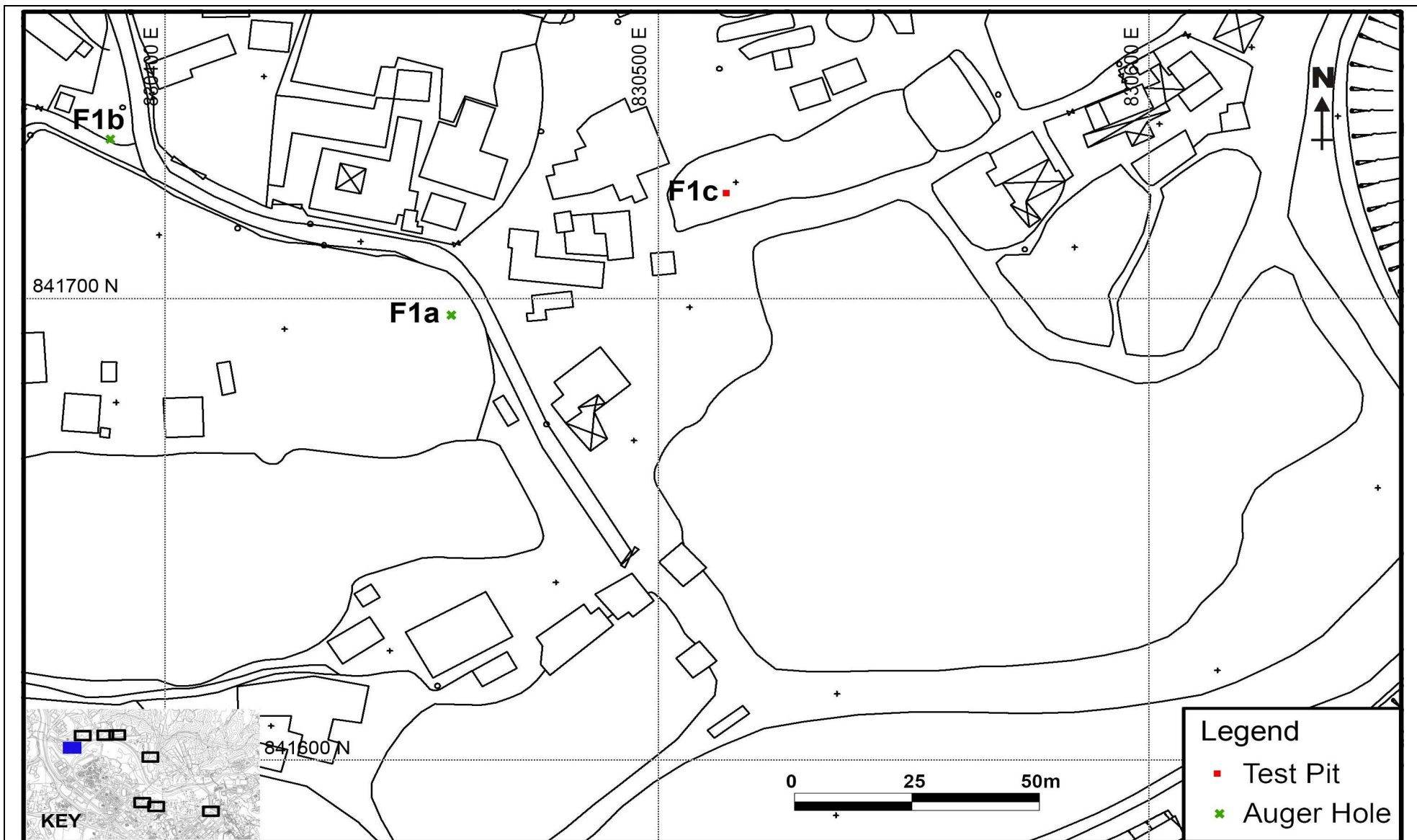
2. Figures on Surface Survey 鑽孔及探方發掘地點分布圖



AECOM

Field Survey Area of Fanling North

SCALE	1:9000	DATE	12/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	FLN-0
		REV	-



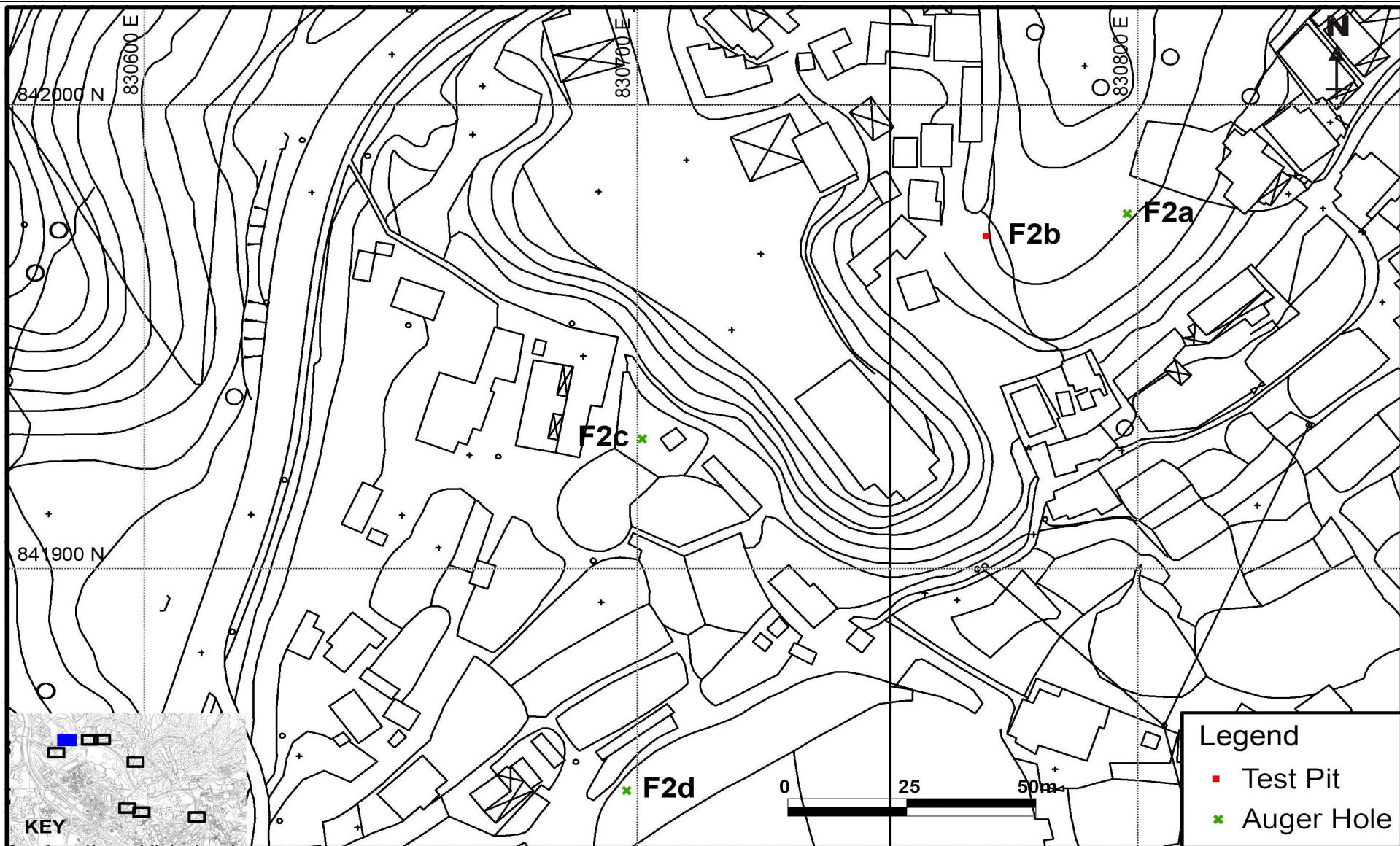
Legend

- Test Pit
- * Auger Hole



Field Survey Area near Fu Tei Au village, Fanling North

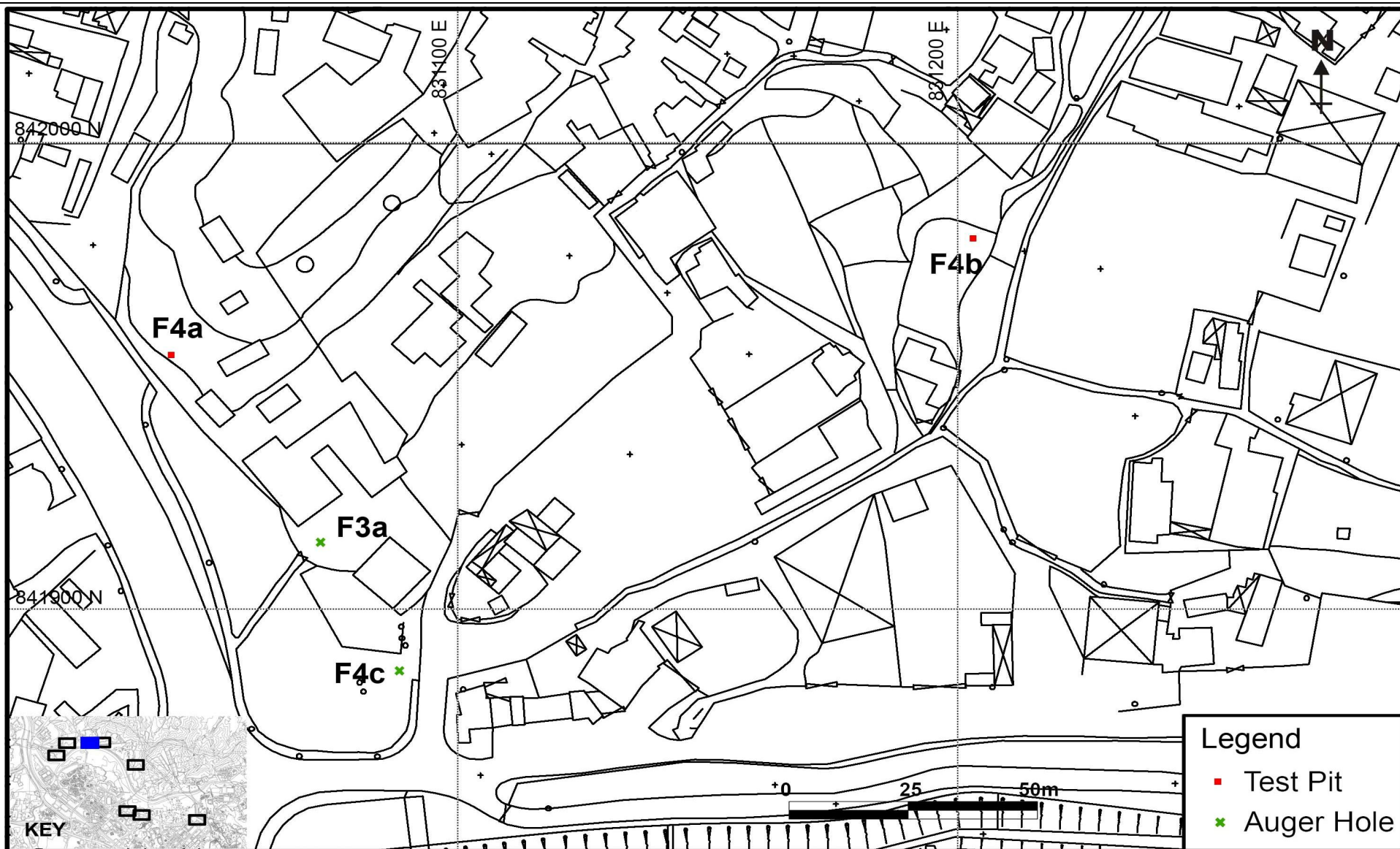
SCALE	1:1000	DATE	12/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	FLN-1
		REV	-



AECOM

Field Survey Area near Fu Tei Au village, Fanling North

SCALE	1:1000	DATE	12/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	FLN-2
		REV	-



AECOM

Field Survey Area near Hung Kiu San Tsuen, Fanling North

SCALE	1:1000	DATE	12/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	FLN-4
		REV	-



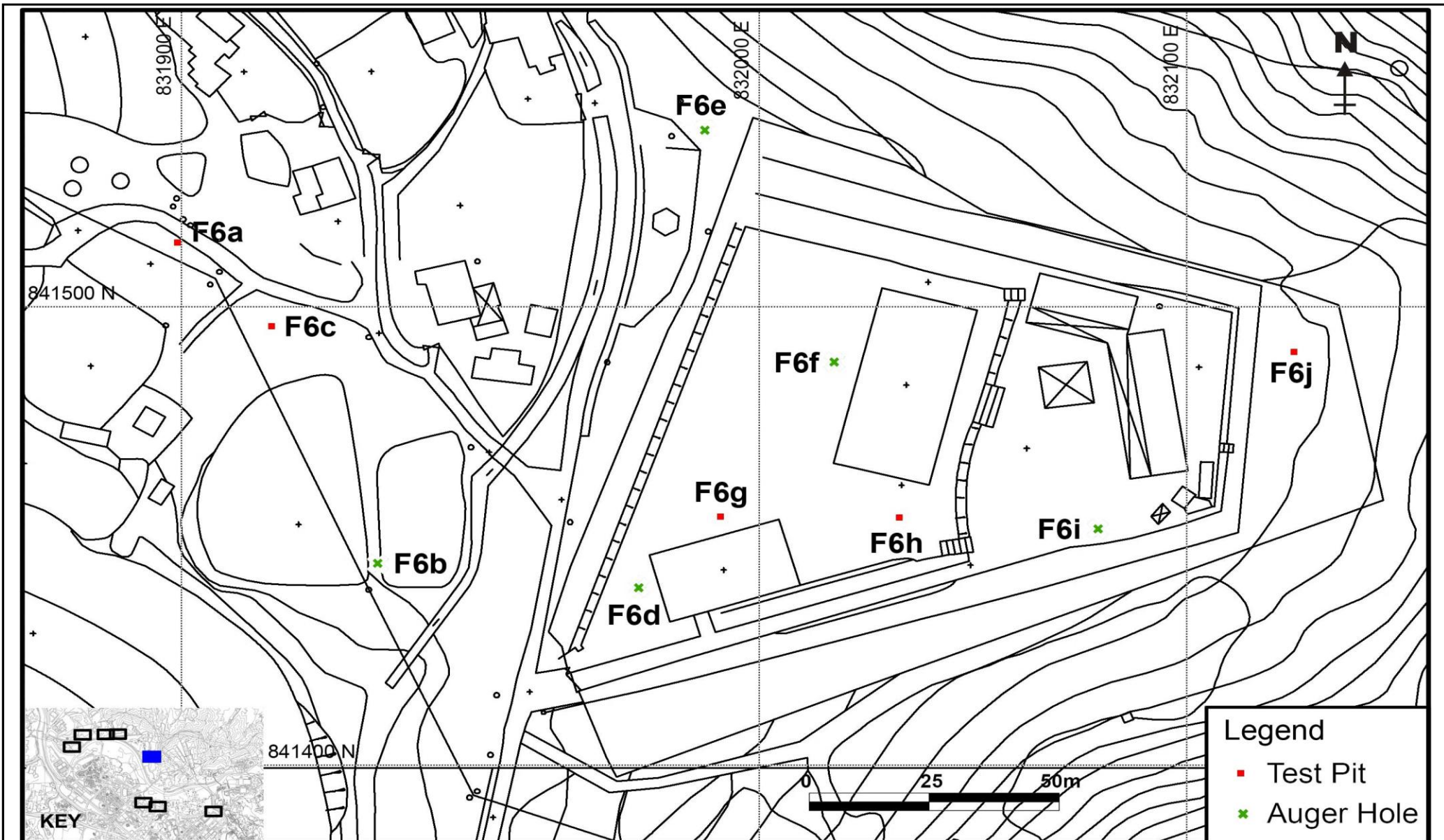
Legend

- Test Pit
- * Auger Hole



Field Survey Area between Hung Kiu San Tsuen and Sheung Shui
Wa Shan, Fanling North

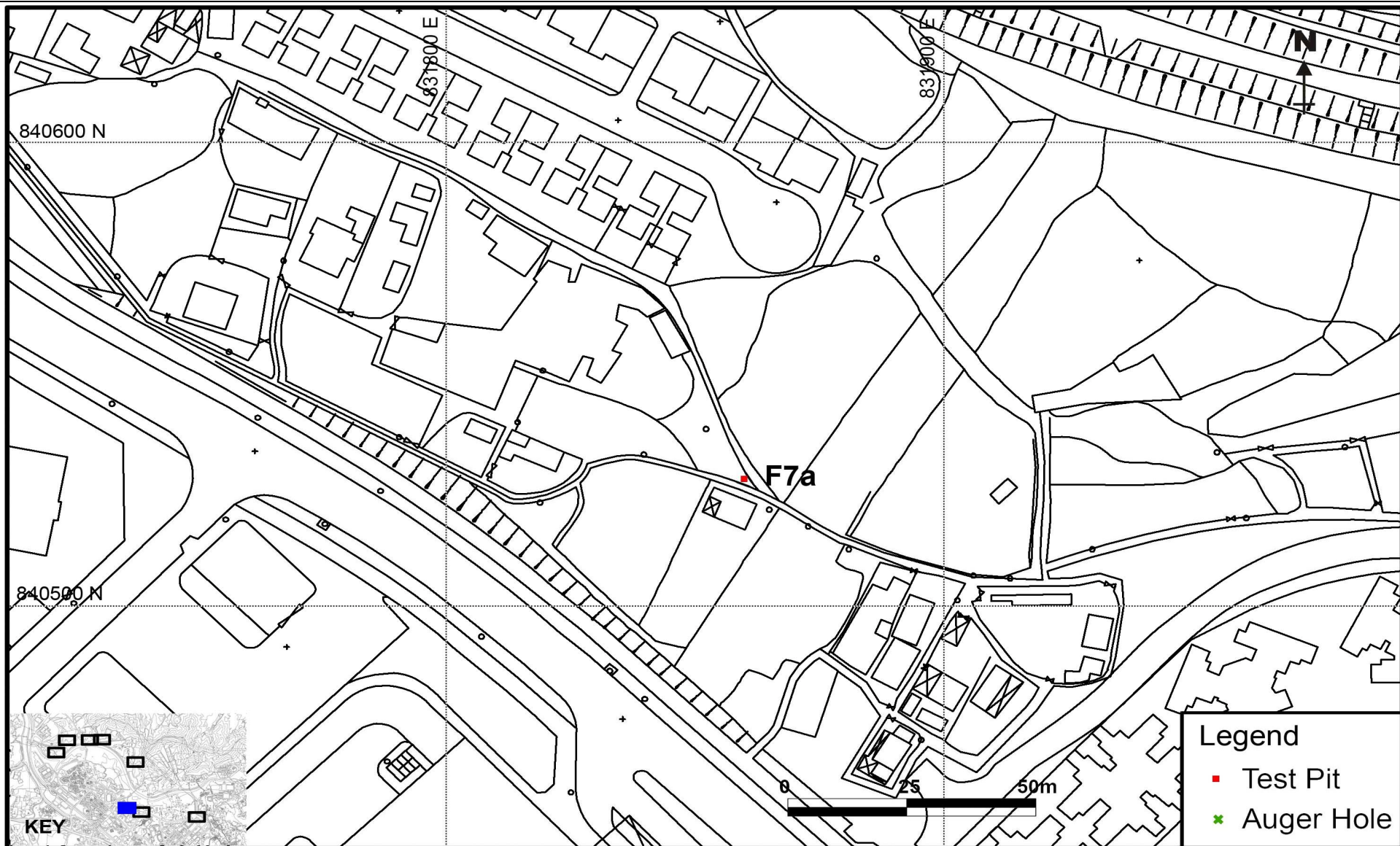
SCALE	1:1000	DATE	12/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	FLN-5
		REV	-



AECOM

Field Survey Area around Sheung Shui Wa Shan Public School,
Fanling North

SCALE	1:1000	DATE	12/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	FLN-6
		REV	-

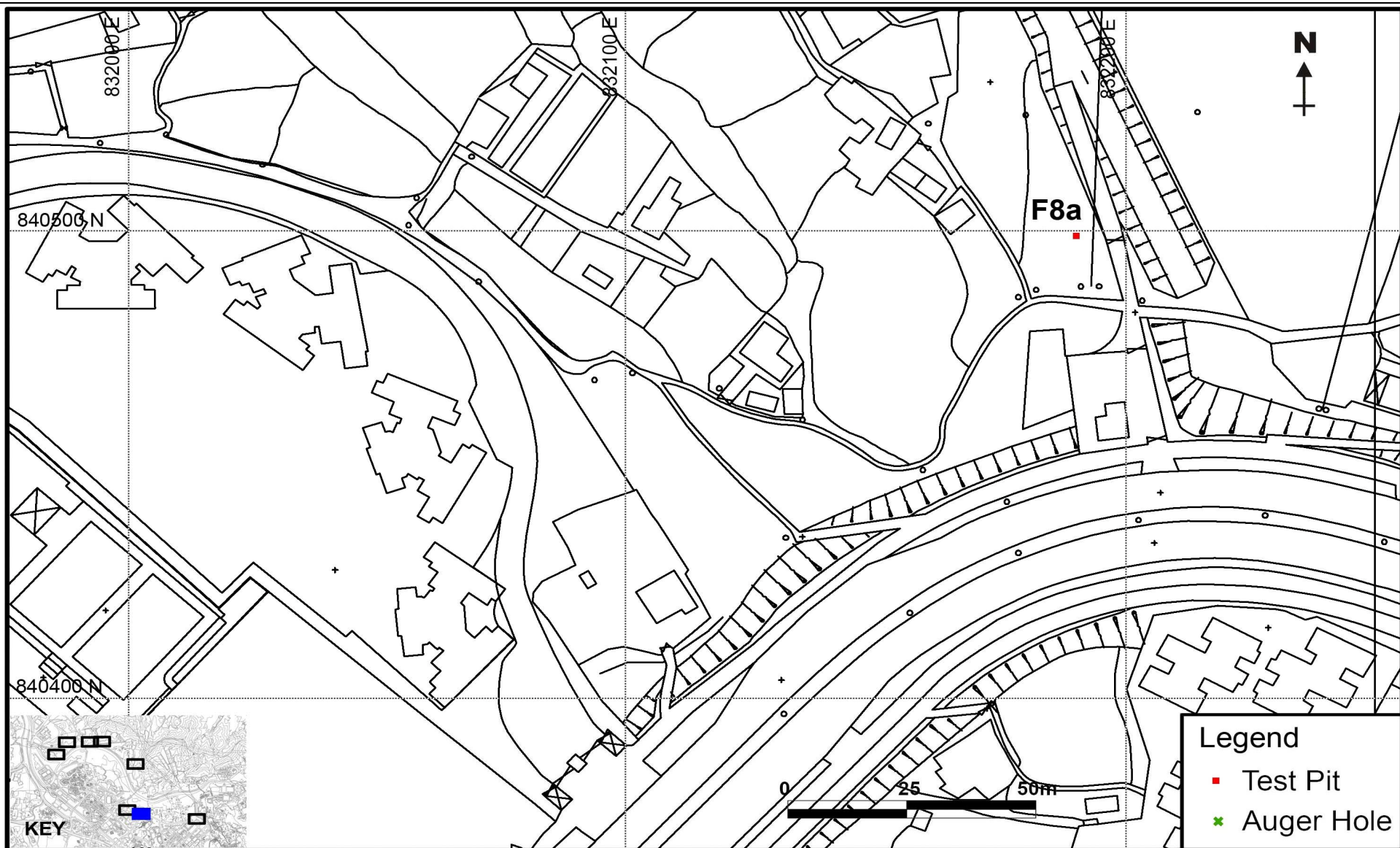


- Legend**
- Test Pit
 - ✕ Auger Hole



Field Survey Area near Noble Hill, Fanling North

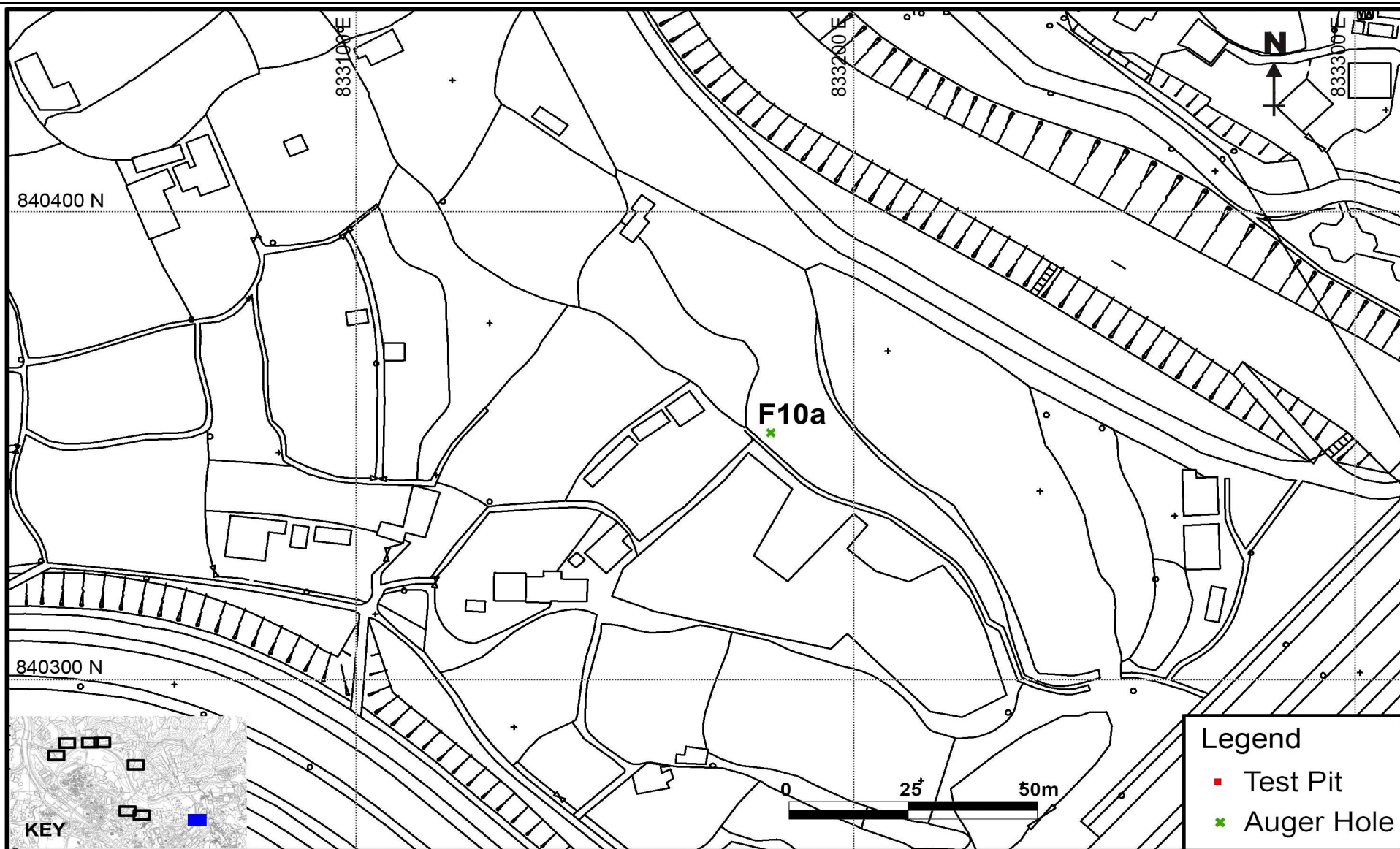
SCALE	1:1000	DATE	12/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	FLN-7
		REV	-



AECOM

Field Survey Area near Noble Hill, Fanling North

SCALE	1:1000	DATE	12/Oct/2010
CHECK	NGWS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	FLN-8
		REV	-



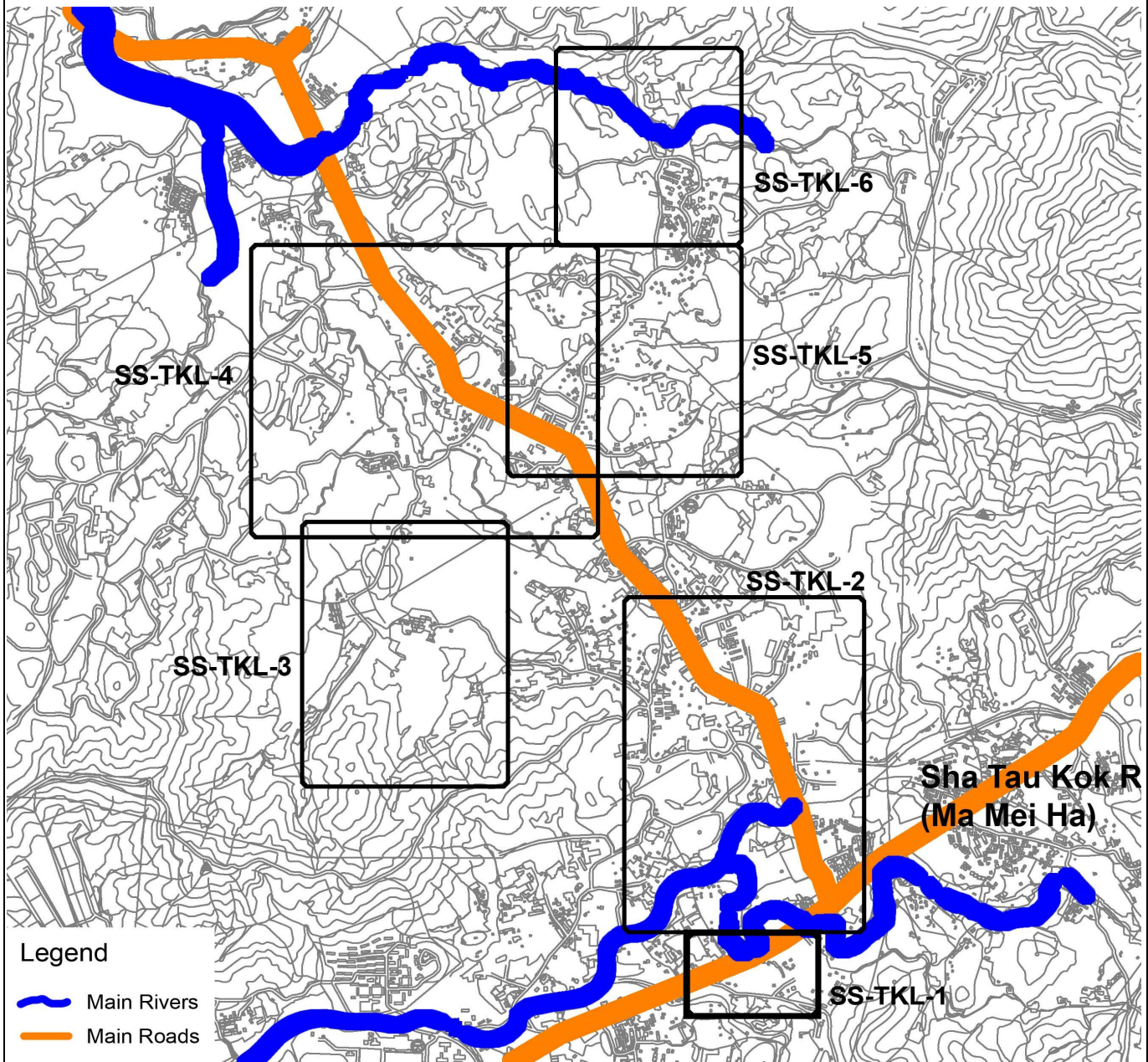
AECOM

Field Survey Area near Ma Shi Po, Fanling North

SCALE	1:1000	DATE	12/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	FLN-10
		REV	-

III. PC/TKL 坪輦／打鼓嶺

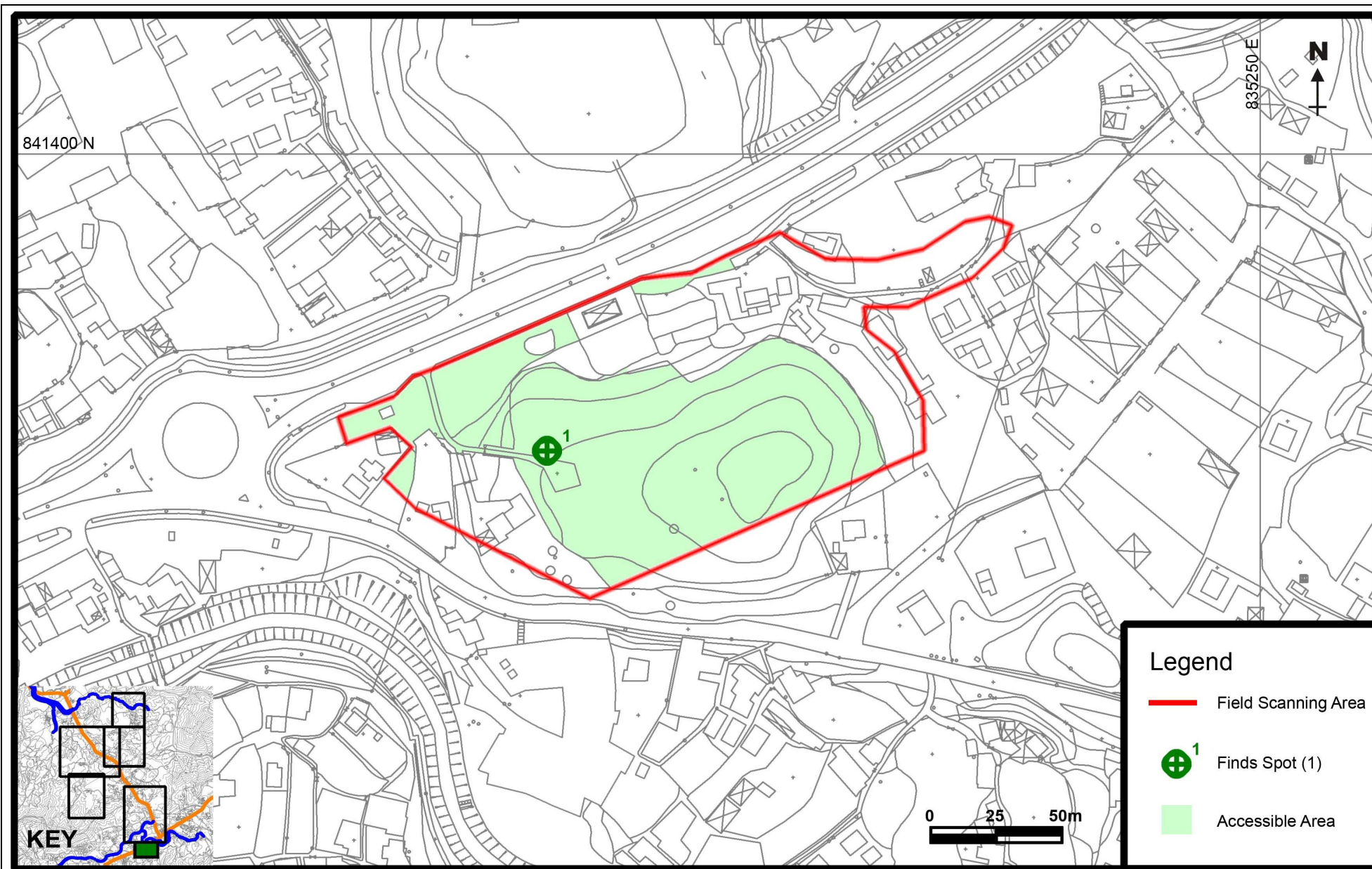
1. Figures on Surface Scanning 地表調查範圍圖



AECOM

Surface Scanning Area in Ping Che /Ta Kwu Ling

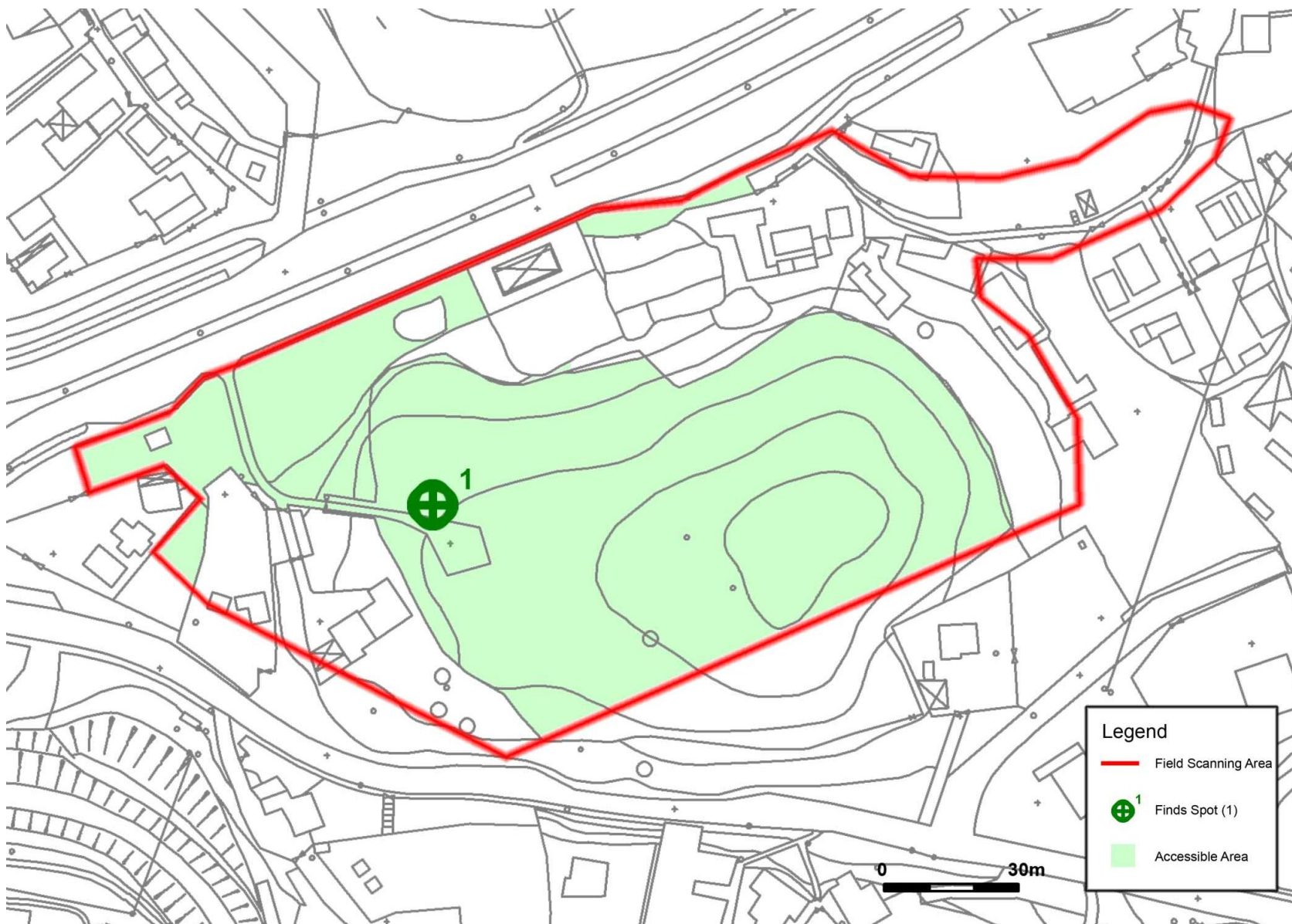
SCALE	1:9000	DATE	12/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING No.	SS-TKL-0
		Rev	-



AECOM

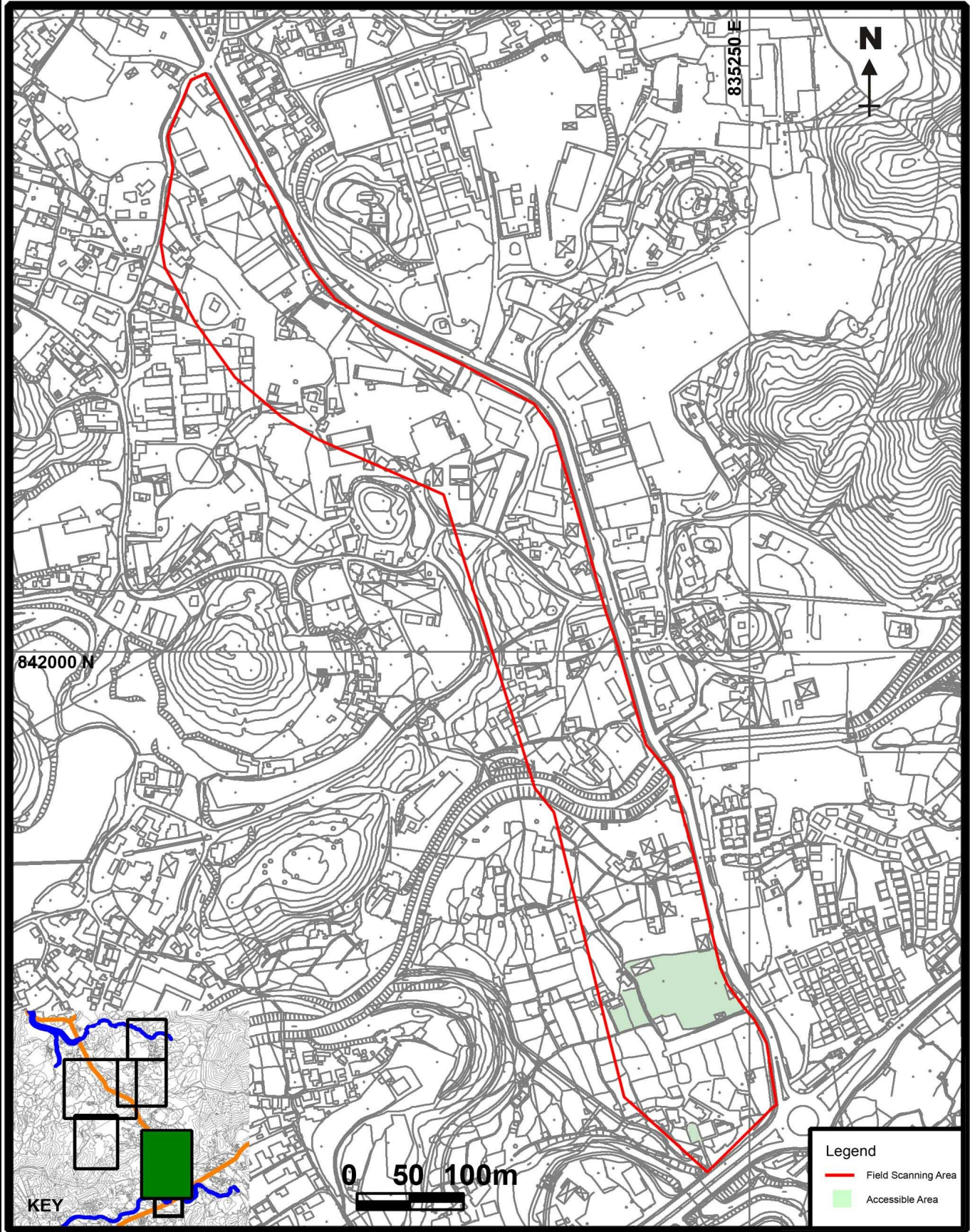
**Surface Scanning Area between Sha Tau Kok Road and Lau Shui
Heung Road near Ko Po, Ping Che/Ta Kwu Ling**

SCALE	See Drawing	DATE	18/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	SS-TKL-1
		REV	-



**Surface Scanning Area between Sha Tau Kok Road and Lau Shui
Heung Road near Ko Po, Ping Che/Ta Kwu Ling**

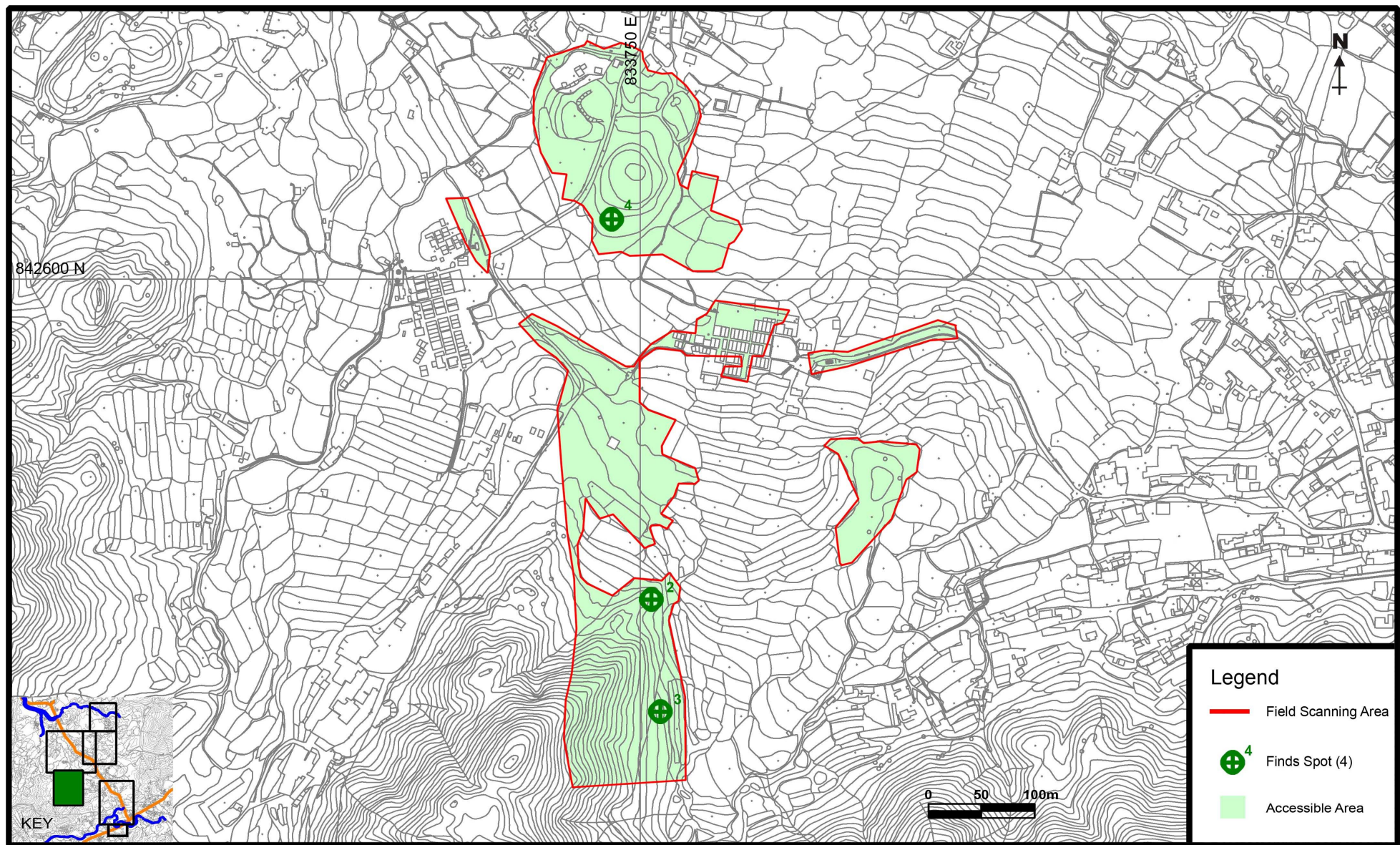
SCALE	1:1000 on A3	DATE	30/Dec/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	SS-TKL-1a
		REV	-



AECOM

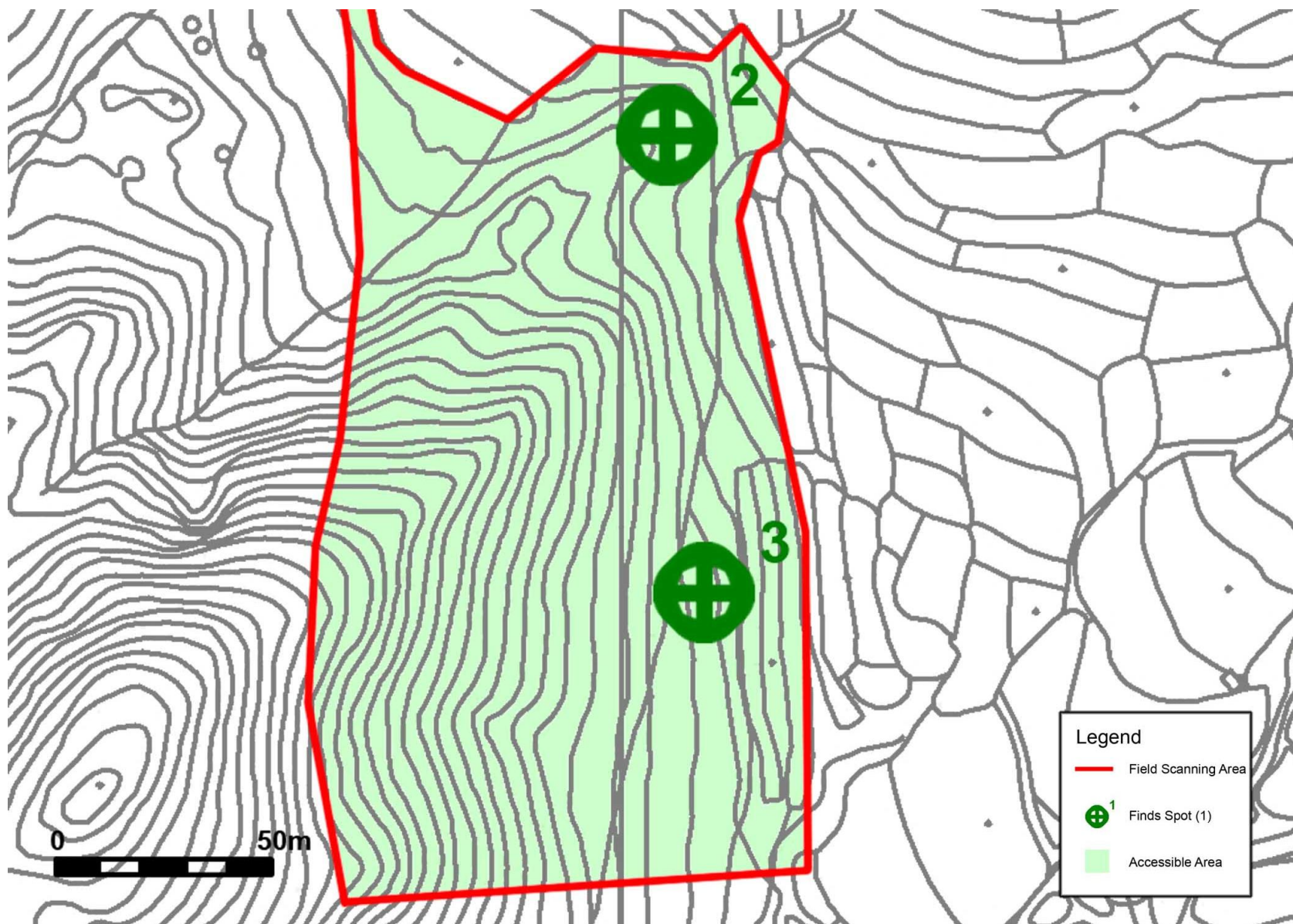
Surface Scanning Area to the west of Ping Che Road

SCALE	1:9000	DATE	12/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING No.	SS-TKL-2
		Rev	-



Surface Scanning Area between Sheung Shan Kai Wat and Ha Shan
Kai Wat, Ping Che/Ta Kwu Ling

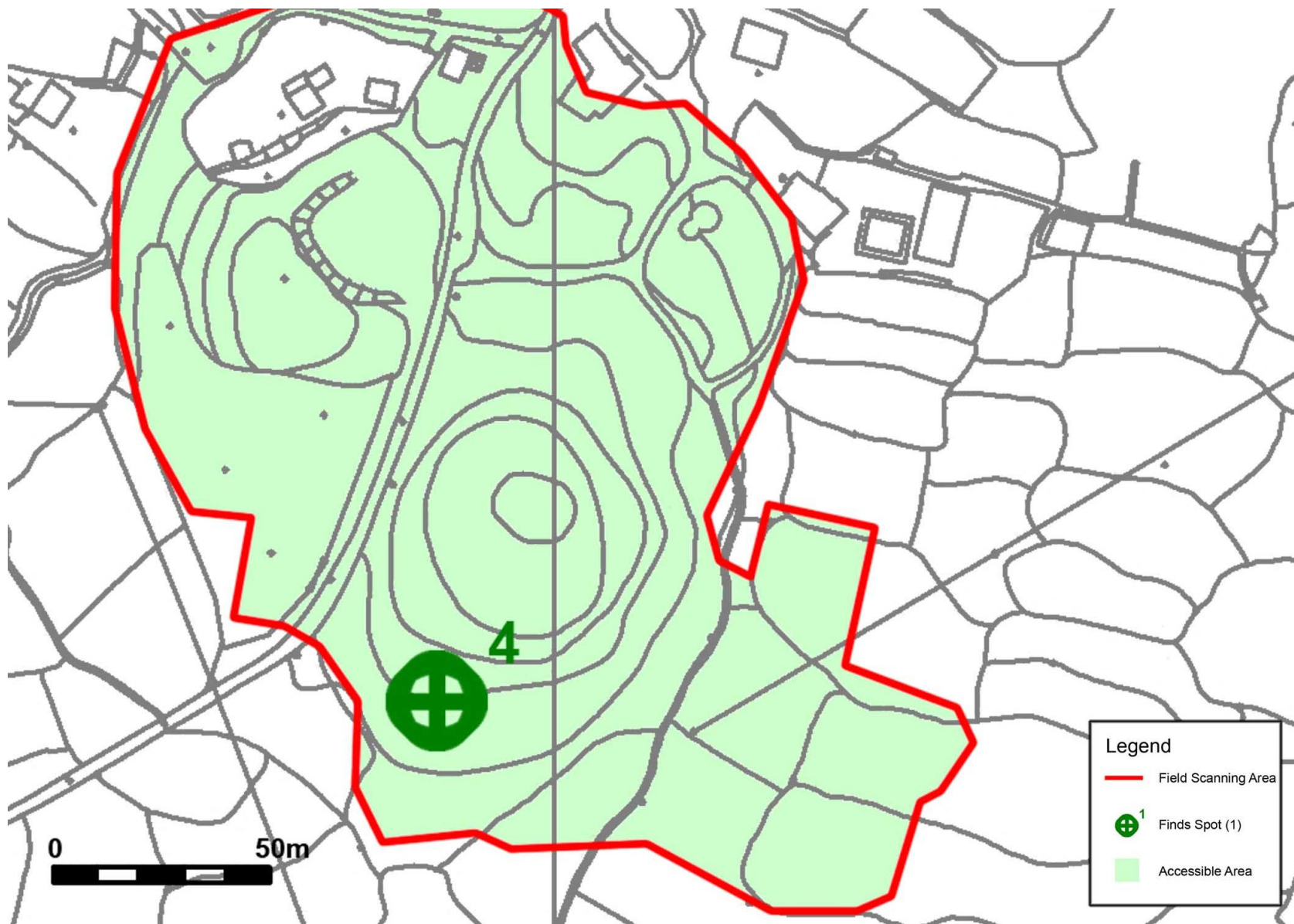
SCALE	See Drawing	DATE	18/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	SS-TKL-3
		REV	-



AECOM

Surface Scanning Area between Sheung Shan Kai Wat and Ha Shan
Kai Wat, Ping Che/Ta Kwu Ling

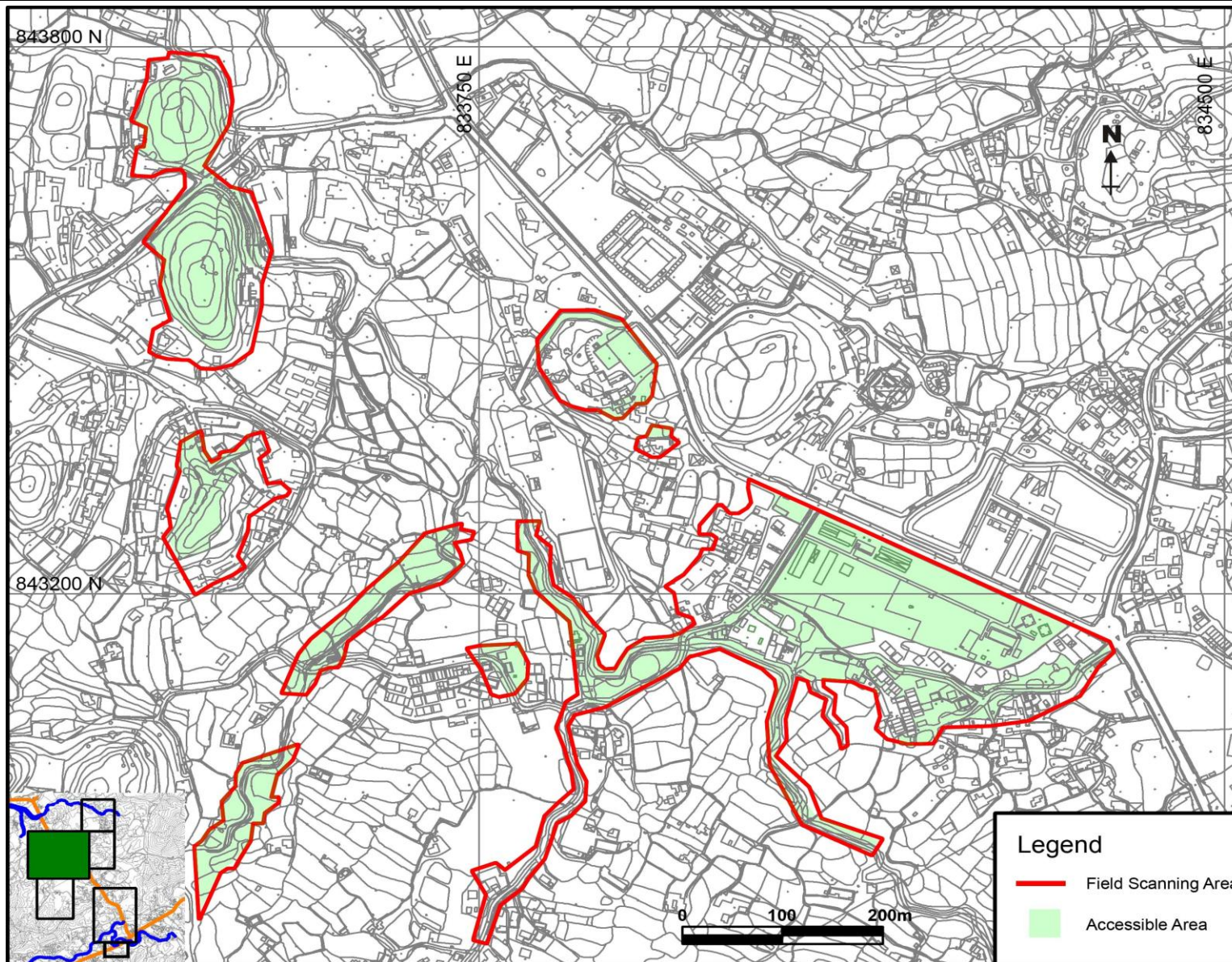
SCALE	1:1000 on A3	DATE	30/Dec/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	SS-TKL-3a
		REV	-



AECOM

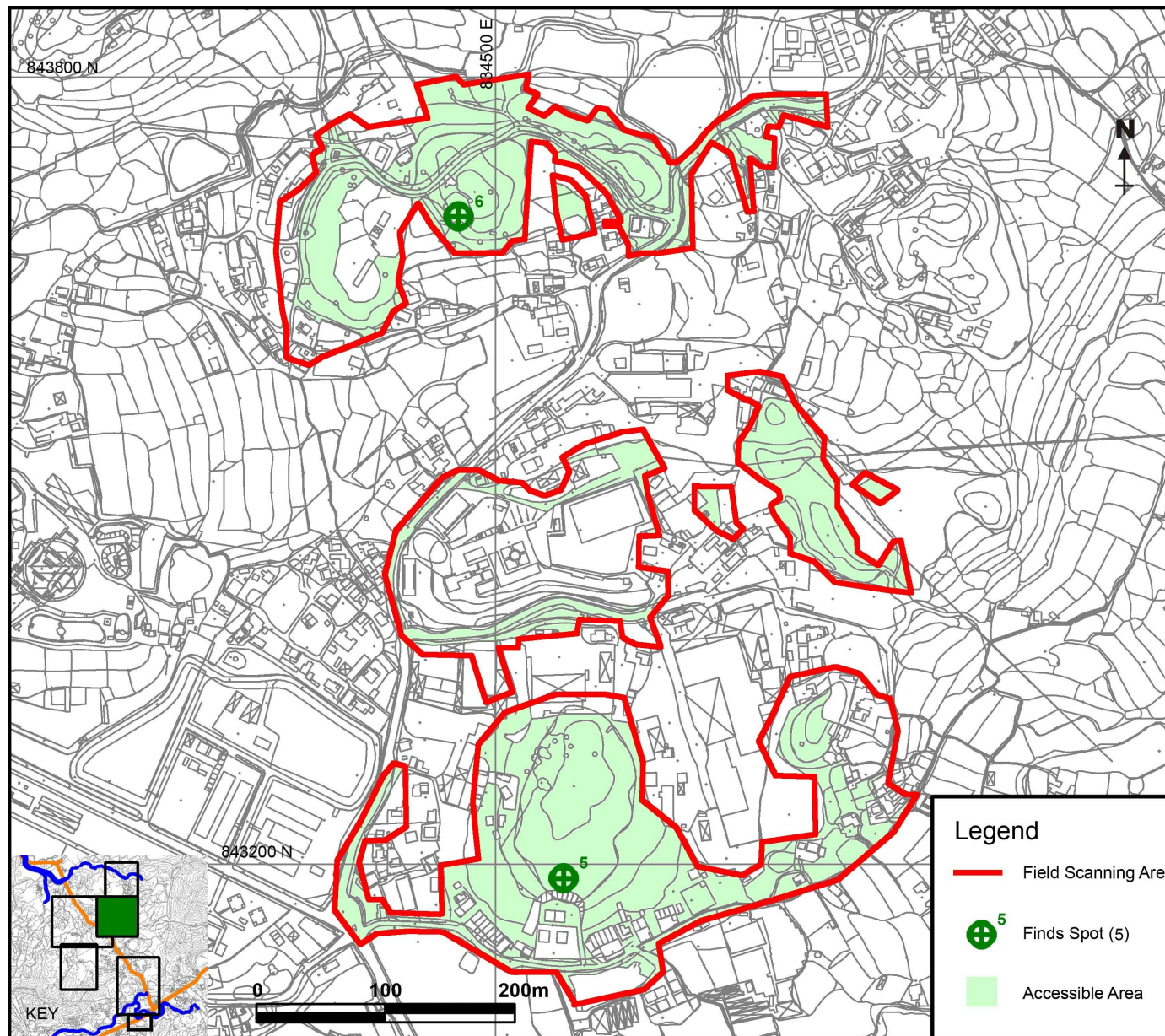
Surface Scanning Area between Sheung Shan Kai Wat and Ha Shan
Kai Wat, Ping Che/Ta Kwu Ling

SCALE	1:1000 on A3	DATE	30/Dec/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	SS-TKL-3b
		REV	-



Surface Scanning Area near Ta Kwu Ling Operation Base and Tai Kong
Po, Ping Che/Ta Kwu Ling

SCALE	See Drawing	DATE	18/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	SS-TKL-4
		REV	-



**Surface Scanning Area between Kat Tin village and Ping Yuen village,
Ping Che/Ta Kwu Ling**

SCALE	See Drawing	DATE	18/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	SS-TKL-5
		REV	.



AECOM

Surface Scanning Area between Kat Tin village and Ping Yuen village,
Ping Che/Ta Kwu Ling

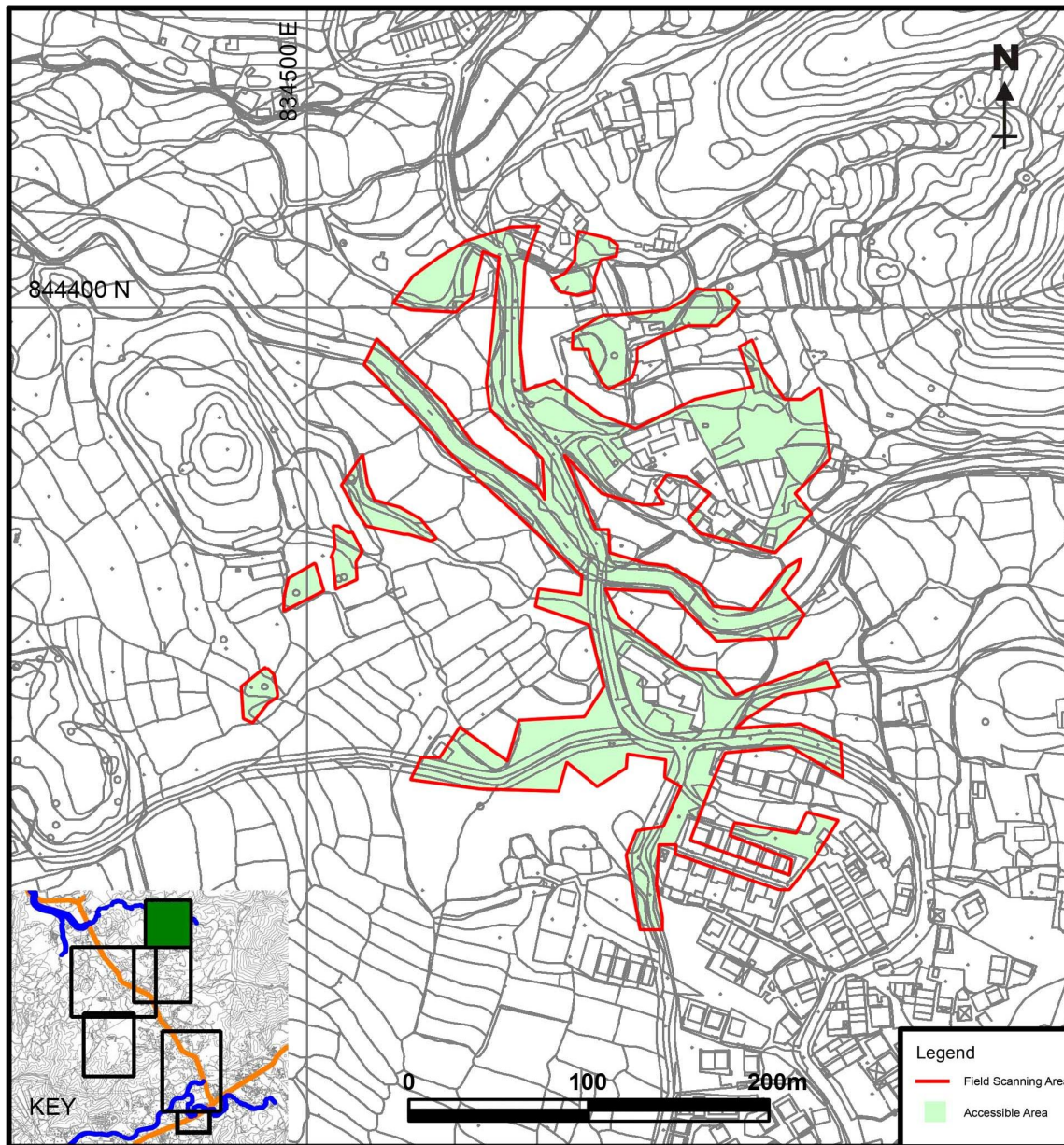
SCALE	1:1000 on A3	DATE	30/Dec/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	SS-TKL-5a
		REV	-



AECOM

Surface Scanning Area between Kat Tin village and Ping Yuen village,
Ping Che/Ta Kwu Ling

SCALE	1:1000 on A3	DATE	30/Dec/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	SS-TKL-5b
		REV	-

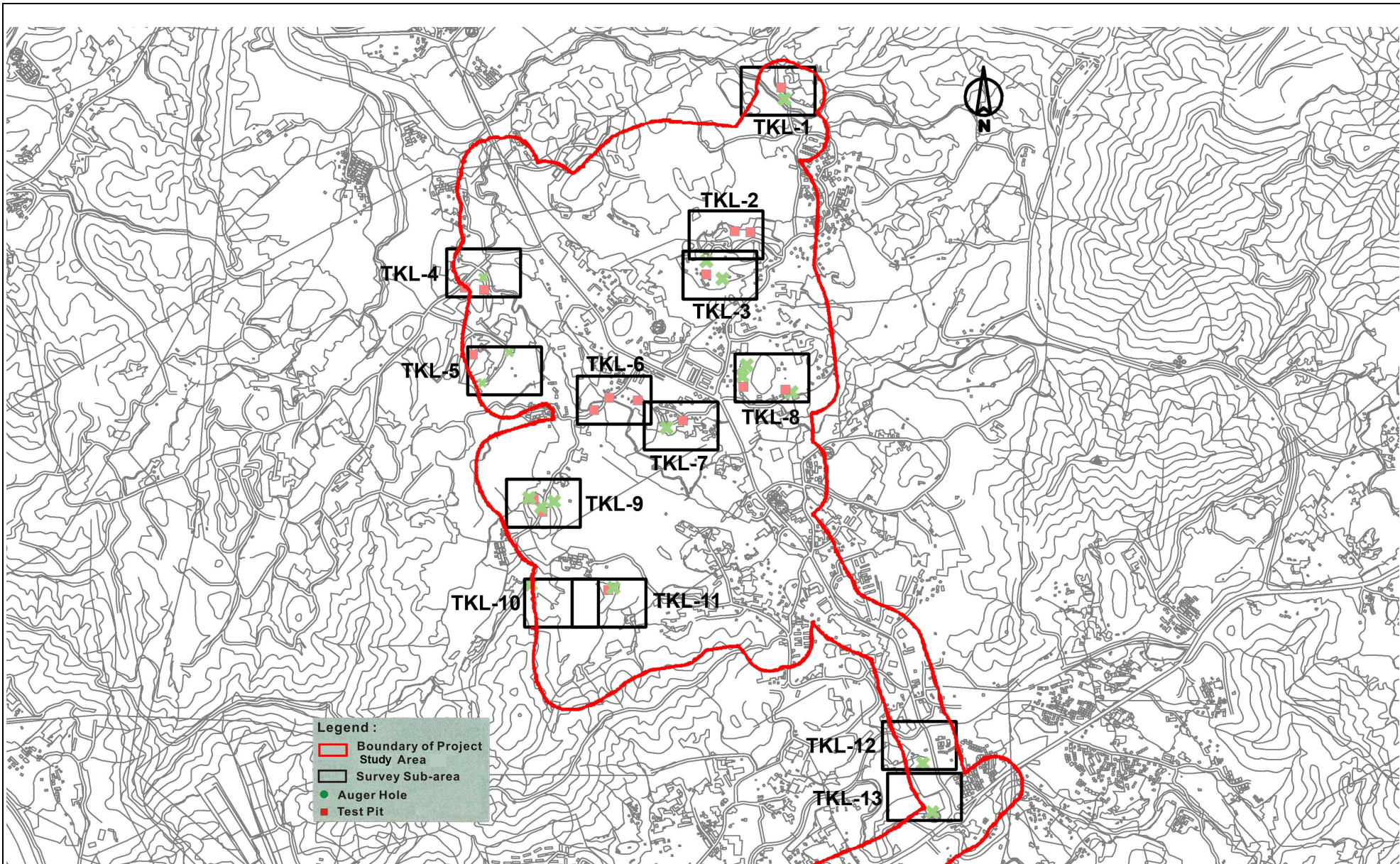


**Surface Scanning Area near Nga Yiu Ha village,
Ping Che/Ta Kwu Ling**

SCALE	See Drawing	DATE	18/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	SS-TKL-6
		REV	.

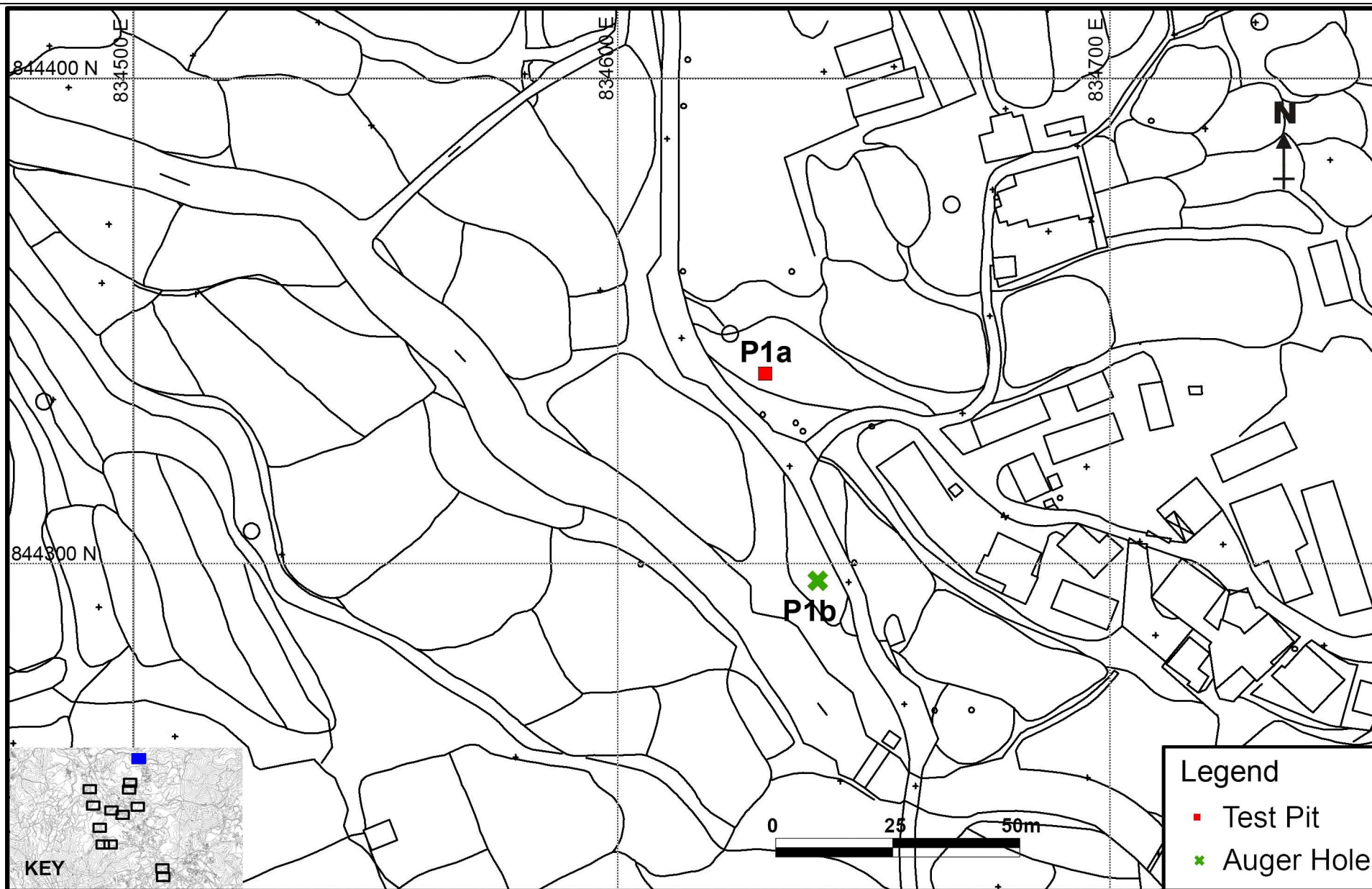
III. PC/TKL 坪輦／打鼓嶺

2. Figures on Surface Survey 鈎孔及探方發掘地點分布圖



Field Survey Area of Ping Che/Ta Kwu Ling Area

SCALE	See Drawing	DATE	18/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	TKL-0
		REV	-



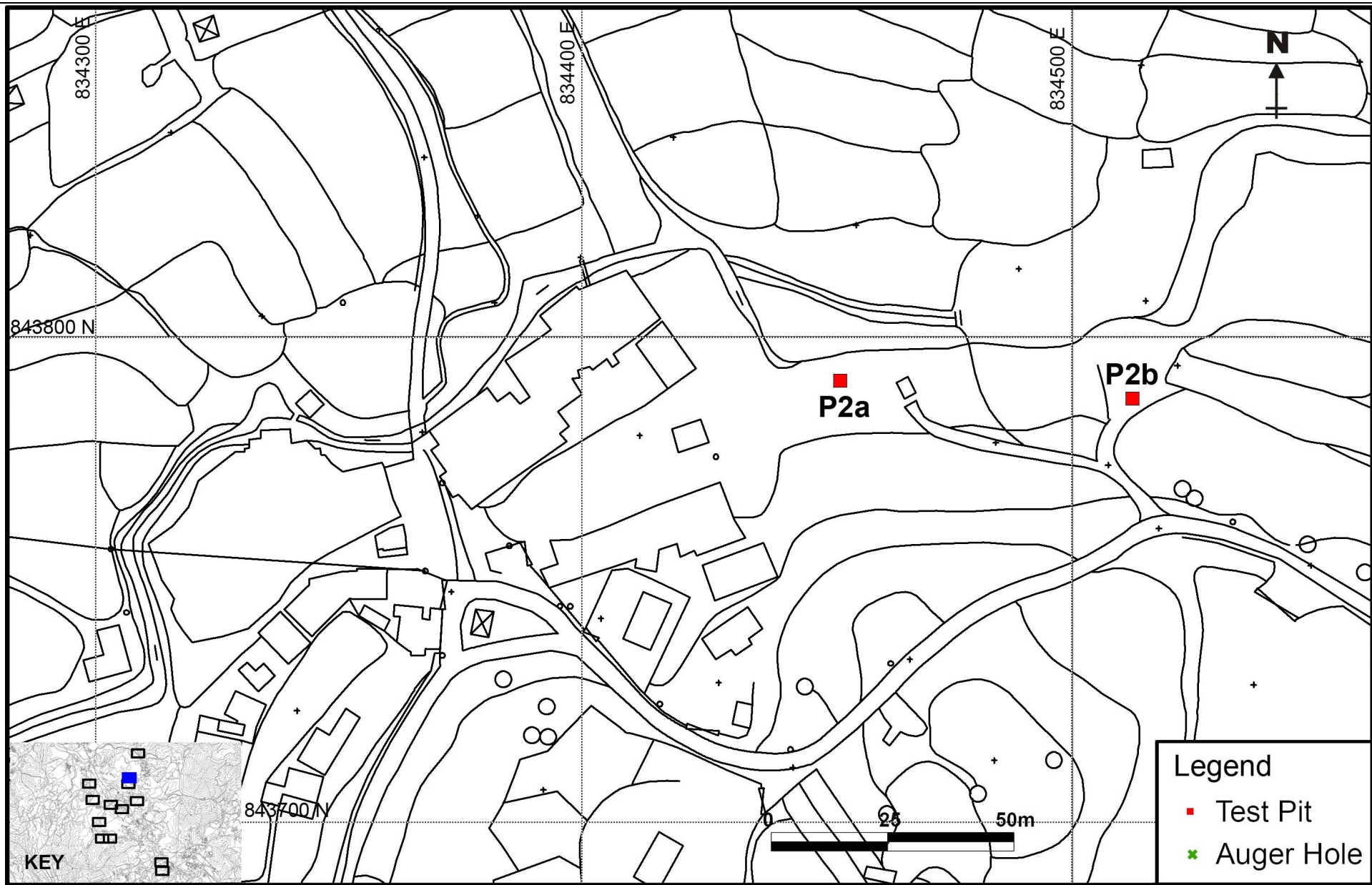
Legend

- Test Pit
- ✕ Auger Hole

AECOM

Field Survey Area near Nga Yiu Ha village, Ping Che/Ta Kwu Ling

SCALE	See Drawing	DATE	18/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	TKL-1
		REV	-



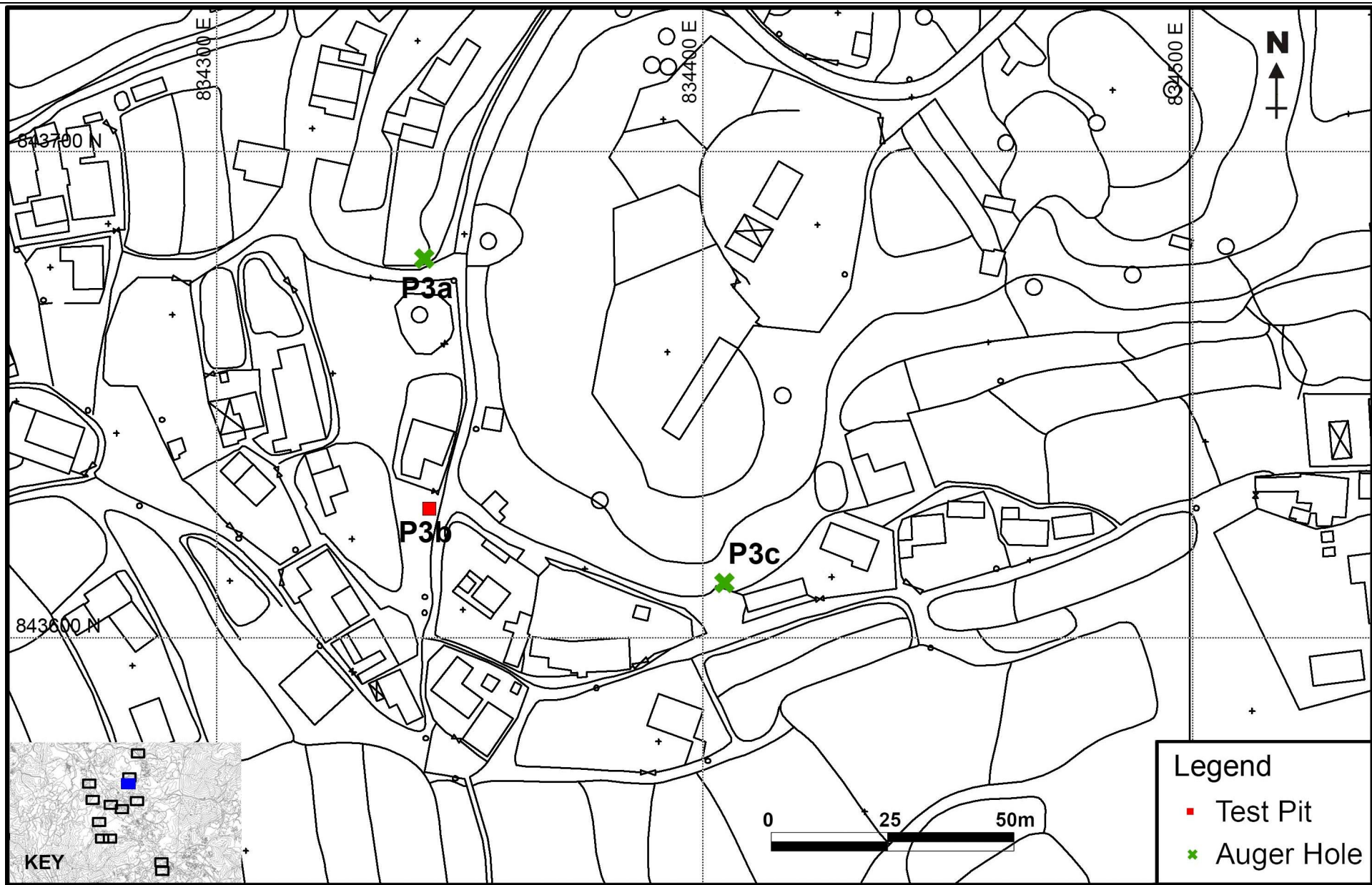
Legend

- Test Pit
- ✕ Auger Hole

AECOM

Field Survey Area near Ping Yeung village, Ping Che/Ta Kwu Ling

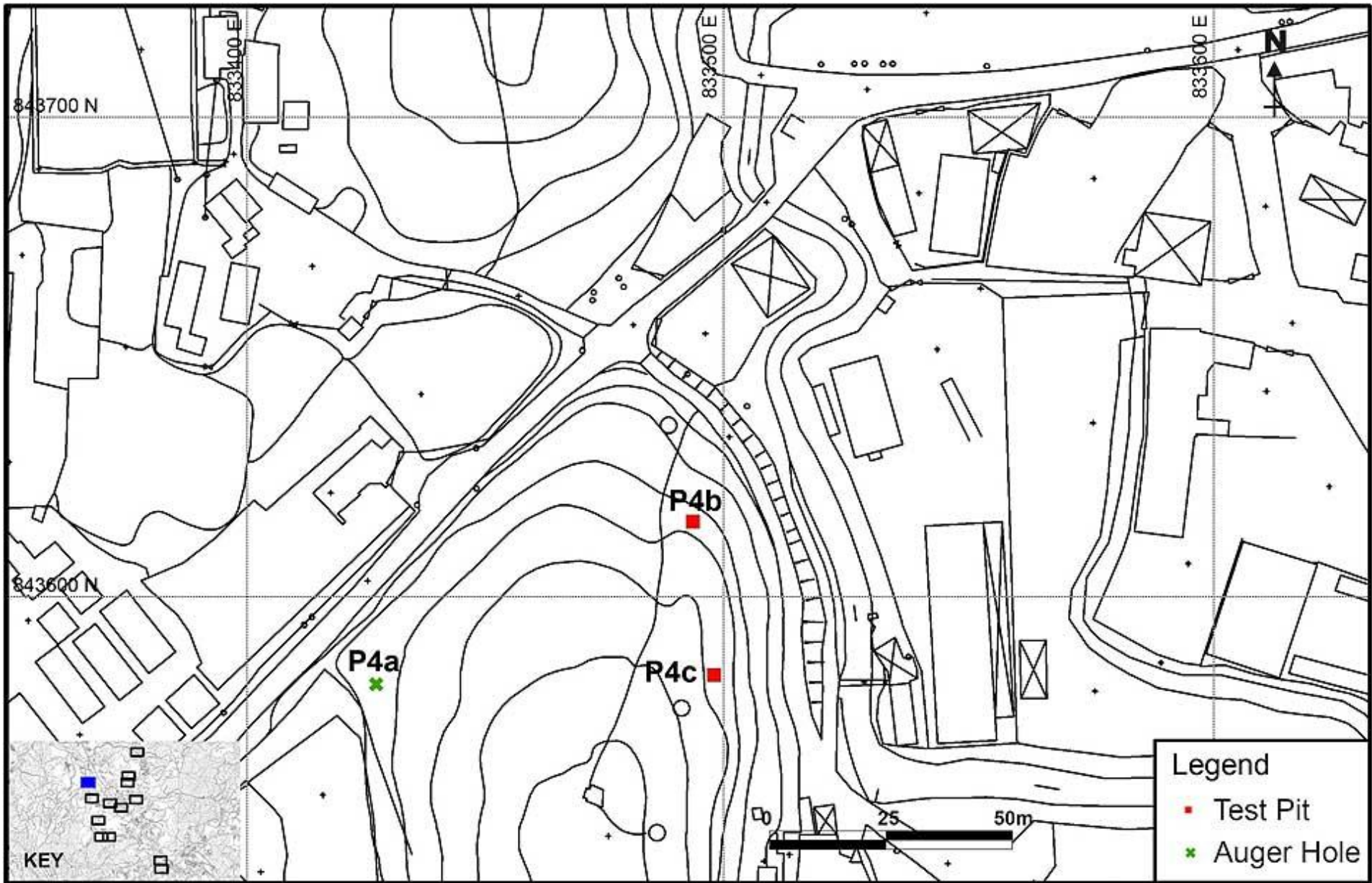
SCALE	See Drawing	DATE	18/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	TKL-2
		REV	-



AECOM

Field Survey Area near Ping Yeung village, Ping Che/Ta Kwu Ling

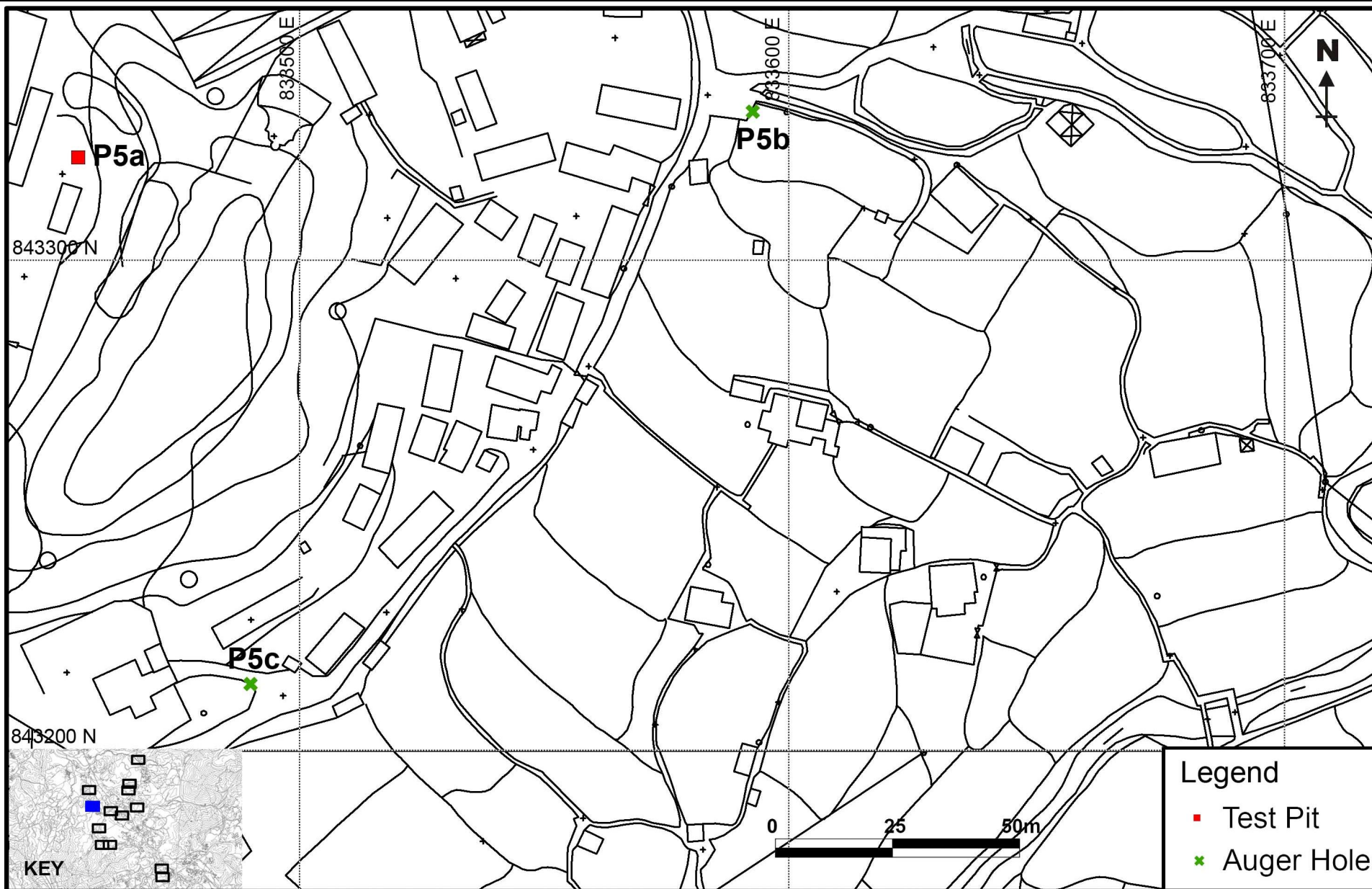
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CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	TKL-3
		REV	-



AECOM

Field Survey Area between Lee Uk and Tai Po Tin,
Ping Che/Ta Kwu Ling

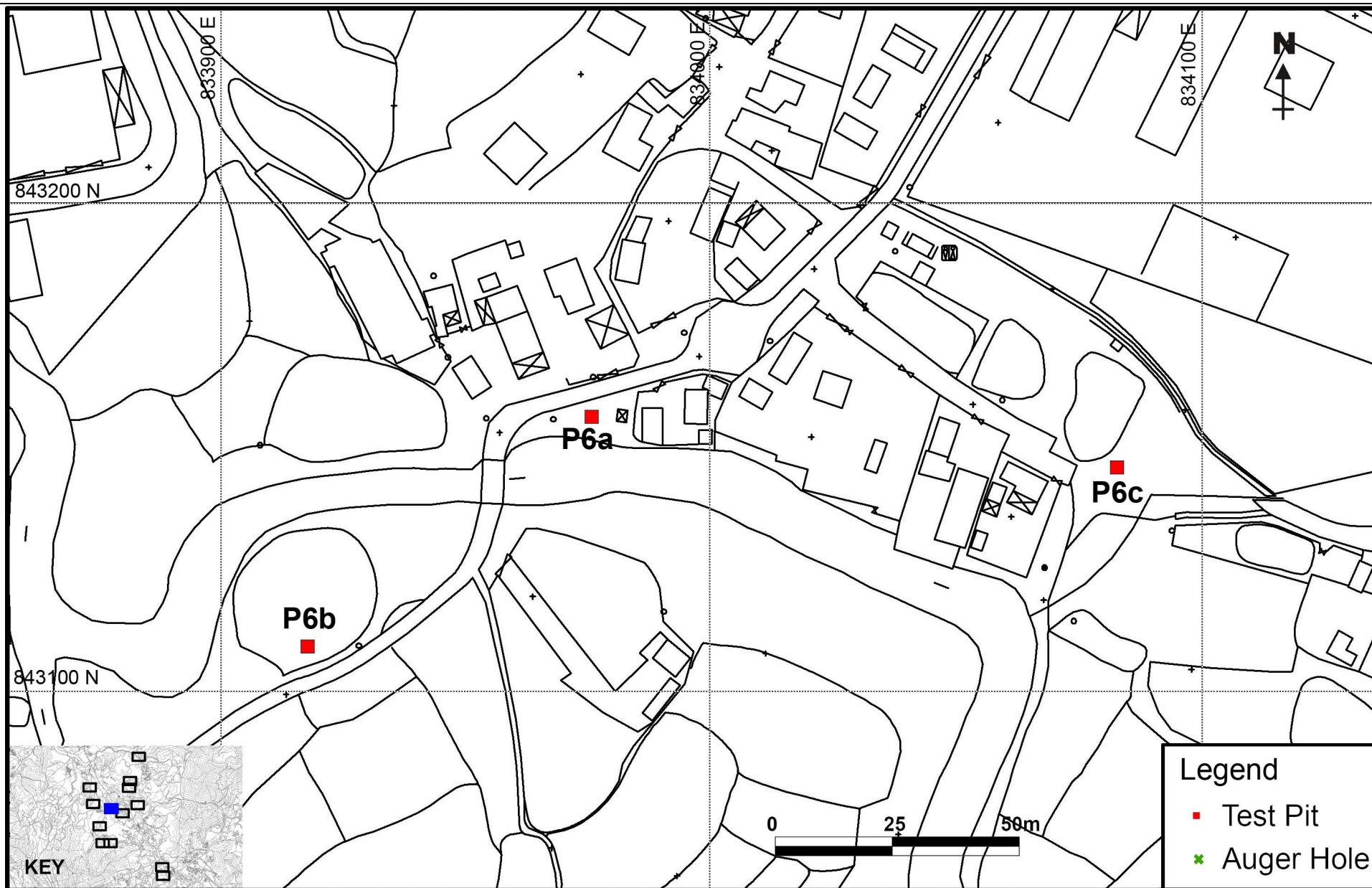
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JOB NO.	60157433	DRAWING NO.	TKL-4
		REV	-



AECOM

Field Survey Area near Tai Po Tin, Ping Che/Ta Kwu Ling

SCALE	See Drawing	DATE	18/Oct/2010
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JOB NO.	60157433	DRAWING NO.	TKL-5
		REV	-



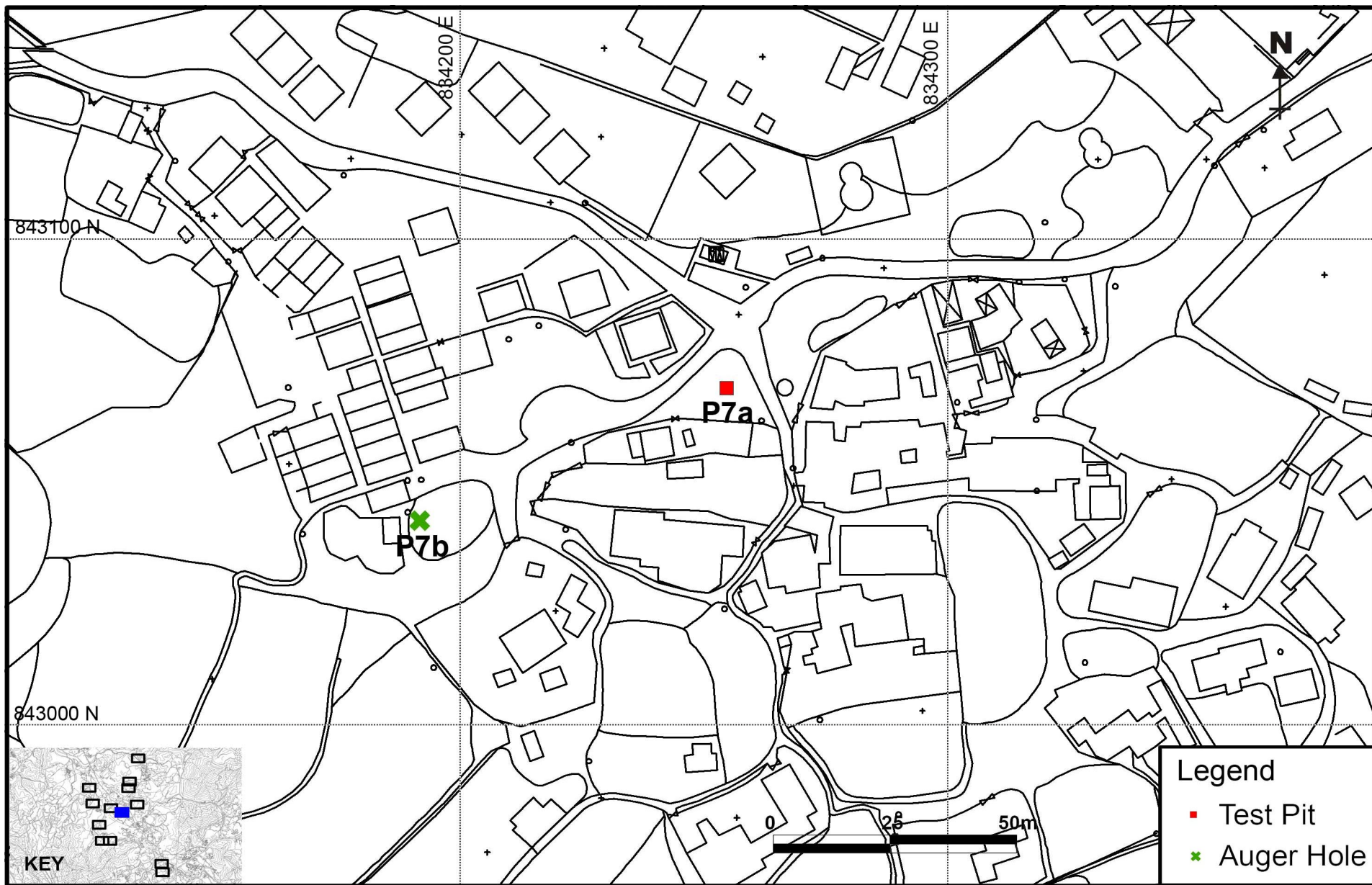
Legend

- Test Pit
- ✕ Auger Hole

AECOM

Field Survey Area at Tai Po Tin, Ping Che/Ta Kwu Ling

SCALE	See Drawing	DATE	18/Oct/2010
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JOB NO.	60157433	DRAWING NO.	TKL-6
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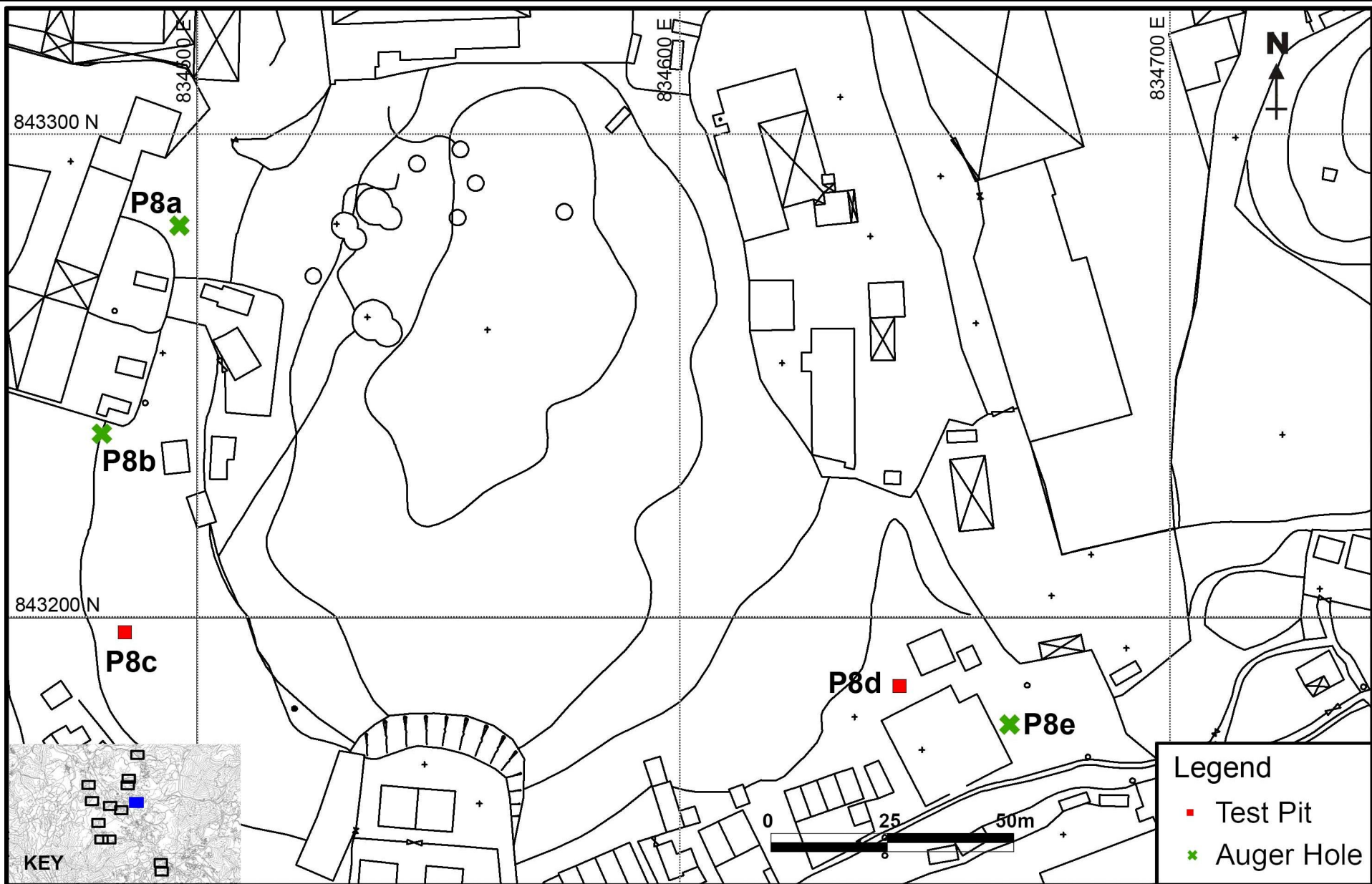
Legend

- Test Pit
- ✕ Auger Hole



Field Survey Area at Yuen Ha village, Ping Che/Ta Kwu Ling

SCALE	See Drawing	DATE	18/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	TKL-7
		REV	-



AECOM

Field Survey Area at Kat Tin village, Ping Che/Ta Kwu Ling

SCALE	See Drawing	DATE	18/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	TKL-8
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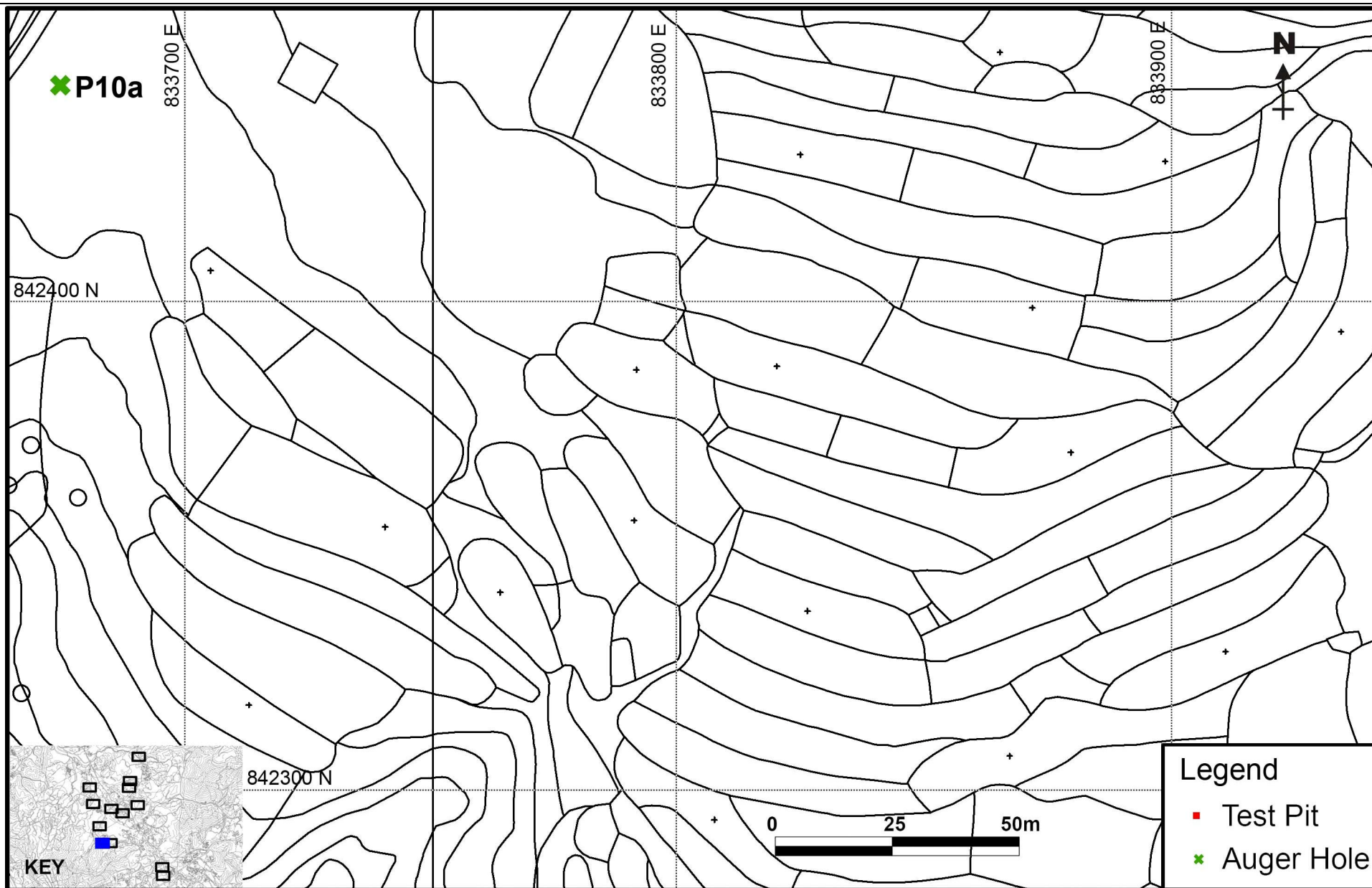
Legend

- Test Pit
- ✕ Auger Hole

AECOM

Field Survey Area between Tai Po Tin and Sheung Shan Kai Wat,
Ping Che/Ta Kwu Ling

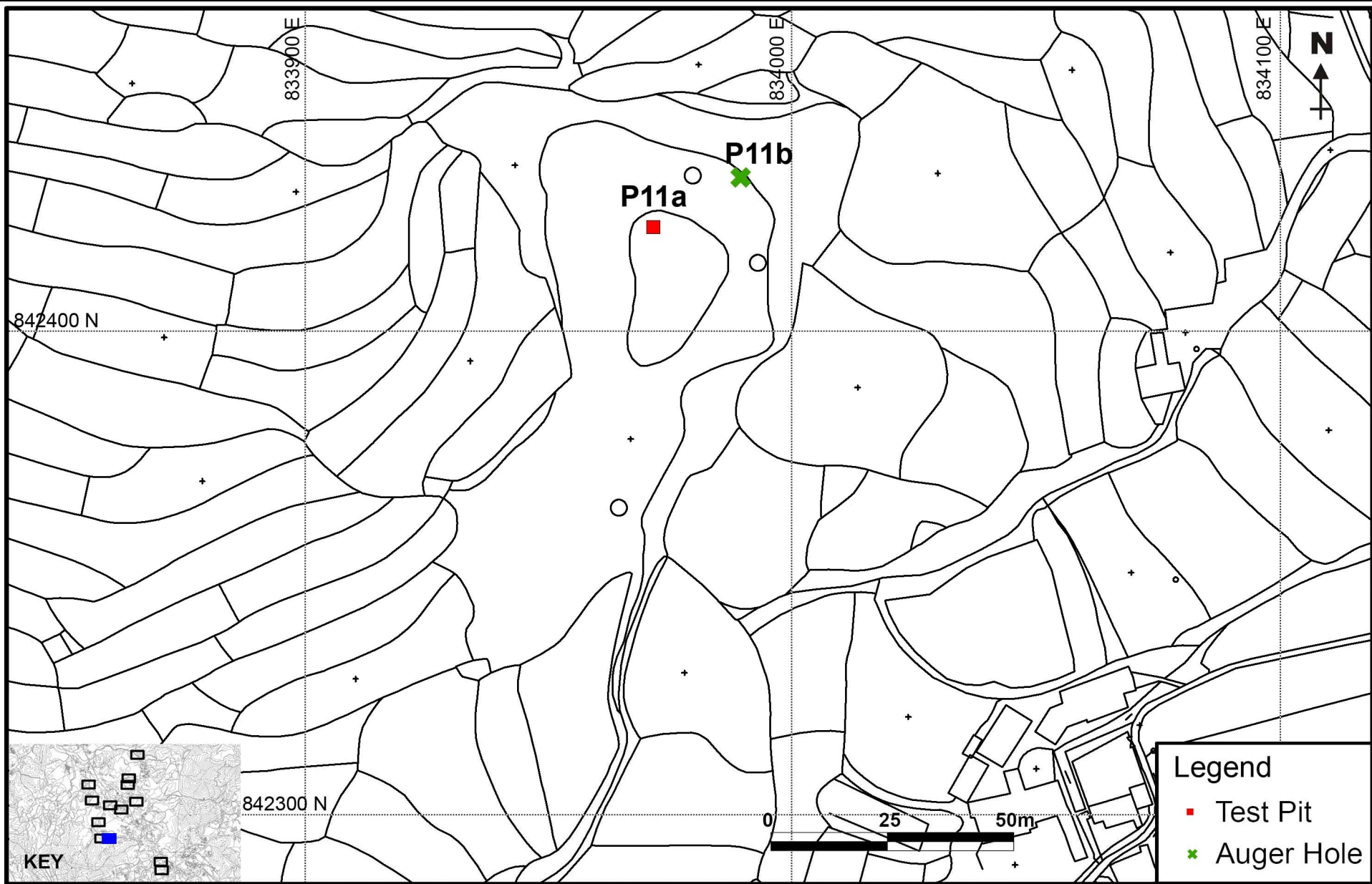
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JOB NO.	60157433	DRAWING NO.	TKL-9
		REV	-



AECOM

Field Survey Area near Sheung Shan Kai Wat,
Ping Che/Ta Kwu Ling

SCALE	See Drawing	DATE	18/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	TKL-10
		REV	-



Legend

- Test Pit
- ✕ Auger Hole

AECOM

Field Survey Area near Ha Shan Kai Wat,
Ping Che/Ta Kwu Ling

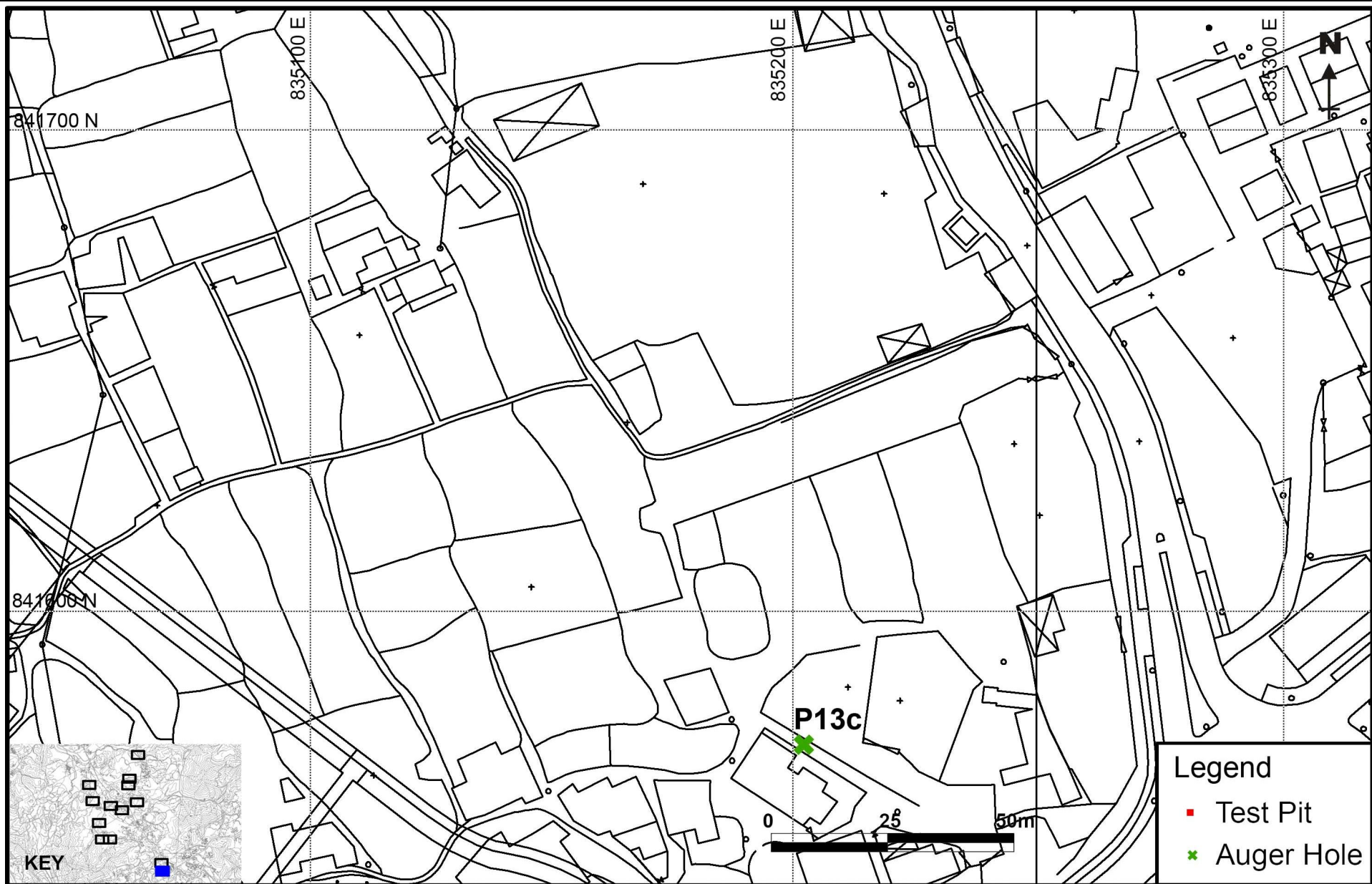
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JOB NO.	60157433	DRAWING NO.	TKL-11
		REV	-



AECOM

Field Survey Area near Hung Leng,
Ping Che/Ta Kwu Ling

SCALE	See Drawing	DATE	18/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	TKL-12
		REV	-



AECOM

Field Survey Area near Hung Leng,
Ping Che/Ta Kwu Ling

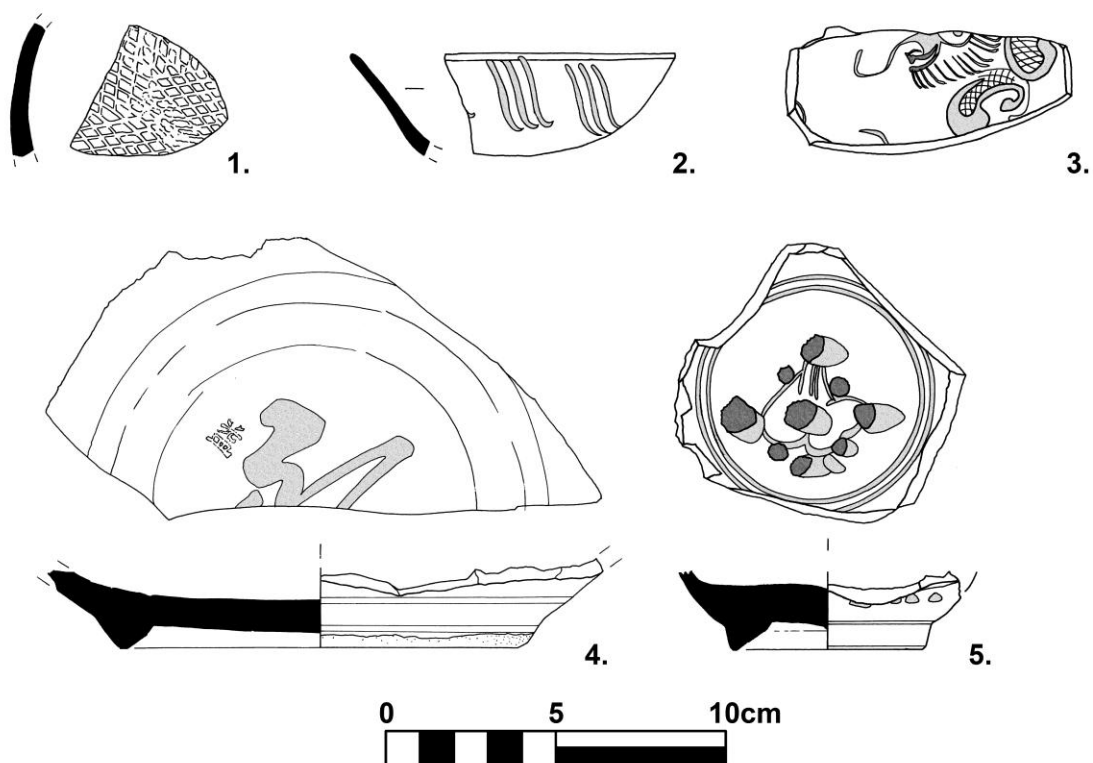
SCALE	See Drawing	DATE	18/Oct/2010
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	TKL-13
		REV	-

APPENDIX C

附錄三

Representative Finds Illustrations

代表性文物繪圖



Ceramics from FLN and PC/TKL
粉嶺北與坪輦／打鼓嶺區出土陶瓷

- Figure 1 Square-geometric pottery shred (SS-FLN-3 Spot 7)
圖 1 方格印紋陶片 (SS-FLN-3 七號地點)
- Figure 2 Blue-and-white porcelain rim shred with vertical strokes (P8d L1)
圖 2 “川”字紋青花瓷口沿碎片 (P8d L1)
- Figure 3 Blue-and-white porcelain bowl base with dragon pattern (P8d L1)
圖 3 過牆龍紋青花瓷碗底 (P8d L1)
- Figure 4 Blue-and-white porcelain bowl base with Chinese character
圖 4 “福” (P8d L1)
 “福”字紋青花瓷碗底 (P8d L1)
- Figure 5 Blue-and-white porcelain bowl base with interlaced floral
圖 5 design (P8d L1)
 纏枝花紋青花瓷碗底 (P8d L1)

APPENDIX D

附錄四

**Representative Finds
Photographs**
代表性文物照片

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I. KTN 古洞北

II. FLN 粉嶺北

III. PC/TKL 坪輦／打鼓嶺

I. KTN 古洞北



Plate 7.1 Celadon Sherds from Find Spot 1, SS-KTN-5

圖 7.1 SS-KTN-5 一號地點採集的青瓷



Plate 7.2 Collected Sherds from Find Spot 1, SS-KTN-5

圖 7.2 SS-KTN-5 一號地點採集的陶瓷碎片



Plate 7.3 Collected Sherds from Find Spot 2, SS-KTN-5

圖 7.3 SS-KTN-5 二號地點採集陶瓷碎片



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圖 7.4 SS-KTN-5 三號地點採集的青瓷



Plate 7.5 Celadon Sherd from Find Spot 4, SS-KTN-5

圖 7.5 SS-KTN-5 四號地點採集的青瓷



Plate 7.6 Reddish stoneware basin with gray surface and flat bottom, K14aC3:1

圖 7.6 K14aC3:1 平底灰衣紅陶器底



Plate 7.7 Grayish coarse ware with large crystal grains, curved body, probably a tile, K14aC3:2

圖 7.7 K14aC3:2 粗砂灰陶，器身彎弧，疑為瓦

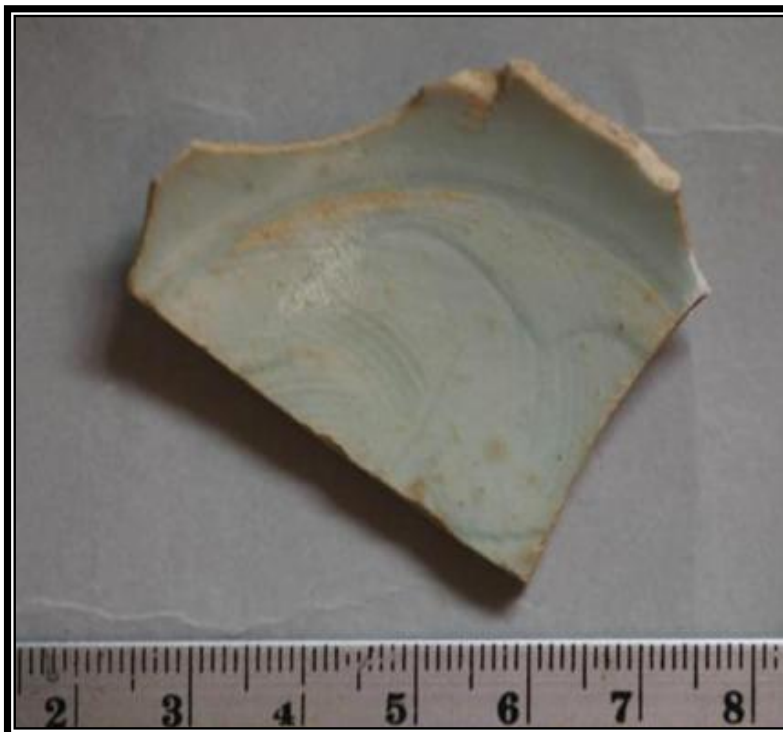


Plate 7.8 Shadowy-blue tea-cup with flat bottom and incised flowers inside (K14aC4:1)

圖 7.8 K14aC4:1 內底刻花平底影青釉茶杯



Plate 7.9 Grayish stoneware with burnished black surface and incised horizontal lines (K14aC4:2)

圖 7.9 K14aC4:2 陰刻重環紋磨光黑衣灰陶



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圖 7.10 K14aC4:3 灰陶瓦，表面帶劃痕，底面帶布紋



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圖 7.11 K14aC4:4 褐陶罐，部分施釉，口沿厚

II. FLN Area 粉嶺北



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圖 8.2 SS-FLN-1 二號地點 青瓷片



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圖 8.3 SS-FLN-1 三號地點 青瓷片及陶片



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Plate 8.6 Blue-and-white porcelain shred, Spot 8, SS-FLN-4

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圖 8.8 F1c L2 陶片及青花瓷片



Plate 8.9 Tile fragments, F1c L2
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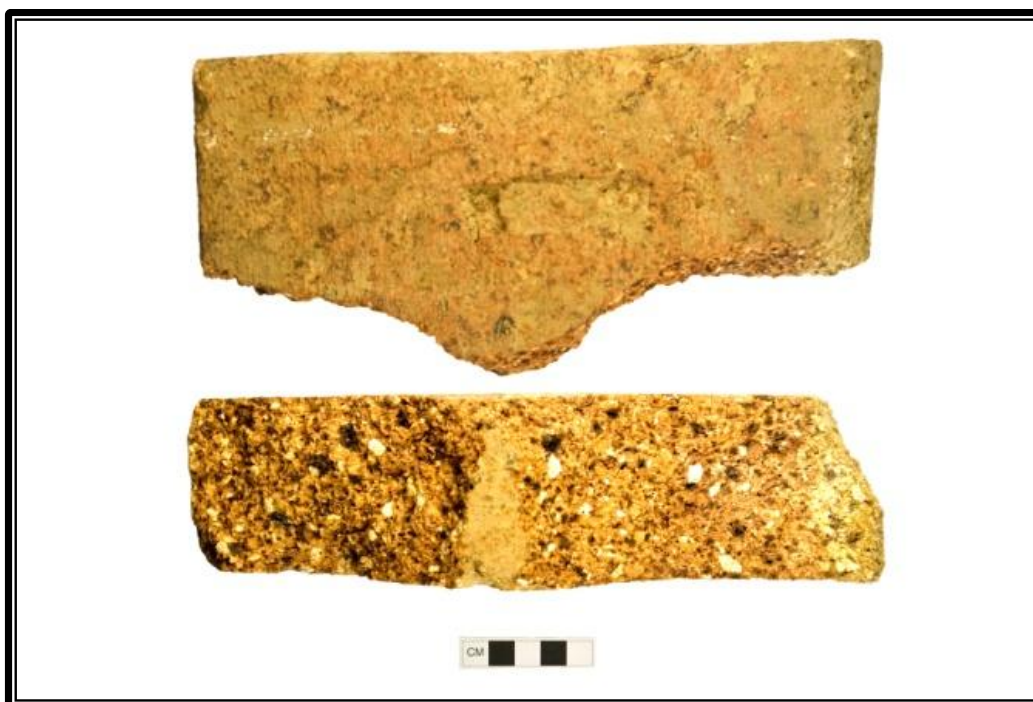


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圖 8.10 F1c L2 磚塊 (俯視及側視)



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Plate 9.4 Blue-and-white porcelain shred, Spot 3, SS-TKL-3 (interior and exterior)

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Plate 9.7 Blue-and-white porcelain bowl base, Spot 5, SS-TKL-5 (interior and exterior)

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圖 9.11 P8c L2 青花瓷碗 (內底和外底)



Plate 9.12 Blue-and-white porcelain shreds, P8c L3

圖 9.12 P8c L3 青花瓷片

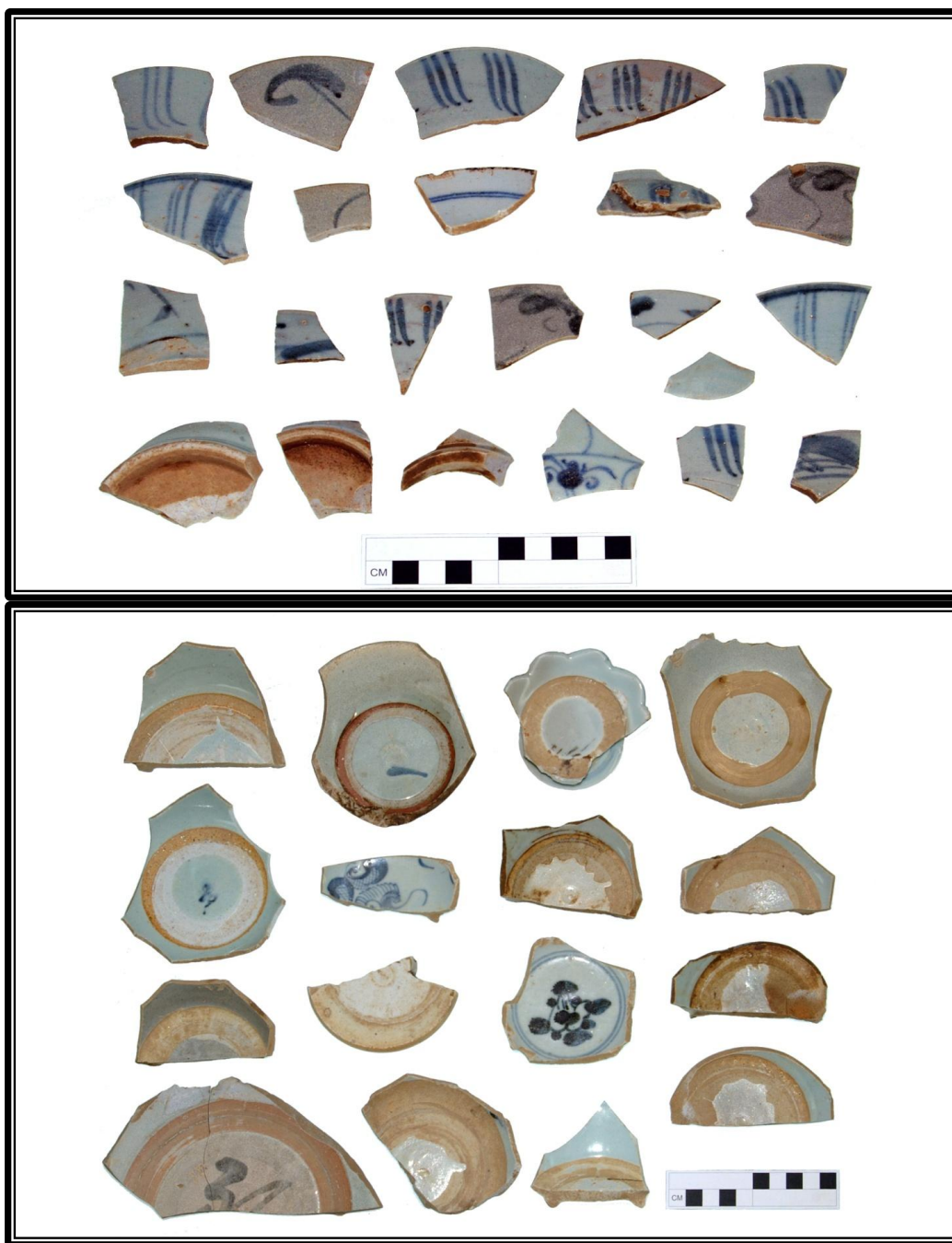


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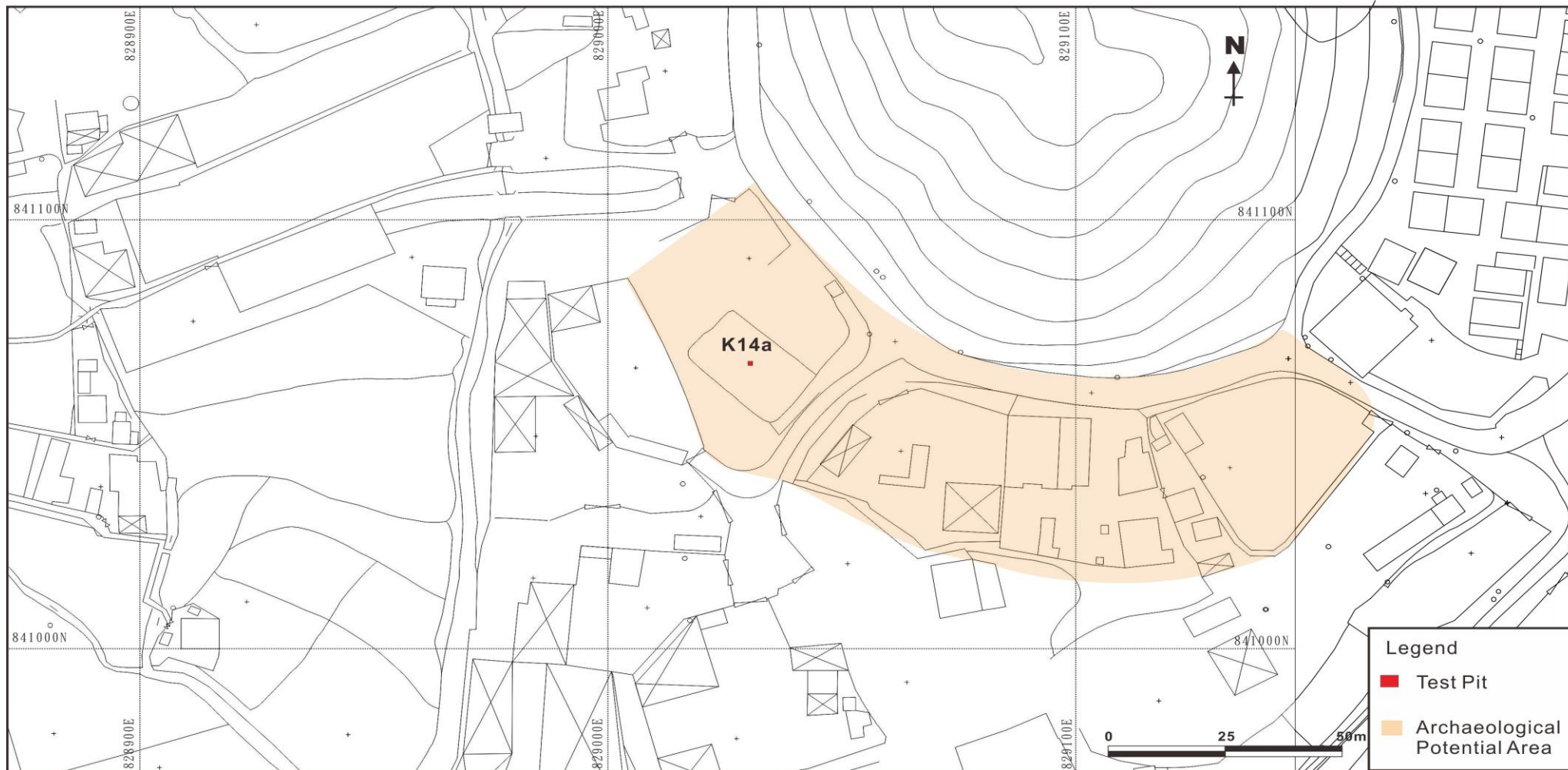
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**Figures of
Archaeological
Potential Areas**

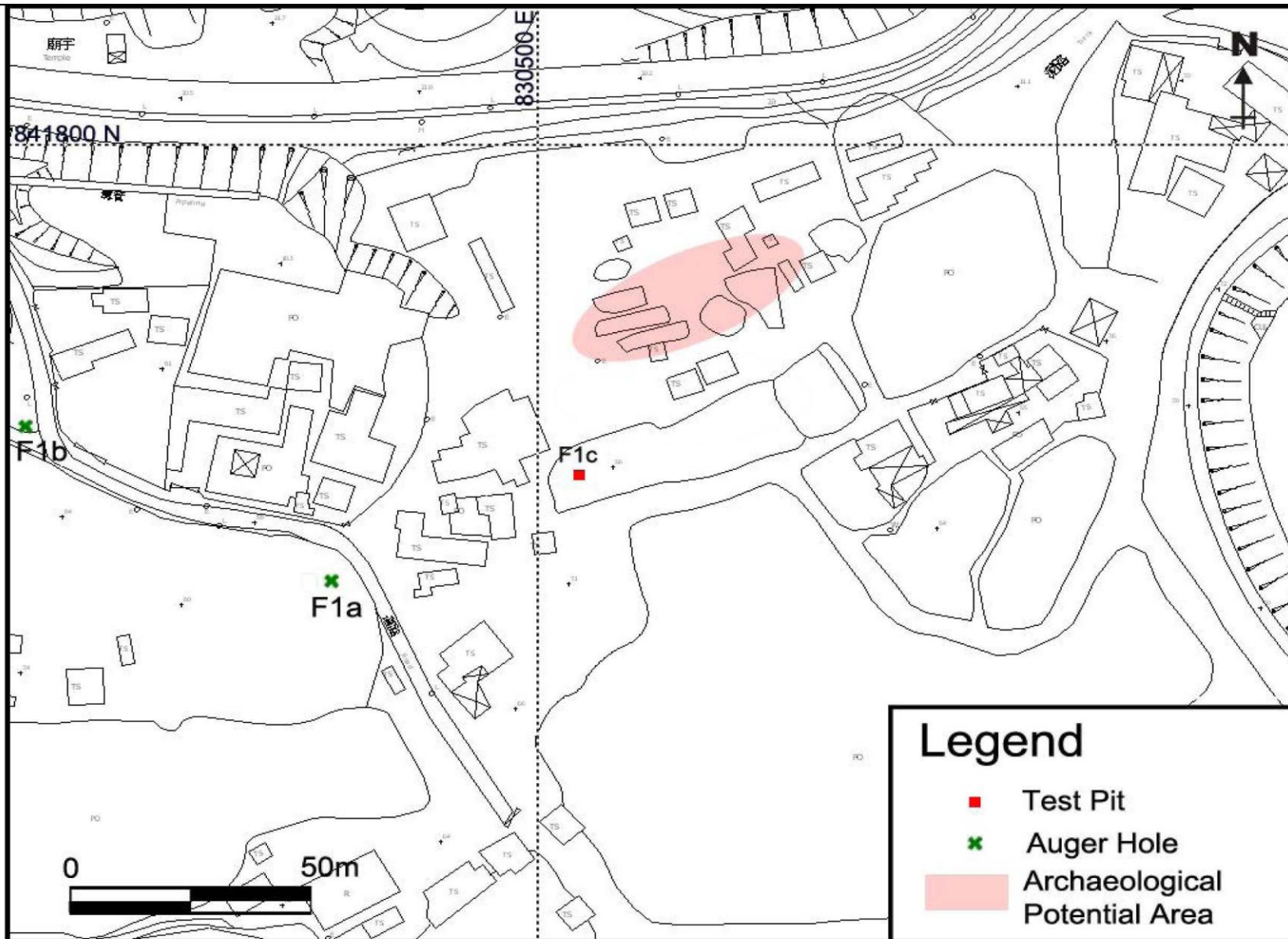
具考古潛質區域指示圖



AECOM

**Indicative Archaeological Potential Area
at Ho Sheung Heung, Kwu Tung North**

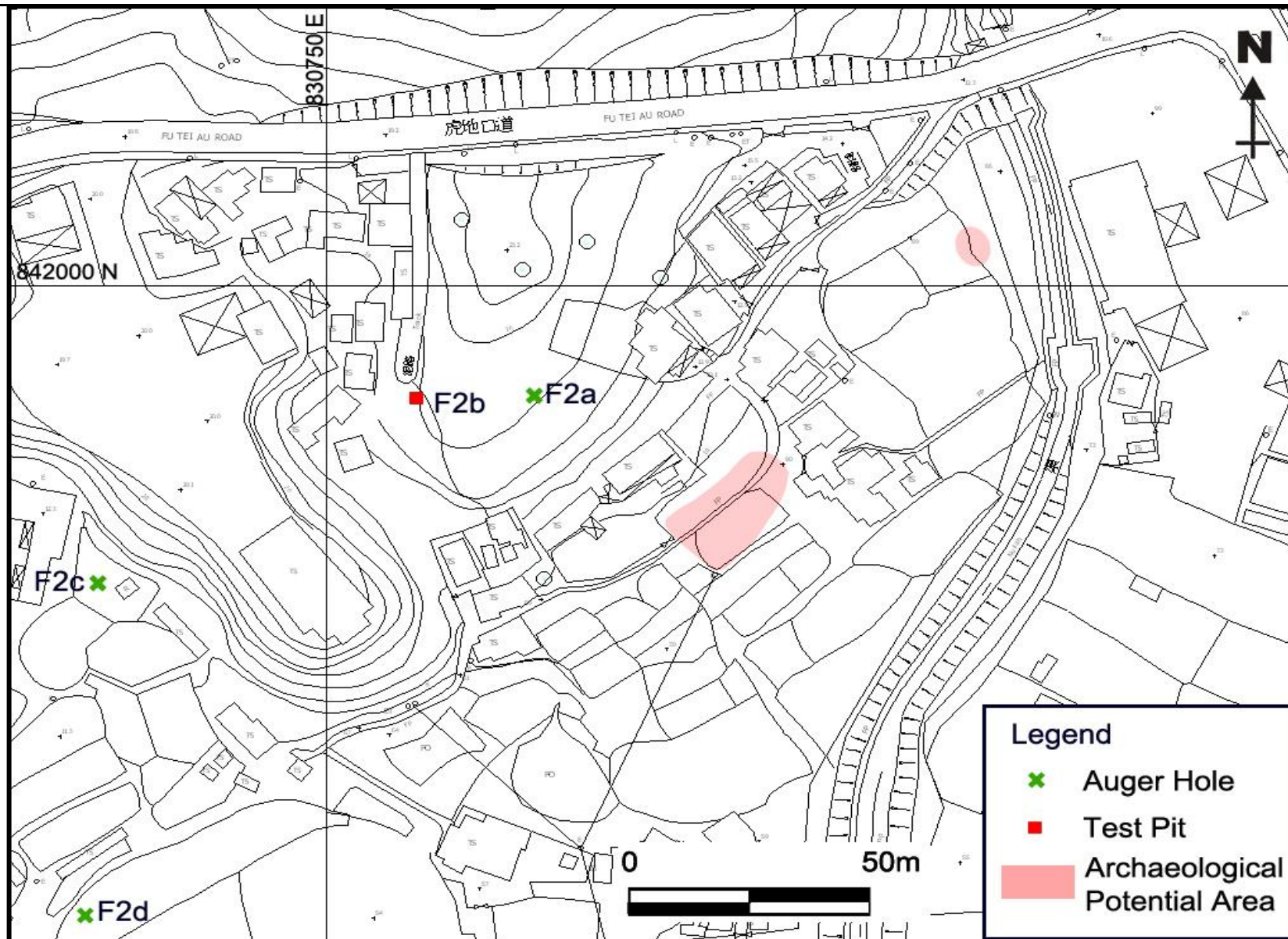
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JOB NO.	60157433	DRAWING NO.	IAAP-1
		REV	-



AECOM

**Indicative Archaeological Potential Area
near West Fu Tei Au village, Fanling North**

SCALE	See Figure	DATE	30/NOV/2010
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JOB NO.	60157433	DRAWING NO.	IAAP-2
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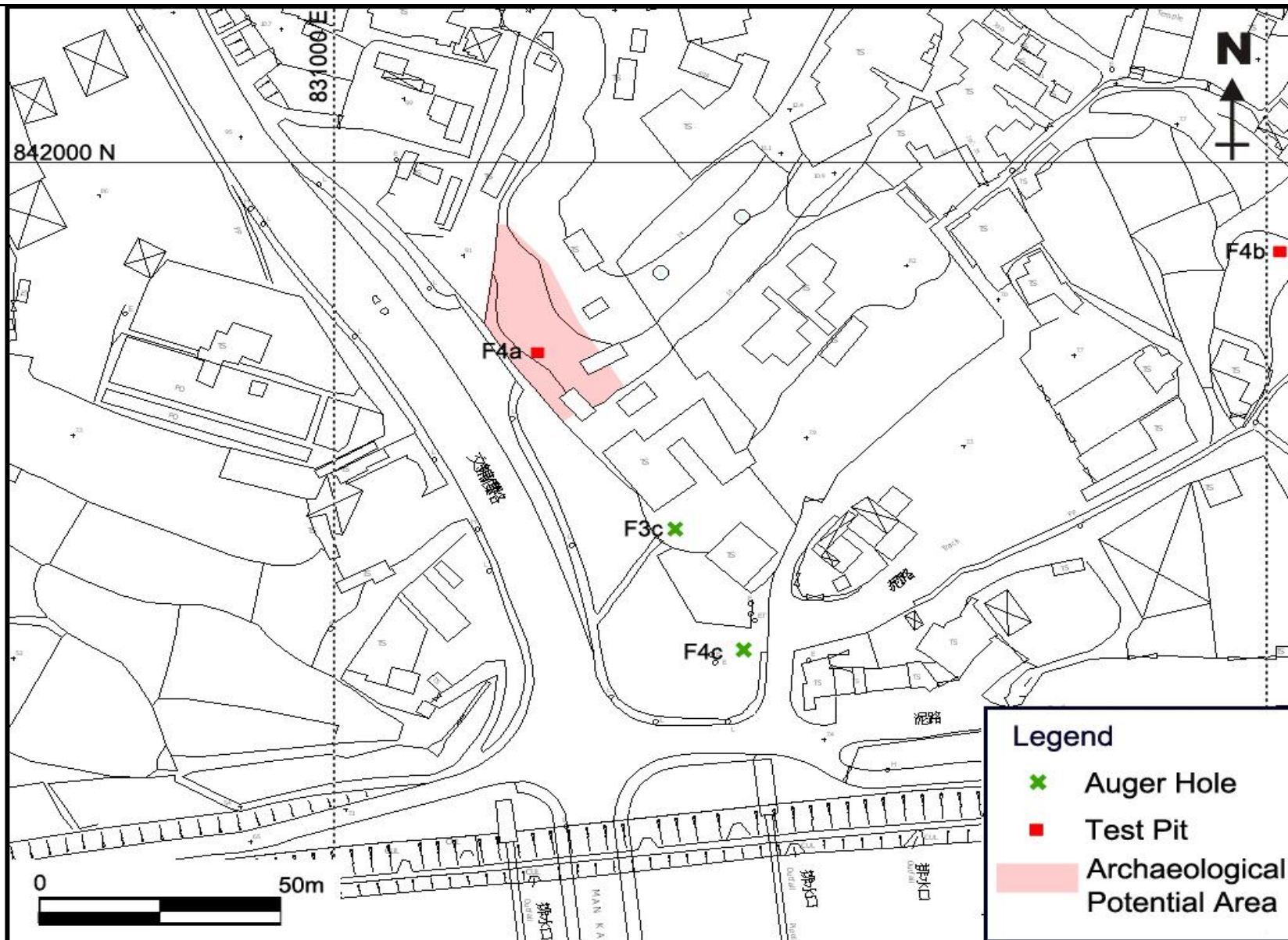
Legend

- x Auger Hole
- Test Pit
- Archaeological Potential Area

AECOM

**Indicative Archaeological Potential Area
near East Fu Tei Au village, Fanling North**

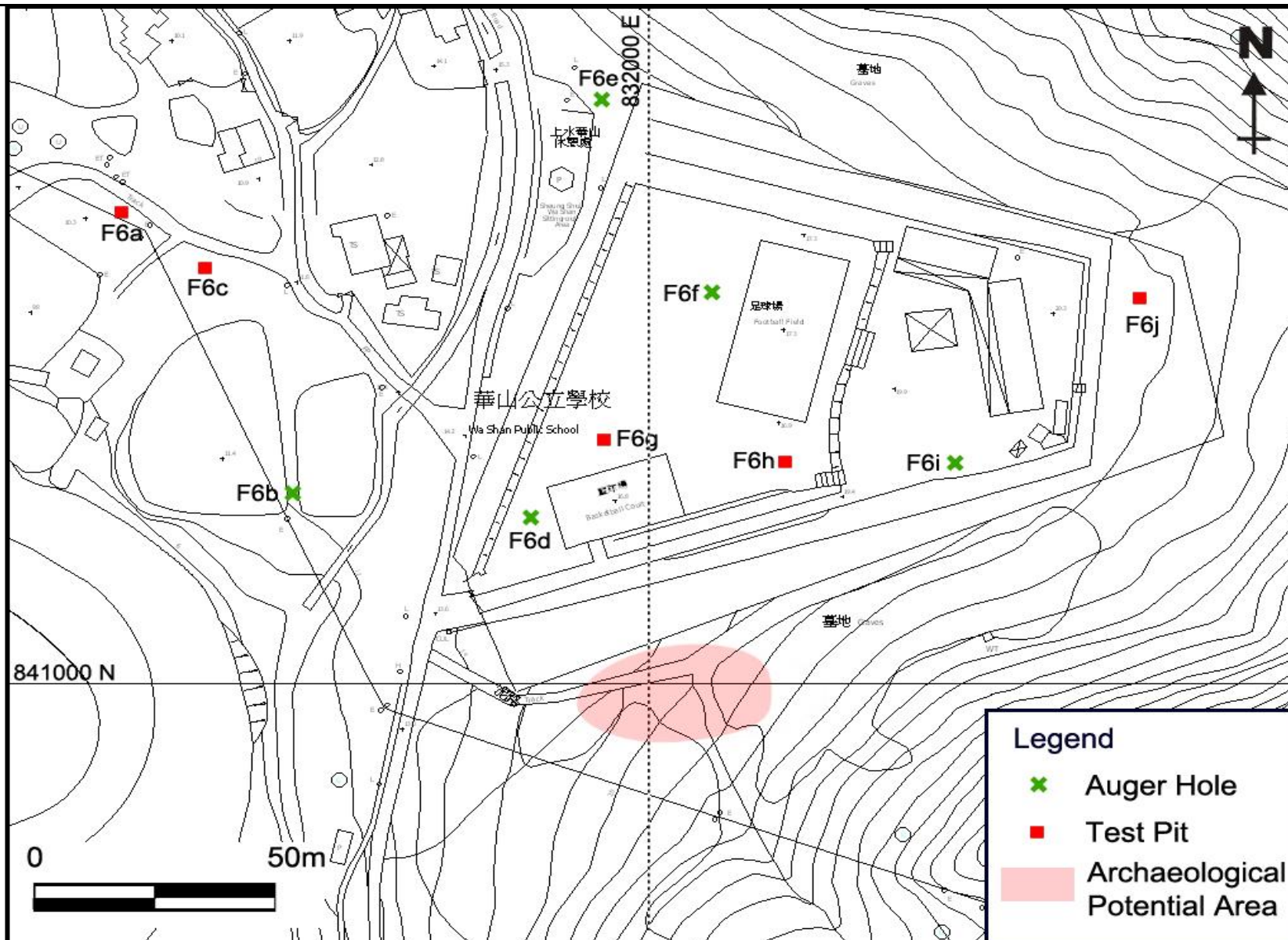
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		REV	-



AECOM

**Indicative Archaeological Potential Area
near Hung Kiu San Tsuen, Fanling North**

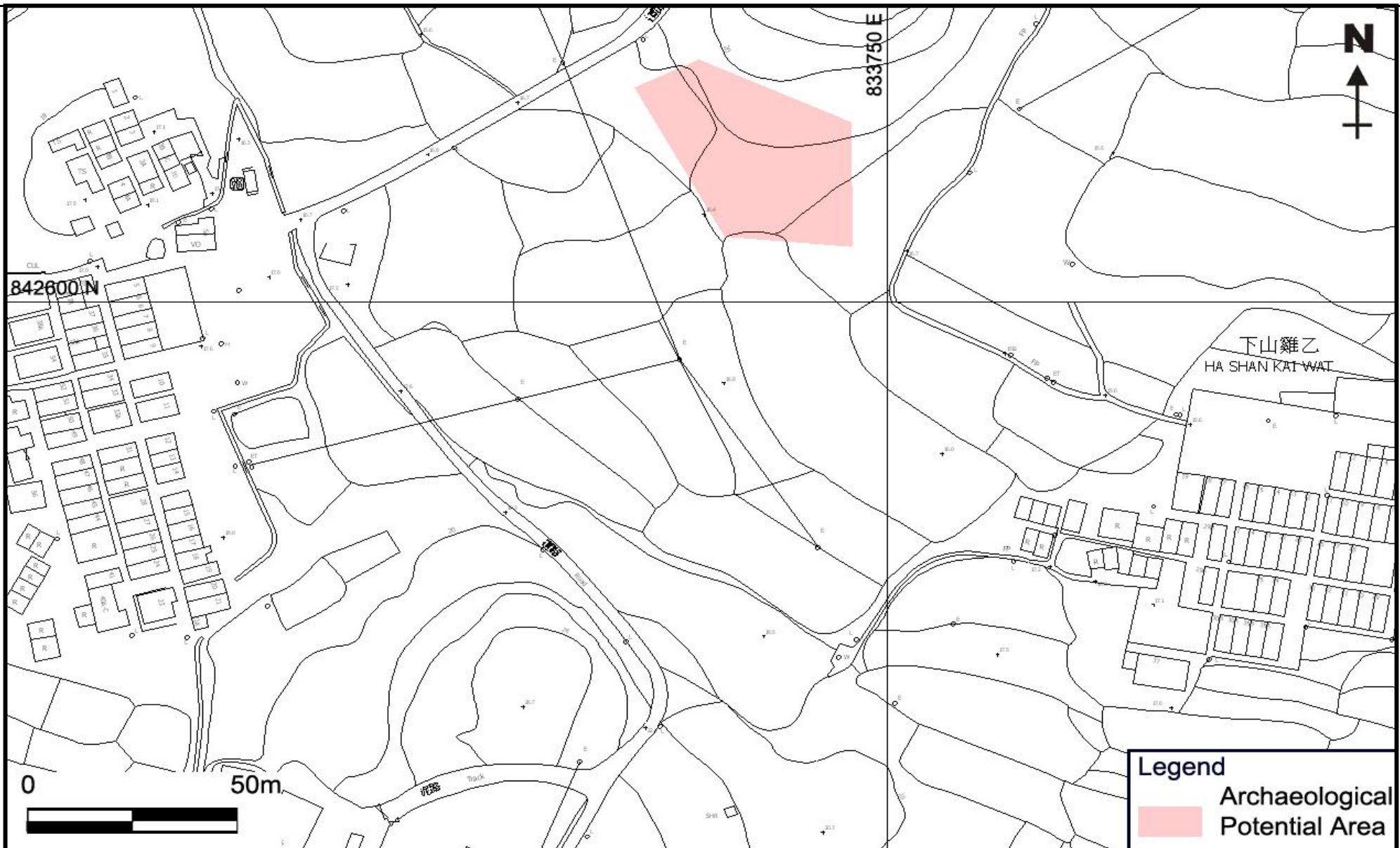
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		REV	-



AECOM

Indicative Archaeological Potential Area
around Sheung Shui Wa Shan Public School, Fanling North

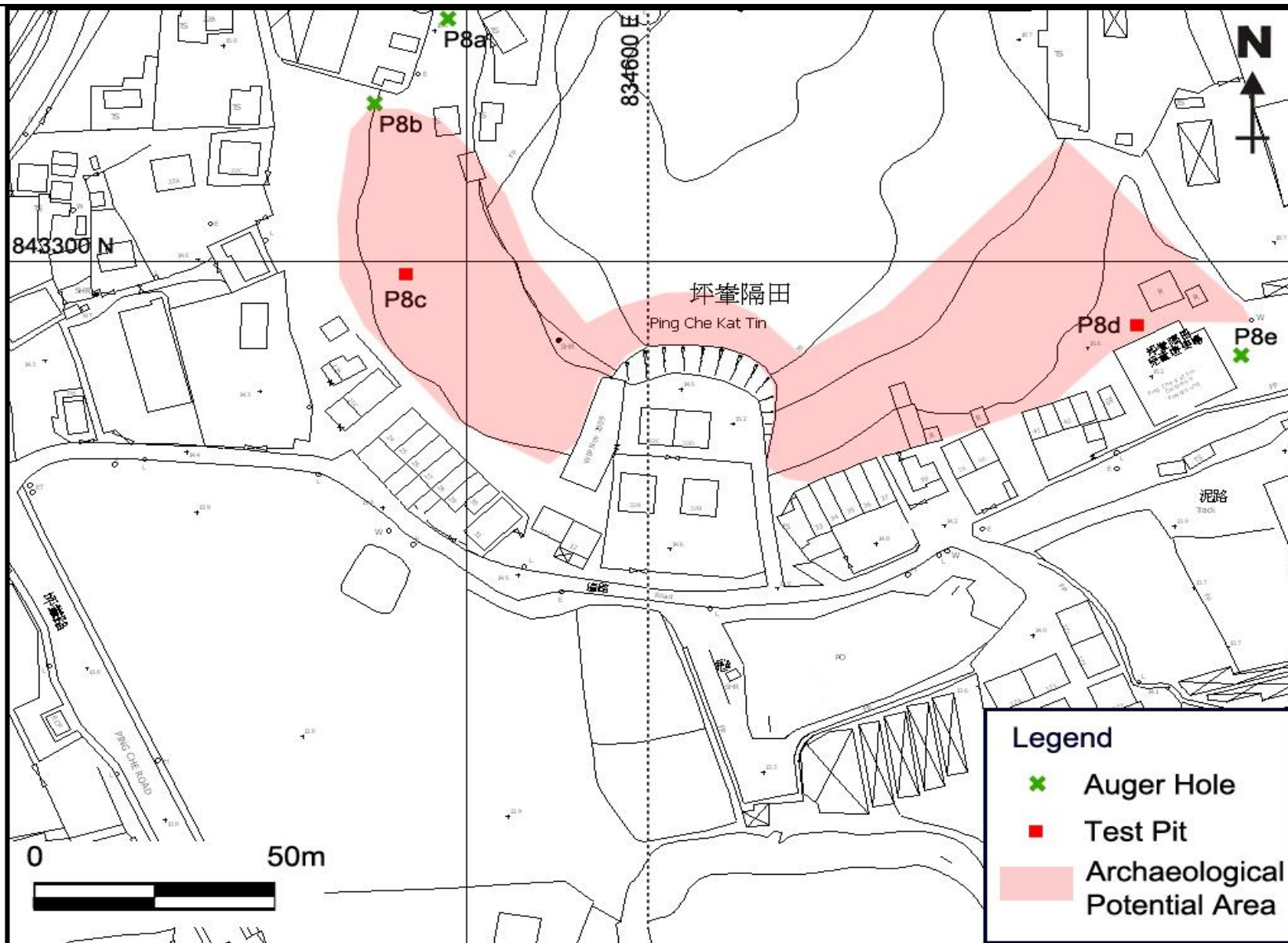
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		REV	-



AECOM

Indicative Archaeological Potential Area
between Sheung Shan Kai Wat and Ha Shan Kai Wat, Ta Kwu Ling

SCALE	See Figure	DATE	30/NOV/2010
CHECK	NGWHS	DRAWN	CHANWK
JOB NO.	60157433	DRAWING NO.	IAAP-6
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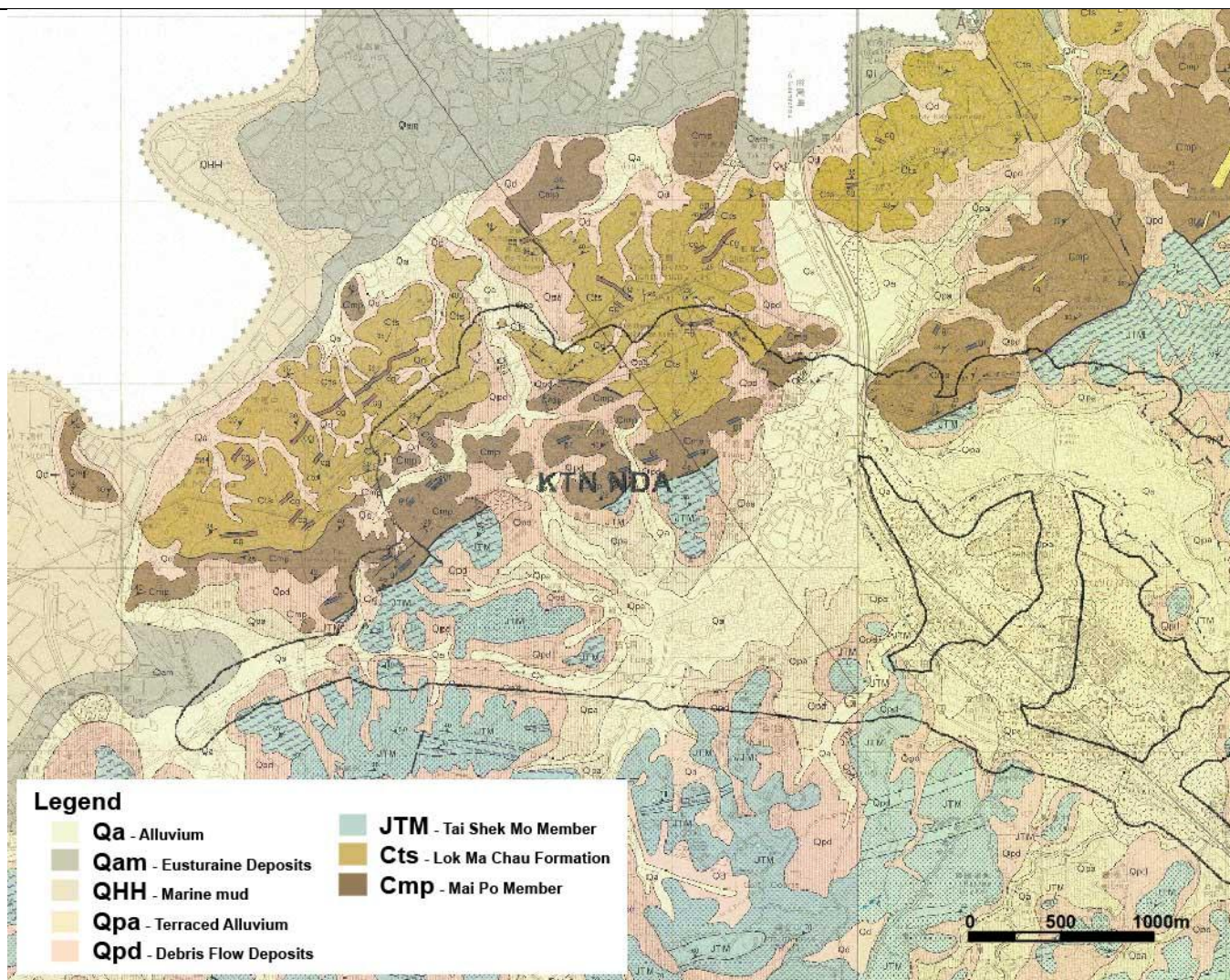


AECOM

**Indicative Archaeological Potential Area
at Kat Tin village, Ta Kwu Ling**

SCALE	See Figure	DATE	30/NOV/2010
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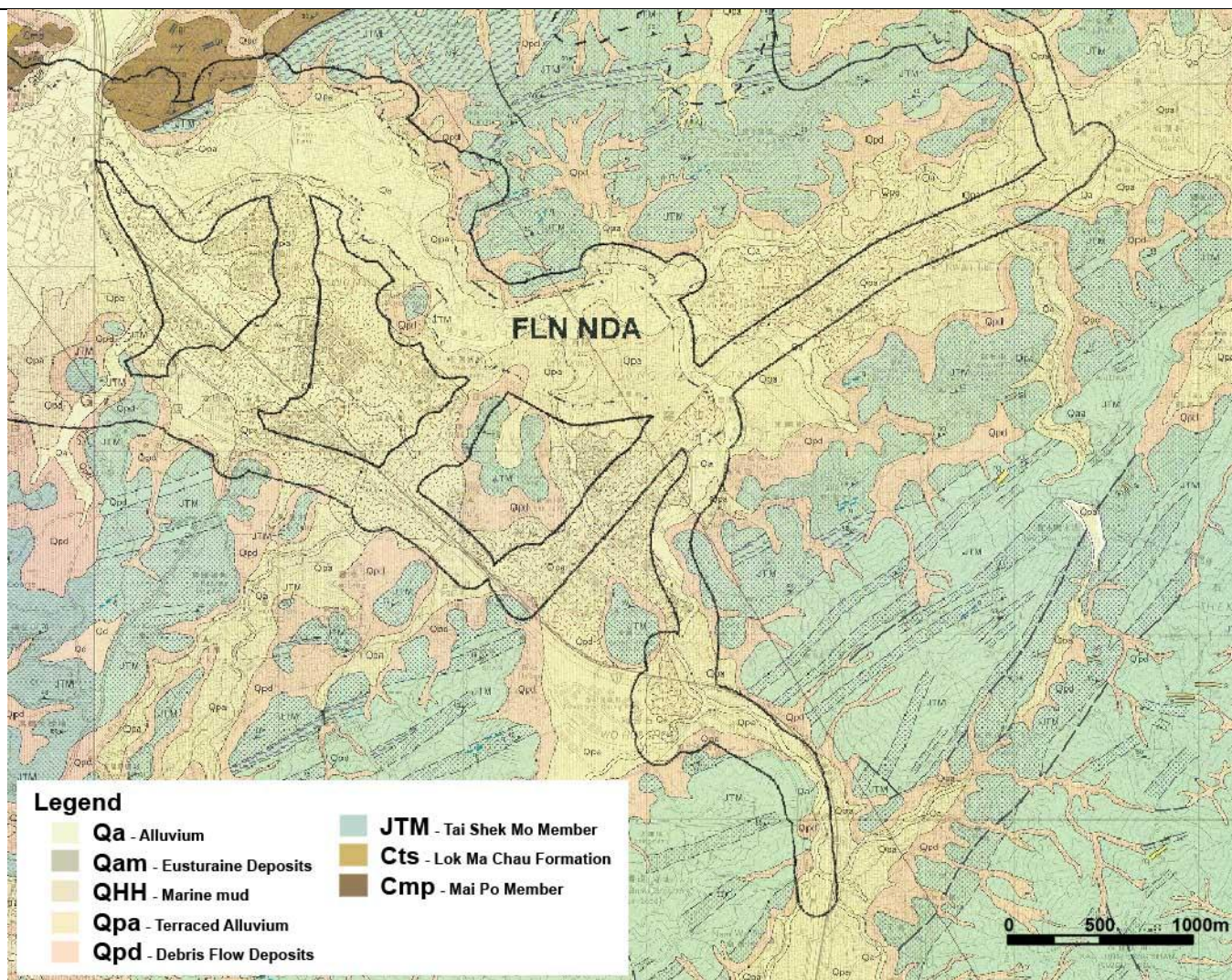
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附錄六
Geological Maps
地質地圖



AECOM

Geological Map showing the area of Kwu Tung (North)

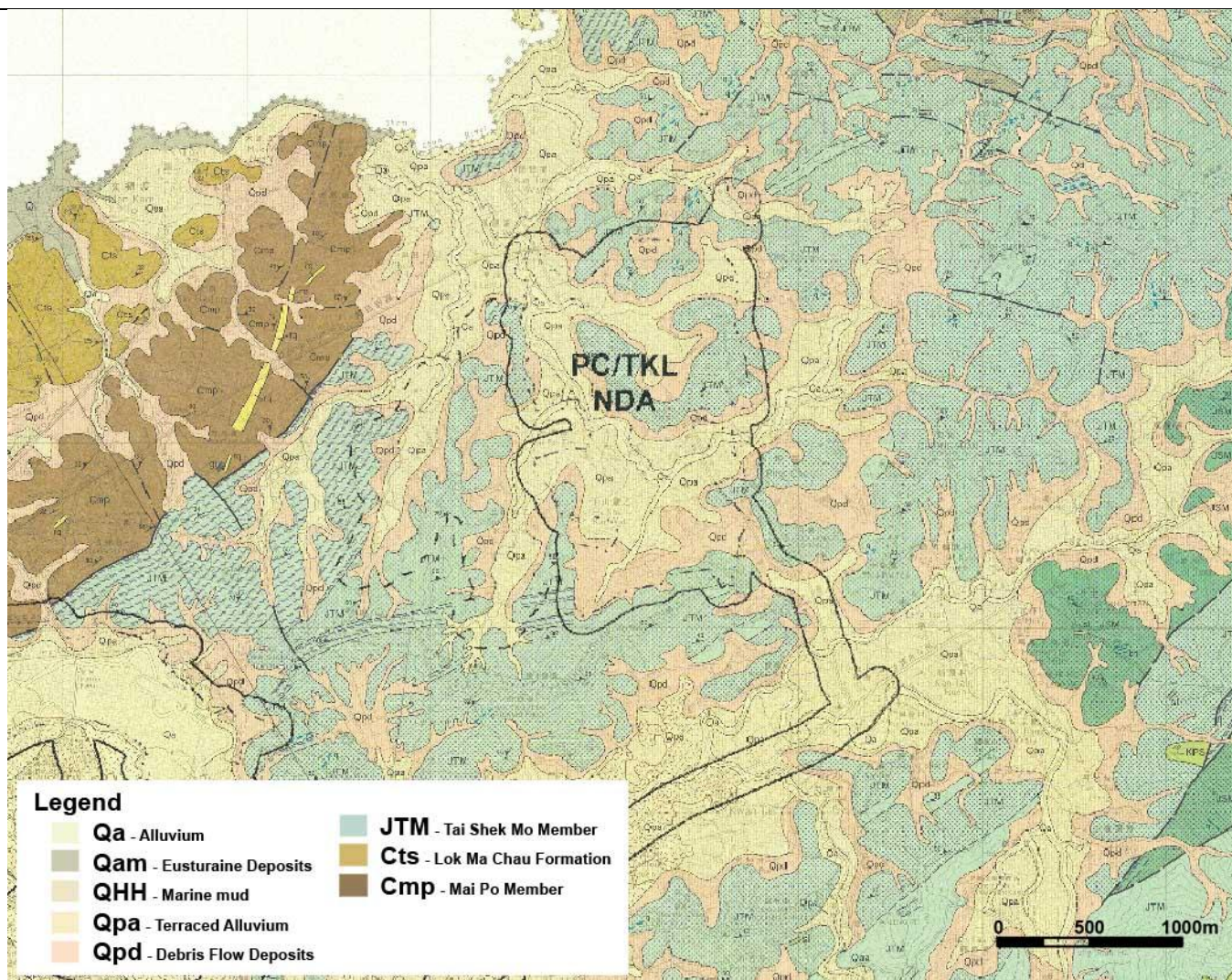
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CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	GM-KTN
		REV	-



AECOM

Geological Map showing the area of Fanling (North)

SCALE	See Figure	DATE	2011-02-10
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	GM-FLN
		REV	-



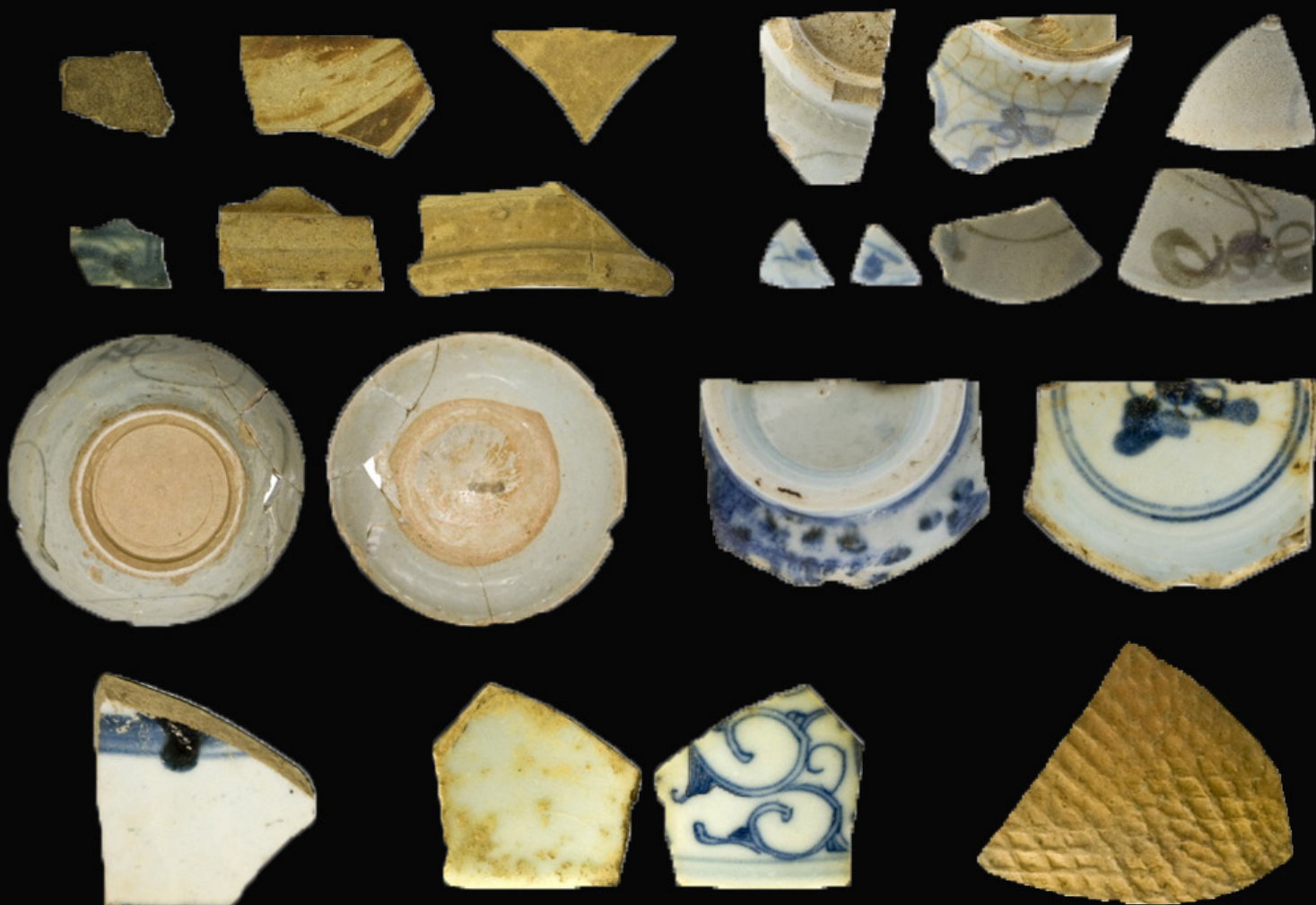
AECOM

Geological Map showing the area of Ping Che / Ta Kwu Ling

SCALE	See Figure	DATE	2011-02-10
CHECK	NGWHS	DRAWN	LAIPKP
JOB NO.	60157433	DRAWING NO.	GM-TKL
		REV	-

合約編號：FL/2010/01

新界東北新發展區 規劃及工程研究



合約編號： FL/2010/01

**新界東北新發展區
規劃及工程研究 -
考古調查**

最終報告

2012 年 6 月

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日期： 2012 年 6 月

免責聲明

本報告乃根據「新界東北新發展區---規劃及工程研究」之考古田野調查為香港特區政府土木工程拓展署而撰寫。該署為本報告之唯一受益人。除該署外，凡未得該署書面同意者，均不得披露、引用或依據本報告。除土木工程拓展署外，凡持有本報告者，均須事前得該署書面同意，方可引用本報告。如非上述目的者，均不可利用本報告作其他用途。

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代號

AH	鑽孔(Auger Hole)
AMO	古物古蹟辦事處(Antiquities & Monuments Office)
CEDD	土木工程拓展署(Civil Engineering & Development Department)
FLN	粉嶺北(Fanling North)
KTN	古洞北(Kwu Tung North)
mPD	香港水平基準面以米計(Hong Kong Principal Datum in meter)
NDA	新發展區(New Development Area)
PC/TKL	坪輦/打鼓嶺(Ping Che/Ta Kwu Ling)
Qa	第四紀沖積(Quaternary alluvium)
Qpa	第四紀更新世沖積(Quaternary Pleistocene alluvium)
Qpd	第四紀更新世洪積(Quaternary Pleistocene debris)
SC	地表採集(Surface Collection)
SS	地面勘察(Surface Scanning)
TP	探方(Test Pit)

1 引言

1.1 背景

- 1.1.1 這份報告呈交新界東北新發展區域(NDAs)，即古洞北 (KTN)、粉嶺北(FLN) 以及坪輦 / 打鼓嶺(PC/TKL) 等三個區域，進行的考古調查結果，基於桌面研究和實地考察後辨認出該區的考古資源。

1.2 考古調查的範圍

- 1.2.1 本考古調查的範圍涵蓋了新發展區的相關工程及發展區外 100 米的邊界。
- 1.2.2 在新發展區已經對考古調查區域進行共 118 公頃的實地掃描，以確定考古遺存的表面。
- 1.2.3 本次考古調查中共有鑽孔數 56 個，已發掘探方數量為 51 個。本次調查的鑽孔及探方都在政府土地上進行。調查是在 2010 年 6 月 17 日至 10 月 7 日期間進行的。

1.3 目標

- 1.3.1 按照招標文件附錄二（考古影響評估指引）及《環境影響評估條例》第 499 章第 16 條，技術備忘錄之附件 10 和 19，以下是本次考古調查的目標：
- 要辨認及確定任何受擬議的工程影響的未知的考古遺址(即未被古物古蹟辦事處列為具考古研究價值的地點的區域)；及
 - 要提交一份包含所有數據和結果的實地調查報告。

1.4 考古隊伍

- 1.4.1 此考古調查由艾奕康有限公司考古隊所進行。考古隊包括以下成員：

項目總監：林錦慰先生

組長和遺址代理人：吳偉鴻先生

持牌及資深考古學家：王文建先生

資深考古學家：劉茂女士

考古學家：黎柏健先生、陳瑋小姐

田野助理：蕭明華先生、石啓明先生及艾奕康有限公司技術人員隊伍

行政人員：鐘秋影女士

土地測量師：具專業資格的土地測量師

2 文化遺產相關法例與規定

2.1 古物古蹟條例 (第 53 章)

2.1.1 古物及古蹟條例為具有歷史、考古及古生物學價值之物件提供了法律框架。

2.1.2 該條例包含確立古蹟的法定程序。根據該條例第 3 條的規定，古蹟是因具有歷史，考古或古生物學意義，而被宣布為法定古蹟的地方、建築物、遺址或建構物、歷史建築、考古、古生物遺址或建構物。

2.1.3 根據第 6 條和第 (4) 條的規定，涉及某些古蹟的下列行為是被禁止的，除非持有主管當局授予的許可證：

- 在暫定古蹟或古蹟之上或之內挖掘，進行建築或其他工程，種植或砍伐樹木，或堆積泥土或垃圾；或
- 拆卸、移走、阻塞、污損或干擾暫定古蹟或古蹟。

2.1.4 根據該條例所界定，古物的發現，必須交給古物事務主管當局，或法定委派人選。該條例還規定，在本條例生效後，於香港範圍內所發現的每一件文物，從發現時刻起計，其所有權歸於政府。相關主管當局可以代表政府放棄文物古蹟的所有權。

2.1.5 除了主管當局和指定人選外，任何人不得在不持有由主管當局所頒發牌照的情況下，進行考古發掘。考古發掘牌照只有在主管當局對申請人各方面滿意的情況下才會給予頒發，這些方面包括：申請人必須曾接受過科學的訓練，或具備相關的經驗，以確保他能夠合格地進行發掘和搜查；申請人必須具有對發掘和搜查所發現的古物作出或安排適當科學研究的能力；申請人還必須具有充足的人員及資金支持。

2.2 環境影響評估條例 (第 499 章)

2.2.1 環境影響評估條例附表 1 釋義將“文化遺產地點”界定為“一項古物或古蹟，即在古物及古蹟條例與古物及古蹟辦事處所規定的任何具有考古、歷史或古生物學價值的地方、建築物、遺址或建構物，或古物”。

2.3 環境影響評估研究實施之技術備忘錄

2.3.1 評估影響的標準和指引分別列在環評技術備忘錄的附件 10 和附件 19。對文化遺產地點的影響評估準則包括：

- 一般假設為贊同保護及存護所有文化遺產地點，由於其提供基本、有限和不可替代的對古今的聯繫，是文化和傳統的參考點和身分；以及
- 對文化遺產地點的不良影響應減到最低。

3 地質與地理

3.1 古洞北區 (見附錄六，圖 GM-KTN)

3.1.1 古洞北區的主要基岩有兩種類型：北部的高地沉積和西部的火山基岩。河上鄉、鳳崗、白石坳及石仔嶺的高地地形含石墨的變質砂岩、片岩、及千枚岩，和在馬草壟河谷高地地形的變質砂岩和千枚岩與變質礫岩。白石坳的基岩是含粗灰分晶體的火山礫岩屑凝灰岩。

3.1.2 覆蓋的基岩是形成於更新世晚期和全新世早期的粗砂，砂土，壤土，淤泥等沖積物。這些沖積物形成了梯田，氾濫平原和峽谷。

3.1.3 在 20,000 比例的地質圖中，氾濫平原被標示為 Qa，梯田被標示為 Qpa（土力工程處 1988）。這些沖積區的主要地形是較高和較低的沖積梯田，從較高的地點延至平緩的山坡，主要在馬草壟及鳳崗一帶有陡坡（見附錄六圖，GMKTN）。

3.2 粉嶺北區 (見附錄六，圖 GM-FLN)

3.2.1 粉嶺北區的基岩面積由含粗灰分晶體火山礫岩屑凝灰岩所構成。覆蓋的基岩是形成於更新世晚期和全新世早期的粗砂，砂土，壤土，淤泥等等沖積物。粉嶺北的主要沖積區是梧桐河平原。

3.2.2 這些沖積物形成了梯田，氾濫平原和峽谷。在 20,000 比例的地質圖中，氾濫平原被標示為 Qa，梯田被標示為 Qpa（土力工程處 1988）。沖積區位於主要山谷，外貌有稍許擡升趨勢，帶有小型絕壁，一般靠近如今的梧桐河（土力工程處 1988: 17, 28, 表 3.1）（見附錄六，圖 GM-FLN）。

3.3 坪輦 / 打鼓嶺區 (見附錄六，圖 GM-TKL)

3.3.1 坪輦 / 打鼓嶺區的主要基岩由一序列的上侏羅世到早白堊世火山岩基岩所構成，它是由含粗灰分晶體的火山礫岩屑凝灰岩所構成。覆蓋的基岩是形成於更新世晚期和全新世早期的粗砂，砂土，壤土，淤泥等等沖積物。坪輦 / 打鼓嶺區的主要沖積區是平原河平原。

3.3.2 這些沖積物形成了梯田，氾濫平原和峽谷。在 20,000 比例的地質圖中，氾濫平原被標示為 Qa，梯田被標示為 Qpa（土力工程處 1988）。沖積區沖積區位於主要山谷，外貌有稍許擡升趨勢，帶有小型絕壁，一般靠近如今的平原河。

3.3.3 沖積物形成廣闊的氾濫平原，上坡區域包括本地物質。這些沖積區的主要地形是較高和較低的沖積梯田，從較高的地點延至平緩的山坡，主要在坪輦 / 打鼓嶺及下山雞乙和橫嶺以南一帶有陡坡（見附錄六，圖 GM-TKL）。

4 考古背景

- 4.1.1 有關新發展區的在桌面研究是根據古物古蹟辦事處的圖書館中現有的考古資料庫，以及學術相關的已發表和未發表的考古調查報告所得。
- 4.1.2 戴維斯教授提到（1961），韓義理醫生曾在 1920 年代和 1930 年代初之間，於上水及粉嶺發現石器，但確切位置並不明確。
- 4.1.3 香港大學考古隊發表的考古地圖說明東打鼓嶺近大塘湖，萬屋邊，和新村沙頭角鎮等地點存在新石器時代的石器及陶器（Bard 1967）。
- 4.1.4 香港大學考古隊的成員波克先生，於 1959 年發現孔嶺遺址。該遺址發現了硬幾何印紋器物及夔紋陶片，以至六朝的陶片（Peacock and Nixon 1986）。該遺址於 1998 年被重新調查，但沒有發現更多的考古文物。
- 4.1.5 由古物古蹟辦事處協調組織的第一次（1984 年至 1986 年）和第二次（1997 年至 1998 年）全港考古調查，並未在新發展區內發現考古遺址。
- 4.1.6 於 1999 年，在位於粉嶺北新發展區外的蒲嶺考古遺址發現唐代至宋代與晚清的考古材料。
- 4.1.7 在上水至落馬洲支線（SSLMCSL）的環境影響評估研究中，古洞北發展區的一部分被包含在考古調查之中，並在河上鄉南部發現一件宋代碗器殘件，但缺乏其他相關的宋代材料遺存，所以並不被認為是原生堆積（博威工程顧問 2001 年）。
- 4.1.8 2000 年在坪輦的表面採集發現明末清初的建築材料，並在坪輦舊村的探方發掘中發現宋代陶瓷（中港考古研究室 2000 年）。
- 4.1.9 在 1977 年梧桐河邊發現的上水華山考古遺址位於粉嶺北新發展區中，其中青銅時代硬幾何印紋陶片被發現（Loverlace 1978 年）。另一項在 2000 年的考古調查證實，該遺址的界線並未達到河溝地區（古物古蹟辦事處 2000 年）。
- 4.1.10 於 2003 年的環境影響評估（Maunsell. 2003）對新發展區內的考古潛質進行了詳盡的調查。鳳崗、河上鄉發現青銅時代晚期的材料，如夔龍紋陶片，以及宋代至明清時期的材料，如青瓷碗，屋瓦及青花瓷器碎片。古洞、馬草壟、燕崗以及下山雞乙亦發現宋代青瓷碗碎片，而下山雞乙還發現 2 片青銅時代的網格紋陶片。

5 歷史背景

5.1 歷史概況

歷史時期早期至中期

- 5.1.1 關於本研究區內人類居住的歷史，可以在古代文獻的記載中找到線索，例如成書於公元一至二世紀的<<史記>>和<<漢書>>。這些歷史書記錄了眾多的「越」族（也稱「百越」）散居華南各地。這些越族是由各種不同姓氏的部落組成，他們從體貌特徵、語言和民間傳說上，皆可與居住在中國中部漢族區分開來。
- 5.1.2 當華南在公元前 221 年（秦王朝）納入當時中國的中央政府版圖之時，越人漸漸被漢文化所同化。在秦代（公元前 221-206），本研究範圍隸屬於番禺縣。
- 5.1.3 公元前 208 年，由秦廷（公元前 221-206）南征越族的軍官們在今天的廣東建立了南越國。秦王朝在北方覆滅後，漢朝（公元前 206 - 公元 220 年）繼立。南越國很快成為漢王朝的附庸國。在漢代至東晉期間（公元前 206 - 公元 331 年），本研究區隸屬於博羅縣¹。公元 331 年至 756 年本研究區改隸於寶安縣。公元 757 年後，本研究區改隸於東莞縣。在 1573 至 1912 年間，本研究區隸屬於新安縣，其後新安縣在又復名為寶安縣。
- 5.1.4 自 8 世紀（唐朝在公元 618 -907 年）開始，吐露港是中國主要的珍珠採集中心。從 9 世紀起，珠江區（包括香港）成為了一個重要的鹽業生產中心。尤其在南宋時期（公元 1127-1279 年），香港更是當時中國的十三個產鹽中心之一。這可從歷史文獻，如<<輿地紀勝>>和<<宋會要輯錄>>等所記載有關鹽走私活動之中窺見一斑。鹽業生產帶動了人口的日益增長，新界北部地區遂逐漸變成居住地和供應食物的農地。
- 5.1.5 根據口述歷史和當地族譜記載，在蒙古征服南宋時，一大波移民從內陸遷移到了新界北部地區。對當地族譜的研究表明，五大家族，即彭族、廖族、侯族、文族和鄧族，皆是第一批南宋時期新界北部的定居者（陳 2006）。
- 5.1.6 在 13 世紀時，即彭族、侯族、廖族搬進了本研究區及其鄰近地區。彭族定居於粉嶺，侯族定居於塱原的西部和南部，而廖族則定居於上水平原。本研究範圍在公元 757-1572 年期間隸屬於東莞縣。
- 5.1.7 在元代（公元 1271- 1368 年）期間，於龍躍頭和屏山（鄧族），屯門、樟木頭及上水（廖族）、河上鄉（侯族），及大埔和新田（文族）等地建立起永久性居住地。

歷史時代晚期

¹ 雖然漢至東晉時代博羅與番禺之間的分界不詳，但根據《嘉慶新安縣誌》、《清初遷海前後香港之社會變遷》、《深圳古代簡史》，本研究範圍應屬博羅。然而，饒宗頤（2005）曾通過李鄭屋漢墓的磚塊探討認為該地為番禺所屬。

- 5.1.8 在 15 世紀，東莞縣沿海地區遭受了頻繁的海盜和倭寇的襲擊劫掠。新安縣遂於公元 1573 年成立，以捍衛這些攻擊。根據<<新安縣志>>，今天的新界、九龍及香港在當時屬於在新安縣的管轄地。
- 5.1.9 1661 年，清廷爲了消滅台灣反清軍事力量，強制執行「遷界禁海令」。住在廣東沿海的居民，包括新界居民，被迫向內陸遷移 50 里(約 25 公里)。直到 1669 年，人們才可以遷回他們的原來的村莊。但是，沿海地區經過「遷界禁海」，人口從 1594 年所記錄的 13,302 丁，巨幅下跌至 1677 年的 3,912 丁。因此，在 17 世紀末至 18 世紀初，客家人得到清政府鼓勵，遂遷入新界地區。
- 5.1.10 清廷在與英國的第一、二次鴉片戰爭均以失敗告終，伴隨而來的便是香港島，九龍半島和昂船洲依<<南京條約>>（1842）和<<北京條約>>（1860）所定，先後被永久割讓給英國。1898 年簽訂<<展拓香港界址專條>>，英國得以租借新界。

5.2 古洞北區歷史

- 5.2.1 侯族氏在元末至明初時期（14 世紀後期）定居於河上鄉。侯族乃晉緡侯之後裔，起源於上谷郡。侯族於宋時自中原南遷，其後子孫繁衍分爲六大房，分別爲廣州府南海縣一房、廣州府番禺縣一房、肇慶府恩平縣新興縣一房、嘉應州一房。侯族爲本地人/廣府人，河上鄉侯族屬於番禺一房，其始祖侯五郎(1023-1086)在宋代遷居新安縣。然而，至到明代初年侯族十一世祖侯卓峰時，侯族才在河上鄉開基；侯卓峰是爲河上鄉的開基祖。
- 5.2.2 河上鄉共有四個村落，即南邊圍、北邊圍、中心村和松圍村（新村）（網上資源 AMO 1）。
- 5.2.3 1688 年和 1819 年版的<<新安縣志>>均有記載他們的居住地點。在清初（18 世紀），居住在此的侯族分支出來，定居在金錢，燕崗和鳳崗。
- 5.2.4 另外兩個村莊也記錄在 1819 年版的<<新安縣志>>中，它們是燕崗村及古洞村。燕崗村是由河上鄉侯氏的一個分支所建立的。可獲取的關於古洞村的記錄很少，甚至連它的確切位置仍然不明瞭。〈新安縣全圖〉（1868 年）（吳 1983 年地圖 9）和 1905 年至 1909 年英國陸軍部地圖（Hal Empson 1992 圖 140）標明原來的古洞村，位於燕崗西南和金錢以東。唯一可以肯定的是關於古洞村的建成年代是在 1898 年之前，早於新界成爲英國的殖民地。

5.3 粉嶺北區歷史

- 5.3.1 彭族於南宋末年（公元 1127 年至 1279 年）搬到粉嶺區（Web 源古物古蹟辦事處 2）。然而，該研究區主要是由梧桐河沿岸的低地構成，並不適合人類居住。因此，該研究區內沒有 1950 年代以前建成的村莊。

5.4 坪輦 / 打鼓嶺區歷史

- 5.4.1 在研究區內存在一定數量的舊村落，包括山雞乙，大埔田，元下，坪輦和隔田。山雞乙及大埔田是在 1898 年之前建立。山雞乙包括上山雞乙和下山雞乙；

屬於一個客家村落。到目前為止，其他可以幫助瞭解這些村莊的歷史的資料很少。

- 5.4.2** 位於坪輦的歷史建築，如天后廟(坪輦)和長山古寺，或可以對坪輦出現人類聚落的年代提供一些線索。在長山古寺發現的最古老的銅鐘是在清乾隆 54 年（1789 年）造的（Web 源古物古蹟辦事處 3）。根據口述歷史，坪輦天后廟在乾隆廿一年從其他地方遷至坪輦（Web 源古物古蹟辦事處 4）。因此，可以相信該地區在清代已成為聚落。

6 方法

6.1.1 以下三個步驟的方法是按照招標文件中附錄二，古物古蹟辦事處（古蹟辦）的考古影響評估準則的要求而執行的。

6.1.2 在要求進行考古調查的範圍所獲田野資料限制下，本文基於地表調查、鑽探、探方發掘之結果，僅闡述具考古潛質區域。

地表調查

6.1.3 在考古調查區域內進行步行調查，以確認地表存在的考古遺存。考古調查區域內的地表調查地點可見於**附錄二**。

6.1.4 在情況理想的時候，對存在於地表的考古物質遺存的進行有系統的搜尋，考古調查範圍覆蓋整個地區。調查將特別注意暴露的地表，如河床切面，受侵蝕地區，階地等。

6.1.5 文物的發現地點已被紀錄，並點繪到比例為 1：1000 的地圖上（見**附錄二**，圖 SS-KTN-5, SS-FLN-1a, 1b, 2a, 3a, 4a, 4b 與圖 SS-TKL-1a, 3a, 3b, 5a, 5b）。在調查過程中所發現的文物已獲收集以及紀錄。在步行調查過程中，地形，地表狀況和現有的影響已獲紀錄。

鑽探

6.1.6 手鑽工具被用作鑽探土壤，以探測地表之下是否存在考古資源。手鑽工具是由鑽頭、鑽桿與手柄組成；鑽頭的一端帶有三道鋒利的刃部。鑽探時用人手操作，使鑽頭垂直鑽入地表，並取出一條泥芯，以進行測試。為了辨別與紀錄地層，土壤的顏色、構成物以及緊合度(3C)會被測量；每當這三項測量因子有所變化時，地層的深度會被紀錄下來。如有發現文物，其出土的深度以及地層也會被紀錄下來。鑽探只有在風化土、地下水或石塊被觸及時，又或是當土壤的黏合度太低，鑽頭無法提取出泥芯時，才會停止。

6.1.7 鑽孔的地點根據合約所提供的已擬定鑽孔地點；根據至到發掘當日的地貌實際情況作出細微的調整。每個已鑽鑽孔的位置都被點繪到比例為 1：1000 的地圖之上。詳見**附錄二**。

探方發掘

6.1.8 本次調查採用了探方，以便查證擬發展區內是否存在考古潛質，以及建立物資遺存的豎向序列與橫向分布範圍。探方位置根據合約指定地點；根據至到發掘當日的地貌實際情況作出細微的調整。

7 調查結果 - 古洞北

7.1 一般描述

- 7.1.1 古洞北位於新界東北新發展區的西部，其東邊以雙魚河-石上河為界，南邊以粉嶺公路為界，西、北兩方向則不逾禁區邊界。就地貌而言，古洞北可以劃分為兩個區域：西部約三分之二區域為丘陵及階地地貌，而剩餘東部區域則基本為平原地帶。在古洞北西部，馬草壟及鳳凰山等丘陵的海拔高度約為 40 米至 60 米，最高點約 80 米；從丘陵延伸出的臺地的海拔逐漸自 40 米降至約 20 米；而到了等河谷地帶，海拔高度可降至約 10 米。在古洞北東部區域河上鄉和燕崗等平原地帶，海拔高度一般在 10 米以下；例外的地點是古洞北東南角的丘陵階地。
- 7.1.2 就地質結構而言，古洞北西部丘陵的基岩大致為形成於古生界下石炭統的變質石灰岩和變質粉砂岩以及形成於中生界上侏羅統和下白堊統的粗火山灰晶屑凝灰岩。古洞北西部緩坡上的表土沉積主要為形成於第四系更新統的階地沖積物及坡積、洪積物，而河谷地帶的表土沉積則一般為形成於全新統的沖積物。在古洞北東部，平原地區的表土沉積一般為由粘土、粉砂、砂和礫石構成的沖積物，形成於全新統 (Lai, Campbell and Shaw, 1996)。
- 7.1.3 在古洞北所做的考古田野工作並未覆蓋全部研究區域。根據項目標書所規定的工作範圍，古洞北的考古調查分佈在 18 個小區內。本報告中，這 18 個小區分別編號為 KTN-1 至 KTN-18。大致而言，小區 KTN-1 至 KTN-5 以及 KTN-7 至 KTN-14 分佈在西部的階地上，而小區 KTN-6 以及 KTN-15 至 KTN-17 則分佈在東部平原上。小區 KTN-18 為東部的例外，此小區位於古洞北東南角的丘陵階地上 (見附錄二，圖 KTN-0)。
- 7.1.4 古洞北的考古調查在田野中採用了地表尋察、探鏟鑽探以及探方發掘等三種方法以尋找潛在的考古資源。地表尋察未依照 18 個小區的區域劃分，而是將整個調查區分為 6 個分區。古洞北的田野工作總計鑽探探孔 25 個，發掘 1 米邊長探方 24 個。在 18 個小區內所鑽探孔及所發掘探方分別按照每個小區的編號及拉丁字母順序編號。例如，小區 KTN-1 內的一個探方和一個探孔分別編號分別為 K1a 和 K1b。所有探孔和探方的位置分別標誌於圖 KTN-1 至 KTN-18。
- 7.1.5 探孔及探方的數量及特定位置在標書中已作規定。但是，在田野工作中，由於地表條件不允許，一些探孔和探方的位置予以變動。多數情況下，位置變動的原因是原定地點的地表為礫石或水泥層(如路邊、貨場、車場等)，地表過於堅硬而無法鑽孔或挖方。在另外一些情況下，原定地點現在被建築物所佔據，如貨場或工廠。
- 7.1.6 根據古洞北地區的桌面研究、地表尋察以及田野發掘，河上鄉一處地點可認定為具有潛在考古價值，見附錄五，圖 IAAP- 1。此次田野調查中從地表尋察、探孔鑽探以及探方發掘所收集的考古發現數量統計，見表 7.3。

7.2 地表尋察結果

7.2.1 為方便報告資料，古洞北所規定的地表尋察區域被分為 6 個分區，編號為圖 SS-KTN-1 至圖 SS-KTN-6。每個分區的地表尋察結果細節，記錄於文字表格並標誌在彩圖上。需要解釋的是，每個分區在田野調查中又劃分出若干地點，並在地面調查記錄表分別描述；但是，由於除了 SS-KTN-5 各區都未在地表發現文物，為表達的簡潔和清晰，本報告中將這些地點合併介紹。這 5 個分區的地表尋察結果總結如下：

SS-KTN-1 (見附錄二，圖 SS-KTN-1)

7.2.2 分區 SS-KTN-1 分佈於馬草壟地區。

7.2.3 分區 SS-KTN-1 的地表和地貌特徵可歸納為三種類型：(1) 覆蓋高、密植被的坡地和荒地，因植被覆蓋很難觀察到地表狀況；(2) 栽種果樹的多層階地，較便於地表尋察；(3) 建築物佔據地點，密集分佈村屋、廢棄豬場、貨場、道路、商店或廠房以及公共建築如學校。此分區內的地表尋察未見任何考古遺存。

SS-KTN-2 (見附錄二，圖 SS-KTN-2)

7.2.4 此分區的北部為一座小山，南部為低平階地。小山上覆蓋茂密的植被，低平階地上分佈著荒廢農田、舊屋、貨場和道路。分區 SS-KTN-2 內的地表尋察未見任何考古遺存。

SS-KTN-3 (見附錄二，圖 SS-KTN-3)

7.2.5 此分區分佈在緩坡及低平階地上。此分區大部份被永久建築物覆蓋，如道路、車場、貨場、廢棄豬場、村屋及垃圾堆。此分區內其它地點為覆蓋著茂密植被的坡地。分區 SS-KTN-3 內的地表尋察未見任何考古遺存。

SS-KTN-4 (見附錄二，圖 SS-KTN-4)

7.2.6 此分區北部調查地點位於羅湖騎術學校，在騎術學校馴馬場地及週邊所作的地表尋察未發現任何考古遺物。此分區南部的舊屋旁亦作調查，但未發現任何考古遺物。

SS-KTN-5 (見附錄二，圖 SS-KTN-5)

7.2.7 此分區分佈在河上鄉一座小山的山腳階地上，這些階地分佈著舊屋、荒田和貨場。在此分區內，在四個“發現點”採集到採集到陶瓷遺物，包括或可定為宋代的青瓷片(見附錄四，圖 7.1)以及定為明清時期的瓷片、硬陶和釉陶片(見附錄四，圖 7.2-圖 7.5)。

7.2.8 地表尋察的發現表明，這一區域或許有發現歷史時期考古堆積層的可能。此區內探方 K14a 的發掘證實了這種可能。此探方第四層出土了一片影青瓷片，另外還出土了硬陶片和瓦片。這些出土物將第四層堆積定為早至宋代。

SS-KTN-6 (見附錄二，圖 SS-KTN-6)

- 7.2.9 此分區分佈於燕崗村及青山道北側，大多數地點分佈這村屋、貨場經濟道路。此分區內其餘地點或是有茂密植被，或是被水所淹。因此，分區 SS-KTN-6 內的地表尋察未發現任何考古遺存。

7.3 探孔鑽探及探方發掘結果

- 7.3.1 古洞北的田野調查共鑽探探孔 25 個及發掘探方 24 個。附錄一中的探孔記錄描述了各個鑽孔的相關細節。附錄一中的探方記錄提供了各個探方的文字、剖面照相及剖面繪圖資料。探方和探孔的歸納資料另分別見於下面的表 7.1 及表 7.2。在所有的探孔和探方中，僅有位於河上鄉的探方 K14a 出土了考古堆積。有關探方 K14a 的考古發現細節介紹如下。

探方 K14a

地表/地貌特徵

- 7.3.2 探方 K14a 位於東北面一座小山的山腳階地上，階地海拔高度約 8 米。階地西面約 40 米處，有一條小河自北向南流。探方 K14a 所在階地現在為荒地，荒地上植有樹木，地面上佈滿垃圾。這片林中階地是附近一帶唯一的空地。階地東北側有河上鄉路穿過，階地週邊的其它方向，現在被貨場和車場所佔據（見附錄二，圖 KTN-14）。
- 7.3.3 自此階地進一步向東，此次地表尋察曾採集到宋代至明清時期的陶瓷片。其實，2002 年在河上鄉的調查就曾在這一帶發現歷史時期的陶瓷片。當時的考古調查屬於為新界東北規劃與發現研究項目所作環境影響評估的一部份（合約號 CE64/96）(Maunsell Consultants Asia Ltd 2003)。

發現

- 7.3.4 在探方 K14a 的發掘劃分 5 個地層層位。第一層當代表土，第五層為此地區人類活動以前的生土堆積。第二層的年代因缺少包含物而不詳。但是，第二層可能形成於晚近時期，或至少在晚近時期曾被擾動。第三和第四層出土了考古遺物。
- 7.3.5 第三層出土兩片陶瓷片。一片為紅色硬陶，或許為盆的殘片，器表有灰色層，器底為平底(見附錄四，圖 7.6)。另一件為灰色夾砂粗陶，含大量砂粒；此器殘部呈弧狀，或許為瓦的殘片(見附錄四，圖 7.7)。
- 7.3.6 第四層出土的器物中，茶杯殘片最具特徵且最易定年。此瓷片為典型的影青瓷，內壁有刻花圖案(見附錄四，圖 7.8)，應是宋代景德鎮產品。其它出土陶瓷遺物包括：一件磨光黑灰胎硬陶，器表有平行的粗劃紋(見附錄四，圖 7.9)；一件灰色瓦片，上面有刮削痕，下面有麻布印紋(見附錄四，圖 7.10)；另外還有一件方唇褐色釉陶罐(見附錄四，圖 7.11)。

7.4 年代

- 7.4.1 已有研究曾針對香港出土的唐代、宋代和明代青瓷作年代序列分析，分析的著眼點為青瓷風格特徵的時代差異 (Hong Kong Institute of Archaeology 2000)。探方 K14a 第四層出土的影青瓷片具有宋代青瓷的典型特徵，因此也應定為宋代遺物，如須更為精確，則定為南宋遺物。
- 7.4.2 根據以往對於香港出土宋代瓦片的研究，第四層所出灰瓦也可定為早至宋代 (Hong Kong Institute of Archaeology 1999)。其他第四層所出陶瓷遺物不易斷代。因此，探方 K14a 第四層目前被定為可早至宋代，但是，如果今後在這一帶發現更多同層遺物，不排除將此層年代更改（推後）的可能。建議日後可在探方 K14a 附近做進一步的考古調查。
- 7.4.3 探方 K14a 第三層出土少量日用硬陶殘片，因缺少對此類陶器物的年代學研究，第三層的斷代並無可靠的基礎。因此層無法被定為宋代堆積，但此層遺物又無明顯清代或近代陶瓷風格，所以第三層目前暫定為明代堆積。

7.5 古洞北區具考古潛質區域

- 7.5.1 通過地表尋察、探孔鑽探及探方發掘等田野工作手段，古洞北地區的考古調查已經完成。不過，考古調查結果顯示，此區域內僅在一個地點發現考古堆積。此地點為位於河上鄉的一個階地，處於小山和河道之間。河上鄉這一個具考古潛質區域在 2000 年被發現，本次報告也再次發掘（見附錄五中圖 IAAP-1）。根據可追溯年代的文物發現，此具考古潛質區域的年代約從宋代至明清時期，判斷此地具考古潛質的證據包括地表採集、探方發掘的宋代至清代的陶瓷片以及探方 K14a 所包含的宋代和明代地層，以及具考古潛質區域附近的河流階地地貌。

表 7.1 古洞北區探方總表

探方	地表海拔高度	最大發掘深度	地貌	目前土地用途	地層				
					表土	下層土		風化土	文物 / 備註
						存在考古遺存	不存在考古遺存		
K1a	c.a. +12.7mPD	75cm	河谷階地	廢地	L1		L2	L3	
K2a	c.a.+14.9mPD	130cm	河谷階地	果園	L1		L2	L3	
K2c	c.a. +14.8mPD	34cm	河谷階地	果園	L1		L2	L3	
K3b	c.a. +14.7mPD	64cm	河流階地	廢地	L1			L2, L3	
K4a	c.a. +18.1mPD	66cm	山腳階地	果園	L1		L2	L3	
K5b	c.a. +28.8.3mPD	20cm	河谷階地	路旁	L1			L2	
K5e	c.a. +30.0mPD	90cm	山丘	墓旁山坡	L1		L2	L3	
K6d	c.a. +11.4mPD	245cm	山腳	羅湖騎術學校用地	L1	L2, L4	L3, L5		現代填充物，釉陶，瓦片
K6e	c.a. +10.4mPD	25cm	山腳	羅湖騎術學校用地	L1		L2	L3	
K7a	c.a. +27.6mPD	70cm	山丘	山坡	L1		L2, L3	L4	
K7b	c.a. +24.0mPD	84cm	山腳	林內廢地	L1		L2, L3	L4	
K8a	c.a. +22.3mPD	20cm	河谷	廢地	L1			L2	遇到地下水
K8b	c.a. +22.3mPD	20cm	河谷	廢地	L1			L2	遇到地下水
K9a	c.a. +22.0mPD	30cm	山腳	路旁	L1			L2	

土木工程拓展署

K9c	c.a. +25.0mPD	110cm	山丘	山坡，有墓	L1		L2, L3	L4	
K10b	c.a. +11.5mPD	76cm	平原	果園	L1		L2, L3	L4	
K10d	c.a. +12.3mPD	90cm	河流階地	廢地	L1		L2		河堤堆積
K10e	c.a. +11.3mPD	60cm	河流階地	花園	L1		L2		底部遇到地下水
K11d	c.a. +10.5mPD	25cm	平原	廢棄貨倉	L1			L2	
K12a	c.a. +8.8mPD	25cm	山腳	渠邊路旁	L1		L2		現代填充物，遇到地下水
K13a	c.a. +9.4mPD	80cm	平原	廢地	L1		L2, L3	L4	
K14a	c.a. +8.4mPD	74cm	山腳階地	林內廢地	L1	L3, L4	L2	L5	L3出明代硬陶及瓦殘片; L4出土宋代青瓷片、釉硬陶及瓦殘片
K16a	c.a. +6.0mPD	36cm	平原	貨倉旁廢地	L1		L2		底部遇到地下水
K17a	c.a. +5.9.0mPD	50cm+ 90cm (鑽探)	平原	道路旁的花園	L1	L1, L2, L3	L4, L5	L6	

表 7.2 古洞北區鑽孔總表

鑽孔	地表海拔高度	最大發掘深度	地貌	目前土地用途	地層				
					表土	下層土		風化土	石床
						存在考古遺存	不存在考古遺存		
K1b	c.a. +11.3mPD	90cm	河谷階地	廢地	L1		L2	L3	
K2b	c.a. +18mPD	100cm	河谷階地	果園	L1		L2	L3	
K3a	c.a. +14.7mPD	90cm	河流階地	廢地	L1		L2		遇到地下水
K5a	c.a. +25.4mPD	15cm	河谷階地	路旁			L1		遇到石塊
K5c	c.a. +29.0mPD	30cm	河谷階地	路旁	L1			L2	
K5d	c.a. +32.0mPD	135cm	山丘	墓旁山坡	L1		L2	L3	
K5f	c.a. +31.0mPD	40cm	山腳	路旁	L1			L2	
K6a	c.a. +11.4mPD	25cm	山腳	羅湖騎術學校用地	L1			L2	
K6b	c.a. +11.4mPD	78cm	山腳	羅湖騎術學校用地	L1		L2	L3	
K6c	c.a. +11.4mPD	80cm	山腳	羅湖騎術學校用地	L1		L2, L3		
K7c	c.a. +24.0mPD	20cm	山腳	廢棄停車場			L1		遇到混凝土層
K8c	c.a. +24.0mPD	30cm	河谷	廢地	L1			L2	
K9b	c.a. +18.0mPD	35cm	山腳	路旁	L1			L2	
K9d	c.a. +16.0mPD	65cm	山丘	山坡	L1		L2, L3	L4	L2為現代堆積

土木工程拓展署

K10a	c.a. +12.3mPD	85cm	Riverside	鄉村路旁	L1		L2, L3		廢料中 遇到石 塊
K10c	c.a. +11.3mPD	35cm	河流階地	廢地	L1		L2		遇到混 凝土層
K11a	c.a. +13.2mPD	85cm	平原	鄉村路旁	L1		L2	L3	
K11b	c.a. +15.5mPD	75cm	平原	鄉村路旁	L1		L2	L3	
K11c	c.a. +14.3mPD	105cm	平原	鄉村路旁	L1		L2	L3	
K11e	c.a. +10.5mPD	100cm	平原	廢棄貨倉	L1		L2	L3	
K12b	c.a. +8.8mPD	30cm	山腳	路旁渠道	L1		L2		遇到地 下水
K13b	c.a. +9.4mPD	100cm	平原	廢地	L1		L2, L3, L4		遇到地 下水
K15a	c.a. +6.5mPD	100cm	平原	空地	L1		L2	L3, L4	
K17b	c.a. +6.1mPD	55cm	平原	鄉村路旁	L1		L2, L3		遇到道 路地基
K18a	c.a. +10.0mPD	40cm	山腳	貨倉			L1	L2	

表 7.3 古洞北區田野調查收集遺物數量統計總表[^]

地區	鑽孔/探方/地表調查	單位	遺存單元	青瓷	無釉硬陶	青花瓷	釉陶	瓦	現代器物
古洞北	探方	K6d	C2	0	0	0	1	1	0
古洞北	探方	K6d	C4	0	0	0	1	0	0
古洞北	探方	K10d	C2	0	0	0	0	0	2
古洞北	探方	K14a	C3	0	1	0	0	1	0
古洞北	探方	K14a	C4	1	1	0	1	1	0
古洞北	探方	K17a	C1	0	0	0	1	0	0
古洞北	探方	K17a	C2	0	2	0	1	0	0
古洞北	探方	K17a	C3	0	1	0	2	0	0
古洞北	地表調查	SS-KTN-5	1 號地點	6	1	1	1	1	0
古洞北	地表調查	SS-KTN-5	2 號地點	2	1	2	0	2	0
古洞北	地表調查	SS-KTN-5	3 號地點	1	0	0	0	0	0
古洞北	地表調查	SS-KTN-5	4 號地點	1	0	0	0	0	0
古洞北總和 37				11	7	3	8	6	2

[^] 收集得到的文物與現場調查見到的文物數量不一致，收集的文物主要按照它們在考古學上的重要性決定。

8 調查結果 - 粉嶺北

8.1 一般描述

- 8.1.1 根據香港上水地質調查表三：基岩和地表地質 (Lai, Campbell and Shaw, 1996)，天然地表的地質包括沖積物 [Qa] (分選性良好至中等的黏土／粉砂、砂和礫石)，階地沖積物 [Qpa] (分選性良好至中等的礫質、砂質黏土／粉砂)，和洪積物 [Qpd] (未分選，夾中礫和漂礫的礫質、黏土質和粉砂)。
- 8.1.2 它們形成於更新世至全新世，而基岩是由粗火山灰晶屑凝灰岩 (未分) (如山石)，形成於上侏羅統至下白堊統。落馬洲組 - 米埔段岩石 [Cmp] (千枚岩，變質粉砂岩夾變質砂岩和石墨片岩 (未分)) 沿著粉嶺北向東北呈帶狀伸延。
- 8.1.3 擬新發展區中的粉嶺北位處梧桐河及雙魚河的河流盆地。梧桐河由坪輦向東流經孔嶺、軍地、馬頭嶺、天平山 (聖山)、華山至虎地坳，然後於上水屠房處匯流入雙魚河。雙魚河本身源於林村，然後流經古洞和河上鄉，向北流至上水屠房附近和石上河及稍北的梧桐河合流，並向北流入羅湖的深圳河。
- 8.1.4 沿梧桐河的北面有一列小山丘，即天平山 (主水平基準以上約 +90 米)、華山 (主水平基準以上約 130 米)、杉山 (主水平基準以上約 110 米)。粉嶺北的大致地貌是建基於沖積物之上，於河流兩岸形成第一階 [Qa - 沖積物]，第二階 [Qpa - 階地沖積物] 及第三階 [Qpd - 洪積物] 河流階地。在這個項目中，所有鑽孔及探方位置均處於第二級或第三級河流階地之上。
- 8.1.5 發掘前進行了地表調查，以視察本地區的考古潛質及擬發掘位置的狀況。在發掘調查階段，粉嶺北區共發掘了 11 個探坑及 14 個孔鑽孔，發掘面積累計 16 平方米。
- 8.1.6 基於對粉嶺北區的桌面研究、地表調查與調查發掘，已將該區具考古潛質區域繪錄到附錄五中，見圖 IAAP-2 至圖 IAAP-5。在是次調查中，粉嶺北區經由地表調查、鑽探、探方發掘所發現的文物數量已列在表 8.3 中。

8.2 地表調查結果

- 8.2.1 粉嶺北需要進行地表調查之地區已於二零一零年七月內完成。本文將粉嶺北地表調查區域分為四個小區 (見附錄二，圖 SS-FLN-0)，以便本文報告之用。SS-FLN-1、SS-FLN-2、SS-FLN-3 及 SS-FLN-4 之整體地表調查結果不足以指明區域存在穩定的文化層和長期人類居住現象。在以下作出描述。

SS-FLN-1 (見附錄二，圖 SS-FLN-1、SS-FLN-1a 和 SS-FLN-1b)

- 8.2.2 本分區位處文錦渡路及上水濾水廠之間的虎地坳道旁。因為本分區內有大量有圍欄的果園及私人居所，地表調查只限於可通行之果園及民居外。
- 8.2.3 本分區含四個考古發現地點。一號地點發現有瓦片及器物底部 (見附錄四，圖 8.1)。二號地點的一處山坡外露土層中，屬於梧桐河的河流階地，此處發現一層瓦片及青花瓷殘片和青瓷殘片 (見附錄四，圖 8.2)。三號地點發現青瓷碗殘件

(見附錄四，圖 8.3)。四號地點有一個面積約 38 米乘 15 米的範圍，分佈有青花瓷殘片(見附錄四，圖 8.4)。這個四號地點曾在 2003 年的環境影響評估 (Maunsell 2003) 中被發現有一清初房屋遺蹟。

SS-FLN-2(見附錄二，圖 SS-FLN-2 和 SS-FLN-2a)

8.2.4 本分區位處文錦渡路旁洪橋新村，及上水華山村的梧桐河北岸。因為本分區內有大量有圍牆的工場及密林，地表調查只限於可通行之道路兩旁稀疏植被上。此外，本分區內大部份地面已被水泥／瀝青覆蓋，或因工程而被移平。

8.2.5 本分區含一個考古發現地點。五號地點發現有黃色布紋瓦片，可能與墓葬有關。但是並未發現可以用來判斷年代和類型的資料，所以沒有進行采集。另外，於五號地點附近有一含大量石英中礫的路塹邊坡。

SS-FLN-3 (見附錄二，圖 SS-FLN-3 和 SS-FLN-3a)

8.2.6 本分區位處梧桐河旁上水華山公立學校的周圍。分區內有大量有圍牆的農地／果園及私人居所，地表調查只限於這類土地以外的地區。現時已經廢棄的上水華山公立學校為水泥鋪面，周圍則有密林圍繞。校內並無發現考古文物。

8.2.7 本分區含兩個考古發現地點。六號地點發現有青花瓷殘片，黃色瓦片，及磚塊。但是並未發現可以用來判斷年代和類型的資料，所以沒有進行采集。在學校南端山坡上一些金塔附近的七號地點發現一片幾何菱格印紋泥質陶片(見附錄三，圖 1；也見附錄四，圖 8.5)。

SS-FLN-4 (見附錄二，圖 SS-FLN-4、SS-FLN-4a 和 SS-FLN-4b)

8.2.8 本分區位處梧桐河烏鴉落陽的對岸。本分區大部份地方的植被稀疏，但因為山坡陡峭，令部份地表調查區域缺乏安全道路通行。部份地表調查區域只能靠肉眼觀察及地勢變化來確定考古的存在。

8.2.9 本分區含兩個考古發現地點。八號地點發現有晚清的青花瓷殘片及褐色的陶片(見附錄四，圖 8.6)。九號地點發現有清朝的青花瓷殘片以及灰瓦(見附錄四，圖 8.7)。

年代

8.2.10 地表調查發現了少量的青瓷和青花瓷碎片以及一片幾何菱格印紋陶。兩個的 SS-FLN-1 二號地點和 SS-FLN-1 三號地點(見附錄四，圖 8.2、圖 8.3)發現的灰綠色釉青瓷碎片大概可以追溯到宋元時期。在 SS-FLN-1 四號地點和 SS-FLN-4 九號地點(見附錄四，圖 8.4、圖 8.7)發現的青花瓷器碎片，有的在外壁裝飾著以寫意方式繪畫的菊花紋，有的在外壁近口沿處飾的川字紋，還有的在內壁飾團菊紋。這些紋樣都能和大埔碗窯燒製的器物類近並見於《香港大埔碗窯青花瓷窯址－調查及研究》(見區 1997 彩圖 144、136、145)。該報告將這類器物斷代為清初至清中葉。

8.2.11 SS-FLN-3 七號地點發現的一片泥質幾何菱格印紋灰陶（見附錄三，圖 1；也見附錄四，圖 8.5），坯土純淨不含砂石，燒成溫度高，胎質硬度高，幾組菱格紋相互打破，為多次拍印而成。它可和香港諸多遺址早期青銅時代地層出土的泥質幾何印紋陶片比照，例如深灣 C 層（秦 1978 圖 8.17）以及西貢沙下（AMO 2005 圖版 95）。然而，幾何菱格印紋陶在新石器時代晚期至青銅時代非常流行。SS-FLN-3 七號地點發現的零丁一片陶片，其年代應屬於新石器時代晚期至青銅時代。

8.3 鑽孔及探方發掘結果

8.3.1 總體而言，各鑽孔及探方中並未見具有考古價值的遺跡。詳細的探方及鑽孔紀錄可參看附錄一，概括的粉嶺北鑽孔及探方總表可參考表 8.1 和表 8.2。可追溯到清朝的地點有兩處，即 F1c 和 F4a。以下進一步闡述之。

探方 F1c

地貌景觀

8.3.1.1 此地位於由近虎地坳的雙魚河和梧桐河的匯流處（見附錄二，圖 FLN-1）。其北面是由火成岩構成的山丘群（Cmp - 落馬洲組 米埔段，及山腳的 JTM - 大帽山組凝灰岩），而三類第四系的沉積物則形成本區的河流階地（Qa - 沖積物，Qpa - 階地沖積，Qpd - 洪積物）（土力工程處，Lai, Campbell and Shaw 1996）。F1c 是位於 Qpd 之上。

8.3.1.2 F1c 位於虎地坳一條鄉村道路旁空置的政府土地上（830514E 841723N），主水平基準以上約 5.9 米。探方長 1.7 米，寬 1 米，發掘深度為 1.16 米，發掘至風化層停止。

調查結果

8.3.1.3 L2 地層（40 - 50 厘米深，主水平基準以上約 7.7 米）出土物有青花瓷器碎片，陶罐碎片，及磚瓦碎塊（見附錄四，圖 8.8 - 圖 8.10），年代可斷為清朝之後。風化層於探方深 116 厘米時遇到（c.a. +2.0mPD）。F1c 及附近之調查結果不足以指明區域存在穩定的文化層和長期人類居住現象，所以該區域不被認為是具考古潛質區域。

探方 F4a

地貌景觀

8.3.1.4 此地位於由近虎地坳的梧桐河（北岸）的一處河流階地（見附錄二，圖 FLN-4）。其北面是由火成岩構成的山丘群（Cmp - 落馬洲組 米埔段，及山腳的 JTM - 大帽山組凝灰岩），而三類第四系的沉積物則形成本區的河流階地（Qa - 沖積物，Qpa - 階地沖積，Qpd - 洪積物）（土力工程處，Lai, Campbell and Shaw 1996）。F4a 是位於 Qpd 之上（第三階河流階地）。

8.3.1.5 F4a 位於文錦渡路旁一處空置的政府土地上 (831042E 841954N)，主水平基準以上約 9.5 米。探方長 1.4 米，寬 1.2 米，發掘深度為 1.2 米，發掘至風化層及見地下水時停止。

調查結果

8.3.1.6 L3 地層 (90 - 110 厘米深，主水平基準以上約 7.7 米) 出土物有青花瓷器碎片、白瓷碎片、陶器底、陶罐碎片 (見附錄四，圖 8.11 - 圖 8.12)，及磚瓦碎塊。風化層於探方深 115 厘米時遇到(主水平基準以上約 2 米)。

8.3.1.7 其中一件青花瓷器碎片上繪有鮮明的藍色線條(以筆尖描繪出較深及實在的藍色輪廓線條，後用較淺色的水藍色填補輪廓內部) (見附錄四，圖 8.11)。這類繪畫技巧與大埔碗窰出土的青花瓷器碎片相近(見區 1997 彩圖 55、83、105)，年代可斷為明至清中葉之間。在這片青花瓷器碎片外底繪有篆書風格的手寫印章圖案(應是“萬壽”字樣)。另一片口沿碎片的外壁佈滿寫意風格的花卉紋，疑為明代裝飾手法。

8.3.1.8 另外，L3 出土的幾個陶質器(可能是碗)底(見附錄四，圖 8.12)，有著一項共同的特徵，即，帶有相對清代瓷碗而言為高的圈足。然而，僅剩的器底部分無法判斷其類型，進而與其它材料進行交錯定年。這些器皿的器壁曾被有意識地打擊去除，保留器底和圈足，有可能用於服務其原用途以外的目的。

8.4 粉嶺北具考古潛質區域

8.4.1 整體而言，粉嶺北的地表調查顯示本區存在有新石器時代晚期至青銅時代早期、宋元以及明清代的考古文物。大部份鑽孔及探方均未見有考古意義之文物。於探方 F1c 及 F4a 出土之文物均為日用器皿及建築材料，這表明在明至清代期間這些位置曾有人居住。F1c 之調查結果不足以指明區域被認為是具考古潛質區域。

8.4.2 SS-FLN-1、SS-FLN-2、SS-FLN-3 及 SS-FLN-4 之整體地表調查結果不足以指明區域存在穩定的文化層和長期人類居住現象。單憑地表調查資料不能判斷該區域是具考古潛質區域。

8.4.3 根據可考的文物，本次調查在虎地坳西和紅橋新村發現兩個具考古潛質區域，前者可追溯至宋元時期，後者可追溯至明至清朝中期（見附錄五中圖 IAAP-2 和 IAAP-4）。另外，2003 新界東北新發展區環境影響評估報告發掘的虎地坳東和上水華山公立學校南部的區域被重新認為已知具考古潛質區域，前者可追溯至清初至清朝中期，後者可追溯至青銅時代（見附錄五中圖 IAAP-3²和 IAAP-5）。對具考古潛質區域的判斷基於地表採集到的陶片、探方發掘結果以及區域附近的河流階地地貌，在上述兩個以往未知考古區域出土的陶片可追溯至宋代至清代。

² 註意 IAAP-3 中東北方向發現的小塊具考古潛質區域位於農田旁邊，農田中發現文物。基於考古分析，具考古潛質區域應該位於田埂，而非位於文物被發現的田中間。

表 8.1 粉嶺北探方總表

探方	地表海拔高度	最大發掘深度	地貌	目前土地用途	地層					文物 / 備註
					表土	下層土		風化土	石床	
						存在考古遺存	不存在考古遺存			
F1c	c.a. +5.9mPD	116cm	河流階地	空置	L1	L2	L3	L4 L5		約在+2.7mPD (L2 - 晚清)發現青花瓷、白瓷、釉陶、瓦、磚
F2b	c.a.+18.5mPD	80cm	山丘	空置	L1			L2		
F4a	c.a. +9.5mPD	120cm	現代道路	空置	L1	L2, L3		L4		約在+8.1mPD (L2, L3 - 晚清) 發現青花瓷、釉陶、瓦、磚；L2 發現白瓷。約在+7.8mPD (L4) 地下水湧出
F4b	c.a. +7.9mPD	85cm	坡邊河流階地	空置	L1	L1		L2	L3	瓦、磚 (L1 - 現代)
F6a	c.a. +10.3mPD	70cm	河流階地	果園	L1			L2		
F6c	c.a. +11.0mPD	75cm	河流階地	空置	L1		L2	L3		
F6g	c.a. +16.5mPD	95cm +50cm(鑽探)	山坡	空置學校	L1		L2 L3 L4	L5	L6	

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F6h	c.a. +16.9mPD	96cm	山坡	空置學校	L1			L2		
F6j	c.a. +22.7mPD	95cm	山坡	空置學校	L1		L2	L3		
F7a	c.a. +8.8mPD	86cm +90cm (鑽探)	河流階地	現代道路	L1		L2 L3	L4 L5		
F8a	c.a. +8.6mPD	45cm +23cm (鑽探)	河流階地	現代電力 設施及農 地旁邊	L1		L2	L3		約在+6.6mPD (L2) 地下水湧 出

表 8.2 粉嶺北鑽孔總表

鑽孔	地表海拔高度	最大發掘深度	地貌	目前土地用途	地層					文物 / 備註
					表土	下層土		風化土	石床	
						存在考古遺存	不存在考古遺存			
F1a	c.a. +7.4mPD	160cm	河流階地	村路旁	L1		L2 L3	L4		
F1b	c.a. +8.1mPD	110cm	河流階地	村路旁	L1	L3	L2			約在+7.1mPD(L3)發現磚
F2a	c.a. +6.0mPD	60cm	山丘	空置	L1			L2		
F2c	c.a. +8.5mPD	85cm	平原	棄置農地	L1		L2	L3		
F2d	c.a. +11.3mPD	140cm	河流階地	村路旁	L1	L5	L2 L3 L4	L6		約在+10.2mPD (L5) 發現磚
F3a	c.a. +8.0mPD	70cm	山丘	空置	L1			L2		約在+7.3mPD (L3) 發現石床
F4c	c.a. +7.0mPD	80cm	河流階地	空置	L1			L2		
F5a	c.a. +9.0mPD	170cm	山坡	空置	L1		L2	L3		
F6b	c.a. +11.0mPD	120cm	河流階地	棄置農地	L1			L2		約在+9.8mPD (L3) 發現石床
F6d	c.a. +16.8mPD	115cm	山坡	空置學校	L1		L2	L3		
F6e	c.a. +15.4mPD	100cm	河流階地	山坡	L1		L2	L3		
F6f	c.a. +17.0mPD	130cm	山坡	空置學校	L1		L2	L3		
F6i	c.a. +20.0mPD	40cm	平原	空置學校				L1		
F10a	c.a. +10.4mPD	90cm	平原	空置	L1	L2				約在+9.6mPD (L2) 發現瓦

表 8.3 粉嶺北發現文物數量[^]

區域	鑽探/探方/地表調查	工作地點	地層	幾何紋陶	青瓷	青花瓷	白瓷	帶釉器皿	陶片	瓦	磚	現代器皿	不可識別
粉嶺北	鑽探	F2d	L5	0	0	0	0	0	0	0	1	0	0
粉嶺北	探方	F1c	L2	0	0	1	0	1	6	4	30	0	0
粉嶺北	探方	F4a	L1	0	0	0	0	0	0	0	0	1	0
粉嶺北	探方	F4a	L2	0	0	2	5	0	0	2	0	0	1
粉嶺北	探方	F4a	L3	0	0	6	0	0	18	16	0	0	1
粉嶺北	探方	F4b	L1	0	0	0	0	0	0	4	9	0	0
粉嶺北	地表調查	SSFLN1	1 號地點	0	0	0	1	0	0	2	0	0	0
粉嶺北	地表調查	SSFLN1	2 號地點	0	2	1	0	0	0	1	0	0	0
粉嶺北	地表調查	SSFLN1	3 號地點	0	2	0	0	0	0	0	0	0	0
粉嶺北	地表調查	SSFLN1	4 號地點	0	0	4	0	0	0	0	0	0	0
粉嶺北	地表調查	SSFLN3	7 號地點	1	0	0	0	0	0	0	0	0	0
粉嶺北	地表調查	SSFLN4	8 號地點	0	0	1	0	2	0	0	0	0	0
粉嶺北	地表調查	SSFLN4	9 號地點	0	0	8	0	0	0	3	0	0	0
粉嶺北總和 136				1	4	23	6	3	24	32	40	1	2

[^] 收集得到的文物與現場調查見到的文物數量不一致，收集的文物主要按照它們在考古學上的重要性決定。

9 調查結果 – 坪輦/打鼓嶺

9.1 一般描述

9.1.1 擬新發展之坪輦/打鼓嶺地區為一盆地，北面界臨深圳河，東、南、西三向為群山環抱。一些丘陵座落於其西面，其中包括杉山（主水平基準以上約 110 米）；其南面則是馬頭嶺（主水平基準以上約 130 米）；長山（主水平基準以上約 160 米），禾徑山（主水平基準以上約 290 米）與黃茅坑山（主水平基準以上約 220 米）位於其東面。盆地內的地形由河流、山丘、平原與河流階地構成。兩條東西流向的主要河流貫穿調查區，即平原河（或稱恒河，起源於坪洋）以及梧桐河（起源於八仙嶺和軍地）。一些平均海拔在主水平基準以上約 30 米左右的小山丘零星地分散在盆地內的平原上，如打鼓嶺等。

9.1.2 根據香港地質調查上水編號 三：基岩和表土地質圖（Lai, Campbell and Shaw, 1996）所錄，該區的自然表土包括沖積物 [Qa]（分選良好至中等的粘土/粉砂、砂和礫石）、階地沖積物[Qpa]（分選良好至中等的礫質、沙質粘土/粉沙）以及坡積、洪積物 [JTM]（未分選，夾中礫和漂礫的礫質粘土質粉砂/砂），形成時期在更新世到全新世之間；而該區的基岩則是粗火山灰晶屑凝灰岩（未分），形成於上侏羅統至下白堊統之間。

9.1.3 為評估該區的考古潛質以及計劃發掘之探坑和鑽孔的地點，我們於發掘之前，進行過一系列的地表調查。於調查發掘期間，我們在這一地區共發掘探坑 16 個，鑽探鑽孔 17 個，累計發掘面積 26 平方米（表面）。

9.1.4 基於對坪輦/打鼓嶺區的桌面研究、地表調查與調查發掘，已將該區具考古潛質區域繪錄到附錄五中，見圖 IAAP-6 至圖 IAAP-7。在是次調查中，坪輦/打鼓嶺區經由地表調查、鑽探、探方發掘所發現的文物數量已列在表 9.3 中。

9.2 地表調查結果

9.2.1 在 2010 年 8 月期間，我們已全面執行既定的坪輦/打鼓嶺地區地表調查。方便陳述起見，將整個地區劃分為 6 個分區（見附錄二，圖 SS-TKL-0），命名為 SS-TKL-1 至 SS-TKL-6。SS-TKL-3 四號地點可能是清代至現代的居住地，其他 SS-TKL-1、SS-TKL-3 及 SS-TKL-5 之地表調查結果不足以指明區域存在穩定的文化層和長期人類居住現象。各分區地表調查結果現述如下：

SS-TKL-1（見附錄二，圖 SS-TKL-1 和 SS-TKL-1a）

9.2.2 該分區位於高埔村附近、流水響道旁，為一政府所有的小山丘。村屋環繞山腳，圍欄屏障整個分區。一號地點發現有少量可定年至清代的青花瓷片（見附錄四，圖 9.1）。

SS-TKL-2（見附錄二，圖 SS-TKL-2）

9.2.3 該分區位於坪輦路西側，從沙頭角公路一直延伸到香港浸會園以西，覆蓋包括山丘及河流階地等地貌所構成的一片土地。這個分區很大程度上被用作停車場

或開放式倉庫的私有土地所阻隔，可通行性低。只有少量空置土地、果園可供調查。沒有發現具考古價值的文物和遺蹟。

SS-TKL-3 (見附錄二，圖 SS-TKL-3、SS-TKL-3a 和 SS-TKL-3b)

- 9.2.4 該分區接近上山雞乙村和下山雞乙村。它由平原、山丘及河流階地組成；草被和樹木茂密，覆蓋絕大部分地表。二號地點位於用作野戰場的一片空曠地，此處發現少量陶片（見附錄四，圖 9.2）。山腳下的三號地點亦發現一片青花瓷片（見附錄四，圖 9.4）和陶片。四號地點位於河流階地上，北面依山，地表分佈著密集的文物（每平方米約 70-100 件）。文物包含大量陶片（見附錄四，圖 9.3）、布紋瓦（見附錄四，圖 9.6），以及可能定年到清代的青花瓷片。有鑒於文物分佈如此密集，四號地點相信是一個居住遺址。

SS-TKL-4 (見附錄二，圖 SS-TKL-4)

- 9.2.5 該分區包括打鼓嶺農場和大埔田。打鼓嶺農場以及其北面果園地處平原。現代建築物及路徑很大程度上掩蓋地表，因此，地表調查不能夠辨認任何具考古意義的文物或遺蹟。大埔田地處河流階地，然而，近期河道拉直工程已改變河流階地沿岸地貌。因此，未能觀察到具有考古意義的文物及遺蹟。

SS-TKL-5 (見附錄二，圖 SS-TKL-5、SS-TKL-5a 和 SS-TKL-5b)

- 9.2.6 該分區由坪輦村、隔田村和坪洋公立學校及學校北面小山丘所組成。地貌構成包括山丘和河流階地，草被和樹木覆蓋大部分空地。五號地點位於隔田東面的一座小山丘上，此處發現大量瓦片和少量鄉村器皿碎片與青花瓷片（見附錄四，圖 9.7），年代應屬清代。空置的坪洋公立學校因校門上鎖而不得進入。北面山丘上的六號地點發現有類似於鄉村器皿中甕型態之碎片，但碎片缺乏年代特徵。

SS-TKL-6 (見附錄二，圖 SS-TKL-6)

- 9.2.7 該分區位於平原河北岸的瓦窰下。它由山坡及河流階地組成。植被茂密，覆蓋空地地表，因而未能觀察到具有考古意義的文物和遺蹟。

年代

- 9.2.8 是次地表調查採集到少量可定年至清代或更早的青花瓷片。與碗窰遺址已發表材料對比，一號地點（見附錄四，圖 9.1）和四號地點（見附錄四，圖 9.5）所採集的青花反映本地風格，可定年到清代。三號地點發現的口沿碎片（見附錄四，圖 9.4），其外壁上有著精緻的青花白描，構成帶有翼狀裝飾的卷曲，據推測應屬於清代之前的時期。在五號地點採集到的碗底（見附錄四，圖 9.7）內、外壁皆施滿釉。內底飾以兩圈弦紋，並在中央部分繪有纏枝花紋；外壁點染密集筆觸。根據碗窰的研究（區 1997），這種風格很應可定年至清代早至中期。

9.3 鑽孔及探方發掘結果

9.3.1 總體而言，各鑽孔及探方中並未見俱有考古價值的遺蹟。詳細的探方及鑽孔紀錄可參看附錄一，概括的探方及鑽孔結果分別呈現於表 9.1 和表 9.2 之中。三個位置發現可定年到清代的遺存，即 P8c、P8d 與 P7b。以下進一步闡述之。

鑽孔 P7b

地貌景觀

9.3.1.1 P7b (834249E 843074N) 地處平原，位於一處政府所有的空置果園 (見附錄二，圖 TKL-7)，主水平基準以上約 11.4 米。鑽孔直徑 10 厘米，鑽探至 1.37 米至風化層停止。

9.3.1.2 P7b 周圍地表觀察到密集的陶片及青花瓷片分布 (見附錄四 9.8)。P7b 中能辨認出 5 層堆積。L3 及 L4 中發現少量陶片，L3 中也發現瓦片 (見附錄四 8.3.1.2b)³；然而，這些陶片過於細碎，難以定年。

9.3.1.3 P7b 周邊之鑽孔調查結果不足以指明區域存在穩定的文化層和長期人類居住現象，所以 P7b 不被認為是具考古潛質區域。

探方 P8c

地貌景觀

9.3.1.4 P8c (834485E 843197N) 位於隔田一座山丘之西向山坡，一處政府所有的空地上 (見附錄二，圖 TKL-8)，主水平基準以上約 15.5 米。探方長 1 米，寬 1 米，深度及 1.12m，發掘至風化層停止。

調查結果

9.3.1.5 探方 P8c 中能辨認出 5 層堆積，包括兩層現代地層 (L1 和 L2)，一層很可能屬於清代的地層 (L3)，一層位於風化層之上的過渡層 (或淋溶層，L4) 以及風化層 (L5)。L2 發現的一隻青花瓷碗 (見附錄四，圖 9.11)。少量陶片，瓦片及青花瓷片發現於 L3 (見附錄四，圖 9.10)。

9.3.1.6 L2 發現的一隻青花瓷碗 (見附錄四，圖 9.11) 伴隨現代塑膠出土，雖然如此，它卻能與 1980 年代碗窖採集到的，有著公元 1800-1700 年 (上限) 熱釋光測年 (林 2000 152) 的另一隻碗進行對比。L2 出土的青花瓷碗除了外壁飾以芝草紋，還在內底中央書有一劃。筆觸繪以淺灰藍色而底色則是一層薄的灰釉。內底及外底一圈無釉，反映本器物以疊燒方法燒製。

9.3.1.7 L3 發現的青花瓷可以分成兩類 (見附錄四，圖 9.12)。一類與 L2 出土的碗在紋飾和燒製方法上十分接近，然筆觸呈現灰沉的綠色而底色灰綠。第二類內、

³ 收集得到的文物與現場調查見到的文物數量不一致，收集的文物主要按照它們在考古學上的重要性決定。

外壁皆施以滿釉，釉層相對較厚，花卉紋筆觸呈鮮明的藍色，底色較為亮，胎質較白，應可和上碗窯製品對比（蔣 1973 14）。滿釉的青花碗應是採用匣钵盛載，單個進行燒製，有別於能夠大批量生產的疊燒方法，故而被認為是針對上層消費者而生產的奢侈商品（曾 2000 122）。

探方 P8d

地貌景觀

- 9.3.1.8 P8c (834644E 843 185N) 位於坪輦隔田兒童遊樂場後方（見附錄二，圖 TKL-8），一座山丘東向山坡的底部，主水平基準以上約 15.3 米，此處空地為政府所有。探方長 1.2 米，寬 1.2 米，深度及 0.65 米，發掘至風化層停止。

調查結果

- 9.3.1.9 探方 P8d 中能辨認出 2 層堆積，包括一層可能屬於清代晚期的地層(L1) 以及風化層(L2)。L1 出土大量青花(見附錄四，圖 9.13)、陶片和陶質建築材料(見附錄四，圖 9.14)。
- 9.3.2 根據《香港大埔碗窯青花瓷窯址－調查及研究》(區 1997) 一書所錄的類似紋樣，L1 出土的青花（附錄四，圖 9.13）最遲可定年至清代晚期。這些紋樣包括牽牛花紋、川字紋(附錄三，圖 2)、過牆龍紋(附錄三，圖 3)及福字紋(見附錄三，圖 4)。值得一提的是，除了上述碗窯遺址的研究之外，其它研究顯示，福建一些窯口早在清初雍正年間便已生產帶有過牆龍紋的青花瓷（葉、林 1993 297）。此外，根據碗窯研究的分期(區 1997 彩圖 194)，L1 出土一件帶有花瓣狀口沿的油燈(附錄四，圖 9.13)，應可定年到清代中期；而 L1 出土的另一片牽牛花紋碎片，則可定年到清代早中期(附錄四，圖 9.13 區 1997 圖 66)。L1 出土還出土一內、外壁皆施滿釉的碗底(附錄四，圖 9.13)：內底飾以兩圈弦紋，並在中央部分繪有纏枝花紋(附錄三，圖 5)；外壁有點染筆觸，與 SS-TKL-5 五號地點發現的那件碗底（附錄四，圖 9.7）類似，應可定年至清代早至中期。

9.4 坪輦/打鼓嶺具考古潛質區域

- 9.4.1 擬新發展之坪輦/打鼓嶺地區 6 個分區的地表調查，辨認出有三處存在清代考古遺存，即 SS-TKL-1、SS-TKL-3 及 SS-TKL-5。但是，只有 SS-TKL-3 中的四號地點有可能是一處居住遺址。
- 9.4.2 SS-TKL-3 中的四號地點位於其北方小山的河流階地，有較為密集的文物（70-100 件/平方米）散布在地面。文物包括有大量可能是清代的陶片及青花瓷和有紋印的瓦片。根據如此高密度的文物發現以及地表文物的混合散布，四號地點可能是清代至現代的居住地。因此，該地點被認為是具考古潛質區域。
- 9.4.3 基於可斷代的文物，在上山雞乙和下山雞乙、隔田村附近有具考古潛質區域。這兩個區域可追溯至清代（見附錄五中圖 IAAP-6 和 IAAP-7）。

- 9.4.4 調查發掘及鑽探在大多數地點沒有觀察到具考古意義的遺蹟。雖然如此，P8c、P8d 以及 P7b 的出土物包含日用器皿及建築材料，表明在清代初期至晚期之間這些地點附近曾有人居住。然而，元下村的 P7b 鑽孔發現支離破碎，曾受到干擾，所以未能提供年代信息。隔田的 P8c 及 P8d 探方中發現穩定文化層，因此被認作是具考古潛質區域。
- 9.4.5 對兩個具考古潛質區域的判斷基於地表採集到的陶片、探方發掘結果以及區域附近的河流階地地貌及穩定文化層，在上述兩個具考古潛質區域出土的陶片可追溯至清代。

表 9.1 坪輦/打鼓嶺探方總表

探方	地表海拔高度	最大發掘深度	地貌	目前土地用途	地層					文物 / 備註
					表土	下層土		風化土	石床	
						存在考古遺存	不存在考古遺存			
P1a	c.a. +15.6mPD	100cm	山丘	空置	L1		L2	L3		
P2a	c.a. +14.5mPD	110cm	山丘	空置	L1		L2	L3		
P2b	c.a. +15.6mPD	110cm	山坡	空置	L1		L2 L3 L4	L5		在 L1 發現現代花盆碎片
P3b	c.a. +14.7mPD	80cm	山丘	空置	L1		L2 L3	L4 L5		
P4b	c.a. +15.1mPD	130cm	山丘	空置	L1		L2 L3 L4	L5		
P4c	c.a. +15.5mPD	104cm	山坡	空置	L1		L2	L3		
P5a	c.a. +16.9mPD	110cm	山丘	空置	L1		L2 L3	L4		
P6a	c.a. +11.5mPD	60cm	村落	空置	L1		L2	L3		在 L2 發現混凝土塊
P6b	c.a. +9.3mPD	120cm +40cm (鑽探)	河流階地	農田	L1		L2L3 L4	L5		
P6c	c.a. +12.0mPD	106cm	平原	果園	L1	L1	L2	L3		在 L1 發現混凝土塊、玻璃瓶、陶、磚
P7a	c.a. +13.0mPD	108cm	平原	果園	L1		L2 L3	L4		在 L1 發現混凝土塊、玻璃

										碎片
P8c	c.a. +15.5mPD	112cm	山坡	空置	L1	L2 L3	L4	L5		在 L2 發現 青花瓷以 及塑膠； 在 L3 發現 青花瓷、 瓦、陶片
P8d	c.a. +15.3mPD	65cm	山坡	空置	L1	L1		L2		在 L1 發現 瓦、磚、 瓷、陶片
P9b	c.a. +19.5mPD	90cm	山丘	空置	L1		L2	L3 L4		
P9e	c.a. +21.7mPD	80cm	山丘	空置	L1		L2, L3	L4		
P11a	c.a. +24.5mPD	70cm	山丘	空置	L1			L2		

表 9.2 坪輦/打鼓嶺鑽孔總表

鑽孔	地表海拔高度	最大發掘深度	地貌	目前土地用途	地層					文物 / 備註
					表土	下層土		風化土	石床	
						存在考古遺存	不存在考古遺存			
P1b	c.a. +15.1mPD	25cm	河流階地	空置	L1					
P3a	c.a. +15mPD	45cm	山坡	果園	L1			L2		
P3c	c.a. +15mPD	110cm	山坡	空置	L1		L2	L3		
P4a	c.a. +16mPD	30cm	山丘	空置	L1			L2		
P5b	c.a. +10.9mPD	145cm	河流階地	農田	L1		L2	L3		
P5c	c.a. +11.9mPD	140cm	河流階地	空置	L1		L2	L3		
P7b	c.a. +11.4mPD	137cm	平原	果園	L1	表採, L3 L4	L2	L5		在地表發現青花瓷；在 L3 和 L4 發現陶片，在 L3 發現瓦
P8a	c.a. +16.8mPD	142cm	山丘	果園	L1	L2	L3	L4		在 L2 發現白瓷
P8b	c.a. +16.8mPD	140cm	農田	空置	L1			L2		
P8e	c.a. +15.8mPD	110cm	Hill foot	空置	L1			L2		

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P9a	c.a. +19mPD	23cm	山坡	空置	L1					
P9c	c.a. +19.9mPD	125cm	山丘	空置	L1		L2	L3		
P9d	c.a. +15.5mPD	135cm	山丘	空置	L1			L2		
P10a	c.a. +14mPD	15cm	平原	空置	L1			L2		
P11b	c.a. +21mPD	140cm	山丘	空置	L1		L2	L3 L4		
P12c	c.a. +13mPD	27cm	平原	農田	L1					
P13c	c.a. +14.8mPD	39cm	平原	空置	L1		L2			在 L2 發現 布塊與玻 璃碎片； L2 之下發 現一層硬 面

表 9.3 坪輦/打鼓嶺發現文物數量[^]

區域	鑽探/探方/地表調查	工作地點	地層	幾何紋陶	青瓷	青花瓷	白瓷	帶釉器皿	陶片	瓦	磚	現代器皿	不可識別
坪輦/打鼓嶺	鑽探	P7b	地表採集	0	0	3	0	0	0	0	0	0	0
坪輦/打鼓嶺	鑽探	P7b	L3	0	0	0	0	0	0	6	0	0	0
坪輦/打鼓嶺	鑽探	P8a	L2	0	0	0	1	0	0	0	0	0	0
坪輦/打鼓嶺	探方	P2a	地表採集	0	0	0	0	0	0	0	0	0	1
坪輦/打鼓嶺	探方	P2b	L1	0	0	0	0	0	0	0	0	7	0
坪輦/打鼓嶺	探方	P6c	L1	0	0	0	0	0	0	0	2	3	0
坪輦/打鼓嶺	探方	P8c	L1	0	0	0	0	0	2	1	0	0	0
坪輦/打鼓嶺	探方	P8c	L2	0	0	1	0	0	0	0	0	0	0
坪輦/打鼓嶺	探方	P8c	L3	0	0	7	0	0	14	2	0	0	0
坪輦/打鼓嶺	探方	P8d	L1	0	0	40	0	15	1	7	1	0	0
坪輦/打鼓嶺	地表調查	SSTKL1	Spot 1	0	0	2	0	0	0	0	0	0	0
坪輦/打鼓嶺	地表調查	SSTKL3	Spot 2	0	0	0	0	0	3	0	0	0	0
坪輦/打鼓嶺	地表調查	SSTKL3	Spot 3	0	0	1	0	0	1	0	0	0	0
坪輦/打鼓嶺	地表調查	SSTKL3	Spot 4	0	0	7	0	0	15	8	0	0	0
坪輦/打鼓嶺	地表調查	SSTKL5	Spot 5	0	0	1	0	0	0	0	0	0	0
坪輦/打鼓嶺總和 152				0	0	62	1	15	36	24	3	10	1

[^] 收集得到的文物與現場調查見到的文物數量不一致，收集的文物主要按照它們在考古學上的重要性決定。

10 結論

10.1.1 各新發展區存在一個考古物資遺存出現位置上的普遍模式，即它們都位於河流兩岸的山坡梯田 Qpd 堆積（例如位於河上鄉的 K14a，近虎地坳的 F1c 和 F4a，與上水華山公立學校附近的 SS-FLN-3，近上山雞乙附近的 SS-TKL-3，隔田村的 P8c 和 P8d 等等）。

10.1.2 以往在上水華山的調查顯示，該遺址的範圍並沒有延伸到梧桐河的河邊，而考古發現存在於接近山腳/邊緣的河階的 Qpd 堆積上。

具考古潛質區域

10.1.3 根據可考的文物，本次報告一共有七個具考古潛質區域。其中本次報告發現的四個具考古潛質區域包括粉嶺的虎地坳西、紅橋新村、和坪輦/打鼓嶺的上山雞乙和隔田村（見附錄五），這四個區域可分別追溯至宋元和明清時期。另外有三個具考古潛質區域被重新認定，包括古洞北的河上鄉、粉嶺的虎地坳東和上水華山公立學校以南的區域（見附錄五），根據可考的文物，這幾個區域可分別追溯至宋元和青銅時代。以下是發掘總結。

明清時期(公元 1368 - 1911 年)

10.1.4 考古發現可追溯到明清時期。許多從 F4a，P8c 和 P8d 以及從地表調查中發現的那些青花瓷片，可與大埔碗窰所發現的進行對比，其中包含了清代早、晚期特徵。也有一些青花瓷片含有類似於明代的裝飾風格。具有這一時期的具考古潛質區域可見於附錄五中的圖 IAAP-1，圖 IAAP-3，圖 IAAP-4，圖 IAAP-6 和圖 IAAP-7。

宋元時期(公元 960 - 1368 年)

10.1.5 K14a 中有一層的含青瓷和黑釉器的地層，而 SS-FLN-1 的地點 2 和地點 3 亦見能鑑定為宋元文物的青瓷碗殘片。但是由於缺乏相關的考古遺存，出土材料並不能明確辨認出一個有力的宋元時序地層關係，但結果亦顯示，在宋元時期，這些地區有人類活動的跡象。具有這一時期的具考古潛質區域可見於附錄五中的圖 IAAP-1 和圖 IAAP-2。

新石器時代晚期/青銅時代早期(公元前 2000 年 - 公元前 1000 年)

10.1.6 在 SS-FLN-3 地點 7 發現的幾何印紋陶片是香港地區新石器時代晚期至青銅時代考古遺址常見的式樣。結合以前在這一區域的考古工作，這一發現再次表明了上水華山的山坡地帶存在著新石器時代晚期至青銅時代的考古遺存。

10.1.7 1978 年，Lovelace 在 SS-FLN-3 地點 7 附近山坡發掘出土了 53 片陶片(Lovelace 1978)。在 1986 年進行的一次考古調查還在主水平基準 10 和 30 米之間的山坡地表收集了 46 片陶片（Peacock 與 Nixon 1988 第一部第三卷 頁 8）。

- 10.1.8 這兩次考古工作中發現的陶片包括有可以追溯到新石器時代晚期的幾何紋硬陶和夾砂陶（Peacock 與 Nixon 1988 第一部第三卷 頁 8）。此外，古物古蹟辦事處 2000 年在梧桐河邊的發掘結果（AMO 2000）顯示，低窪地帶不存在這一時期的考古發現。
- 10.1.9 因此，有理由相信，新石器時代晚期至青銅器時代的考古遺存可能只存在於山坡及階地地帶（Peacock 與 Nixon 1988 第一部第三卷 頁 8）。這一時期的具考古潛質區域可見於附錄五中的圖 IAAP-5。
- 10.1.10 其餘的考古調查地區未見考古遺物或遺跡，因此沒有考古價值。
- 10.1.11 本次調查中的探方及鑽孔位置均在新發展區中的政府土地上進行。至於新發展區中私人土地上的考古潛質，需要在詳細發展設計前進行評估。

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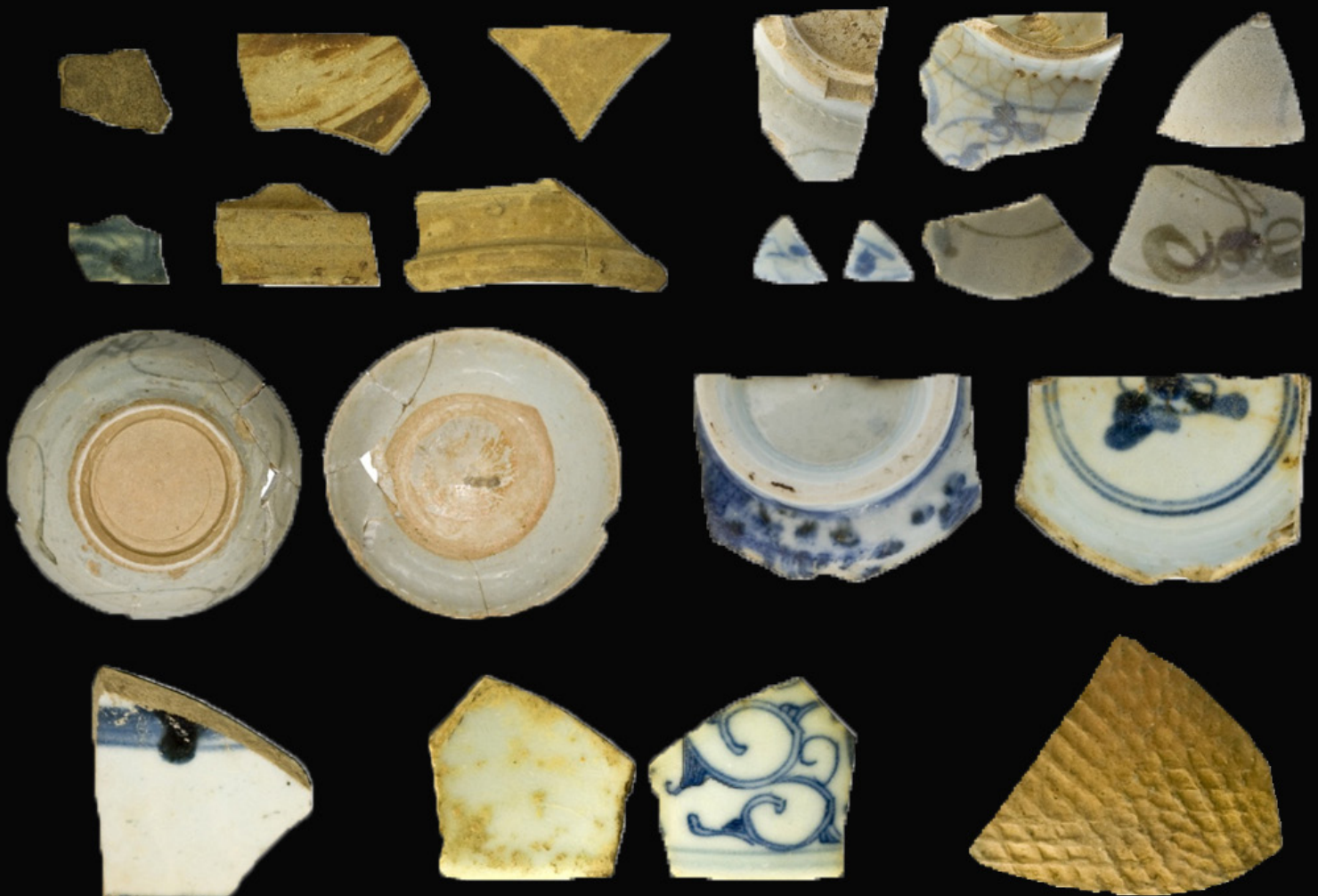
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Contract No. FL/2010/01

North East New Territories New Development Areas Planning and Engineering Study



Contract No. FL/2010/01

**North East New Territories New
Development Areas
Planning and Engineering Study –
Archaeological Field Survey**

Final Report

June 2012

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Abbreviation

AH	Auger Hole
AMO	Antiquities & Monuments Office
CEDD	Civil Engineering & Development Department
FLN	Fanling North
KTN	Kwu Tung North
mPD	Hong Kong Principal Datum in meter
NDA	New Development Area
PC/TKL	Ping Che/Ta Kwu Ling
Qa	Quaternary alluvium
Qpa	Quaternary Pleistocene alluvium
Qpd	Quaternary Pleistocene debris
SC	Surface Collection
SS	Surface Scanning
TP	Test Pit

1 INTRODUCTION

1.1 Background

1.1.1 This report presents the results of archaeological survey conducted at proposed New Development Areas (NDAs), Kwu Tung North (KTN), Fanling North (FLN) and Ping Che / Ta Kwu Ling (PC/TKL) of North East New Territories, identifying archaeological resources after desktop research and fieldworks conducted on the proposed area.

1.2 Scope of Archaeological Survey

1.2.1 The scope of the Archaeological Survey covers the 100 metres expanded from the boundary of the NDAs and associated works.

1.2.2 118 ha. in the NDAs has been field scanned in the archaeological survey areas to identify archaeological deposits on the surface.

1.2.3 The total numbers of auger holes and test pits conducted and completed in this archaeological survey are 56 and 51 respectively, these pits and holes were dug and drilled at government lands. The field survey was conducted between 17 June and 7 October 2010.

1.3 Objectives

1.3.1 The followings are the objectives of the Archaeological Field Survey, in accordance with the requirements set out in Specification and Appendix B (Guidelines for Archaeological Impact Assessment) of Contract No. FL/2010/01 and Annexes 10 and 19 of the Technical Memorandum of EIAO, (Cap.499), S.16:

- *To identify any previously unknown archaeological sites (i.e. sites not listed as Sites of Archaeological Interest by AMO) affected by the proposed works; and*
- *To submit a report containing all the data and results of the Field Survey.*

1.4 The Archaeological Team

1.4.1 The archaeological field survey was conducted by AECOM's archaeological team. The team consists of the following members:

- Project Director: Mr Josh Lam
- Team Leader and Site Agent: Mr. Steven Ng
- Licensed Archaeologist: Mr. WANG Wenjian
- Senior Archaeologist: Ms. LIU Mao
- Archaeologist: Mr. Patrick Lai and Ms. Kathy Chan

- Field Assistant: Mr. Siu Ming Wa, Mr. Mike Shek Kai Ming and AECOM technician team
- Administration Staff: Mrs. Gas Chung
- Land Surveyor: Qualified Land Surveyor

2 HERITAGE LEGISLATION AND STANDARDS

2.1 Antiquities and Monuments Ordinance (Cap. 53)

- 2.1.1 The Antiquities and Monuments Ordinance provides the statutory framework for the preservation of objects of historical, archaeological and palaeontological interest.
- 2.1.2 The Ordinance contains the statutory procedures for the Declaration of Monuments. Under the Ordinance, monument means a place, building, site or structure which is declared to be a monument, historical building, archaeological or palaeontological site or structure because of its historical, archaeological or palaeontological significance under section 3 of the Ordinance.
- 2.1.3 Under section 6 and subject to subsection (4) of the Ordinance, the following acts are prohibited in relation to certain monuments, except under permit granted by the Secretary for Development:
- *To excavate, carry on building works, plant or fell trees or deposit earth or refuse on or in a proposed monument or monument; or*
 - *To demolish, remove, obstruct, deface or interfere with a proposed monument or monument*
- 2.1.4 The discovery of an Antiquity, as defined in the Ordinance, must be reported to the Antiquities Authority, or a designated person. The Ordinance also provides that, the ownership of every relic discovered in Hong Kong after the commencement of this ordinance shall vest in the Government from the moment of discovery. The Authority on behalf of the Government may disclaim ownership of the relic.
- 2.1.5 No archaeological excavation can be carried out by any person, other than the Authority and the designated person, without a licence issued by the Authority. A licence will only be issued if the Authority is satisfied that the applicant has sufficient scientific training or experience to enable him to carry out the excavation and search satisfactorily, is able to conduct, or arrange for, a proper scientific study of any antiquities discovered as a result of the excavation and search, and has sufficient staff and financial support.

2.2 Environmental Impact Assessment Ordinance (Cap. 499)

- 2.2.1 Schedule 1 Interpretation of the EIAO defines “Sites of Cultural Heritage” as “an antiquity or monument, whether being a place, building, site or structure or a relic, as defined in the Antiquities and Monuments Ordinance and any place, building, site, or structure or a relic identified by the Antiquities and Monuments Office to be of archaeological, historical or palaeontological significance”.

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

2.3.1 The criteria and guidelines for evaluating and assessing impacts are listed in Annexes 10 and 19 of the EIAO-TM respectively. The criteria for evaluating impact on sites of cultural heritage include:

- The general presumption in favour of the protection and conservation of all sites of cultural heritage because they provide an essential, finite and irreplaceable link between the past and the future and are points of reference and identity for culture and tradition; and
- Adverse impacts on sites of cultural heritage shall be kept to an absolute minimum.

3 GEOLOGICAL BACKGROUND

3.1 KTN Area

- 3.1.1 The solid geology of KTN area mainly consists of two types of bedrock (see **Figure GM-KTN** in **Appendix F**): the upland sedimentary in the north and volcanic bedrock in the west. The metamorphosed sandstone with graphite schist and phyllite in upland terrain in Ho Sheung Heung, Fung Kong, Pak Shek Au and Shek Tsai Leng, and metamorphosed sandstone with metacglomerate and phyllite in the upland terrain of Ma Tso Lung valley. Pak Shek Au is the bedrock of Lapilli lithic-bearing coarse ash crystal tuff.
- 3.1.2 Covering of bedrocks are alluvial and colluvial materials of coarse sand, sandy soil, loam, silt etc, which are dated to late Pleistocene and early Holocene. These material formed terraces, flood plains and valleys.
- 3.1.3 The floodplains are marked as Qa and terraces are marked as Qpa in 20,000 geological map (Geotechnical Control Office 1988). The topography of these alluvial deposits are lower and higher alluvial terraces, stepped level-to gently slope with steep slopes mainly between terrace levels at Ma Tso Lung and Fung Kong (see **Figure GM-KTN** in **Appendix F**).

3.2 FLN Area

- 3.2.1 The bedrock of FLN area consists of Lapilli lithic-bearing coarse ash crystal tuff (see **Figure GM-FLN** in **Appendix F**). Covering of bedrocks are alluvial and colluvial materials of coarse sand, sandy soil, loam, silt etc, which are dated to late Pleistocene and early Holocene. The main alluvial area in FLN is a river plain of Ng Tung River.
- 3.2.2 The deposit of alluvium occurs either as raised terraces and floodplain. The floodplains are marked as Qa and terraces are marked as Qpa in 20,000 geological map (Geotechnical Control Office 1989), they occur in the major valleys and are recognised by their slightly raised elevation and small escarpments which are generally adjacent to present day Ng Tung River (Geotechnical Control Office 1988: 17, 28, Table 3.1) (see **Figure GM-FLN** in **Appendix F**).

3.3 PC/TKL Area

- 3.3.1 The solid geology of the PC/TKL area consists of a sequence of Upper Jurassic to Lower Cretaceous volcanic bed rock, which consists of Lapilli lithic-bearing coarse ash crystal tuff (see **Figure GM-TKL** in **Appendix F**). Covering of bedrocks are alluvial and colluvial materials of coarse sand, sandy soil, loam, silt etc, which are dated to Late Pleistocene and early Holocene. The main alluvial area in PC/TKL is a river plain of Ping Yuen River.
- 3.3.2 The deposit of alluvium occurs either as raised terraces and floodplain. The floodplains are marked as Qa and terraces are marked as Qpa in

20,000 geological map (Geotechnical Control Office 1989), they occur in the major valleys and are recognised by their slightly raised elevation and small escarpments which are generally adjacent to present Ping Yuen River.

- 3.3.3 Material forms broad floodplains with local fan deposits upslope. The topography of these alluvial deposits is lower and higher alluvial terraces, stepped level-to gently slopes sloping with steep slopes between terrace levels mainly occur in north Ping Che/Ta Kwu Ling, areas south to Ha Shan Kai Wat and Wang Leng (see **Figure GM-TKL** in **Appendix F**).

4 ARCHAEOLOGICAL BACKGROUND

- 4.1.1 The desktop research is based on currently available archaeological information from AMO libraries, published and unpublished archaeological survey reports from academic sources relevant to the NDAs.
- 4.1.2 Prof. S.G. Davis (1961) mentioned that Dr. C.M. Heanley had found celts in Sheung Shui and Fanling between 1920s and early 1930s, but the exact location of the findings is not clearly understood.
- 4.1.3 The Archaeological Team of the University of Hong Kong has published an archaeological map indicating the existence of Neolithic stone implement or pottery has been found near Tai Tong Wu, Man Uk Pin, and San Tsuen of Sha Tau Kok Town to the east of Ping Che/Ta Kwu Ling (PC/TKL) (Bard 1967).
- 4.1.4 Mr. Polk, a member of Archaeological Team of University of Hong Kong, has identified Hung Leng Site of Archaeological Interest in 1959, where Bronze Age hard geometric vessel, Double F shards and probably Six dynasty shards were collected (Peacock and Nixon 1988). The site was re-surveyed in 1998, but no more archaeological findings have been recovered.
- 4.1.5 The First (1984 to 1986) and Second (1997 to 1998) Territory-Wide Archaeological Survey organised and coordinated by the AMO identified no site of archaeological interest in the NDAs.
- 4.1.6 Po Leng Site of Archaeological Interest outside the FLN NDA recovered Tang to Song dynasty and late Qing dynasty materials in 1999.
- 4.1.7 An archaeological investigation was undertaken as part of the EIA Study for the Sheung Shui to Lok Ma Chau Spur Line (SSLMCSL), which is partly located within the KTN NDAs. A fragment of Song dynasty bowl was identified at the area to the south of Ho Sheung Heung, but the lack of other associated diagnostic Song dynasty materials or features suggested that the material does not represent an in situ deposit (Binnie Black and Veatch 2001).
- 4.1.8 An archaeological survey undertaken at Ping Che in 2000 has recovered Ming to Qing dynasty building materials through surface collection and Song dynasty ceramics were identified in test pit excavation in Ping Che Kau Tsuen (HKIA 2000).
- 4.1.9 Sheung Shui Wa Shan Site of Archaeological Interest was identified in 1977 near Ng Tung River at FLN NDA, where Bronze Age hard geometric shards were identified (Loverlace 1978). Another archaeological survey in 2000 confirmed that the site boundary of Sheung Shui Wa Shan Site of Archaeological Interest does not reach the river channelised area (AMO 2000).
- 4.1.10 An Environmental Impact Assessment conducted in 2003 (Maunsell 2003) has thoroughly investigated the archaeology potential within the

NDA. In KTN NDA, Fung Kong and Ho Sheung Heung has recovered Late Bronze Age materials such as Double F pattern shards, as well as Song to Qing dynasties materials such as celadon shards, roof tiles and blue-and-white porcelain fragments. Two fragments of Bronze Age net pattern shards were discovered at Ha Shan Kai Wat, and Song celadon shards were also recovered at Kwu Tung, Ma Tso Lung, Yin Kong and Ha Shan Kai Wat.

5 HISTORICAL BACKGROUND

5.1 General History of NDAs

Early history to middle historical period

- 5.1.1 Clues of human occupation to the Study Area can be found in historic textual records such as *Shiji* (史記) and *Hanshu* (漢書) written in the first to second century A.D.. These records describe that Yue (越) ethnic groups (also called “Hundreds of Yue” (百越)) scattered around in south China. Such ethnic groups are comprised by different tribes bearing various surnames and can be differentiated from the Han ethnic group who lived in central China in terms of physical characteristics, language, and folklore.
- 5.1.2 When south China became an administration territory of China’s central government in 221 BC (Qin dynasty), the Yue people was gradually assimilated by the Han culture. During Qin period (221-206 BC), the Study Area was subordinated to Panyu (番禺) County.
- 5.1.3 In 208 BC, Nan Yue (Southern Yue) State was established in Canton, by military officials sent from the Qin (221 - 206 BC) Court to conquer Yue in the south. Following the collapse of Qin’s political power in the north it began Han dynasty (206 BC - AD 220). Nan Yue State soon became a vassal state of Han. During Han to Eastern Jin dynasties (206BC – AD331), the Study Area was subordinated to Bolaw (博羅) County¹. From AD331 to AD756, the Study Area was subordinated to Baoan (寶安) County. After AD757, the Study Area was subordinated to Dongguan (東莞) County. And later between 1573 and 1912, the Study Area was subordinated to Xin’an (新安) County, and then Xin’an renamed as Baoan County.
- 5.1.4 Since the 8th century (during Tang dynasty AD 618 - 907), Tolo Harbour was the main pearl harvesting centre in China. From the 9th century onward, Pearl River area (including Hong Kong) was an important salt production centre. Especially in Southern Song dynasty (AD 1127-1279), Hong Kong was one of the thirteen salt production centres of China. Historic textual records such as *Yudi Jisheng* (輿地紀勝) and *Songhuiyao Jilu* (宋會要輯錄) describe smuggling related to salt production. The north NT area gradually turned into a settlement place and agricultural land to supply food to deal with the increasing population growth attributed to the prevalent salt production industry.

- 5.1.5 According to oral history and local genealogical records, a wave of

¹ Although the boundary between Bolaw County and Panyu (番禺) County during Han to East Jin period is unclear, it is generally suggested that the Project Area belonged to Bolaw County at that time, according to Xin’an Gazetteer(1819), *Social Change in Hong Kong Before and After the Early Qing Clearance* (1986), and *Brief History of Ancient Shenzhen* (1997). However, professor Jao Tsung-I (2005) discussed that the area belonged to Panyu based on the inscriptions on bricks of Lei Cheng Uk Han Tomb.

immigrants migrated into the north NT area from mainland China during Mongol's conquer to Southern Song Court. Study of local genealogy indicates that five major clans, namely, the Pangs, the Lius, the Haus, the Mans and the Tangs, were groups of settlers in the north NT during Southern Song period (Chan 2006).

5.1.6 In 13th century, the Pangs, the Haus, and the Lius moved into the Study Area and its adjacent areas. The Pangs inhabited in Fanling, the Haus in west and south of the Long Valley, and the Lius in Sheung Shui Plain. The Study Area was subordinated to Dongguan (東莞) County from AD 757-1572.

5.1.7 During the Yuan dynasty (AD1271-1368), permanent settlements were built in Lung Yeuk Tau and Ping Shan (the Tangs), Tuen Mun, Cheung Muk Tau and Sheung Shui (the Lius), Ho Sheung Heung (the Haus), and Tai Po and San Tin (the Mans).

Late historical period

5.1.8 During the 15th century, the coastal areas of Dongguan County were suffered from frequent marauding bandit and pirate attacks. Xin'an (新安) County was thus set up in AD 1573 to defend such attacks. According to *Xin'an Gazetteer* (新安縣志), the present day New Territories, Kowloon and Hong Kong were zoned within Xin'an County.

5.1.9 In 1661, *Coastal Evacuation Order* (遷界令) was compelled by the Qing Court in order to stifle the anti-Manchu troops in Taiwan. People lived in coastal area were forced to move 50 *li* (approximately 25 km) inland, including the NT inhabitants. It was until 1669, the people could move back to their villages. However, after the coastal evacuation, population severely dropped from 13,302 as recorded in 1594 to 3,912 in 1677. Thus, Hakka people were encouraged to move in the NT area during late 17th to early 18th centuries.

5.1.10 Following Qing's failure in the First and the Second Opium Wars to Britain, Hong Kong Island, Kowloon Peninsula and Stonecutter's Island were successively ceded in perpetuity to the United Kingdom under the *Treaty of Nanking* (南京條約) (1842) and the *Convention of Peking* (北京條約) (1860). In 1898, under the terms of the *Convention for the Extension of Hong Kong Territory* (展拓香港界址專條), Britain obtained the New Territories.

5.2 KTN Area History

5.2.1 Haus settled at Ho Sheung Heung since late Yuan dynasty to early Ming dynasty (late 14 century). Haus were descendants of Chun Man Hau (晉繆侯) with origin in Shanggujun (上谷郡). The Hau's family moved southward during the Song dynasty and their descendants proliferated to six major family branches, namely at Nanhai (南海) county and Panyu (番

禺) county in Guangzhou, Enping (恩平) county and Xinxing (新興) county in Zhaoqian (肇慶) and Jiayingzhou (嘉應州).

- 5.2.2 Haus in Ho Sheung Heung belonged to the one in Panyu/ Cantonese and their ancestor named Hau Ng-long (侯五郎) (1023-1086) migrated to Xin'an county in the Song dynasty. However, it was until the 11th generation ancestor of Haus, Hau Cheuk-fung (侯卓峰), the family estate was establish in Ho Sheung Heung in the early Ming period. Hau Cheuk-fung then (侯卓峰) became the founding ancestor in Ho Sheung Heung (Web Source AMO 1).
- 5.2.3 There are four villages in Ho Sheung Heung namely Nam Bin Wai (南邊圍), Pak Bin Wai (北邊圍), Chung Sum Tsuen (中心村) and Chung Wai Tsuen (松圍村) (San Tsuen) (Web Source AMO 1).
- 5.2.4 The settlement was recorded both in the 1688 and 1819 *Xin'an Gazetteer*. During early Qing (18th century). Haus branched out and settled in Kam Tsin (金錢), Yin Kong (燕崗) and Fung Kong (鳳崗).
- 5.2.5 Two more villages were recorded under the 1819 *Xin'an Gazetteer*; they are Yin Kong village and Kwu Tung village. Yin Kong village was a branch of Haus in Ho Sheung Heung. Available record about Kwu Tung village is thin; even its precise location remains uncertain. The *Map of San-on District (1868)* (Ng 1983:Map 9) and the *1905-1909 War Office Map* (Hal Empson 1992:140) show that the original Kwu Tung village was marked to the southwest of Yin Kong village and to the east of Kam Tsin. The only certainty about Kwu Tung village is that it was built before 1898, prior to the British colonisation to the NT.

5.3 FLN Area History

- 5.3.1 Pangs moved in Fanling Area during the Southern Song dynasty (A.D. 1127 – 1279) (Web Source AMO 2). However, the Study area is mostly comprised of lowland floodplain along Ng Tung River (or River Indus), where not suitable for human settlement. Thus, no villages dated prior to 1950s are situated within the Study Area.

5.4 PC/TKL Area History

- 5.4.1 There are a number of old villages located within the Study area, including Shan Kai Wat, Tai Po Tin, Yuen Ha, Ping Che and Kat Tin. Shan Kai Wat and Tai Po Tin were set up prior to 1898. Shan Kai Wat, which includes Sheung Shan Kai Wat and Ha Shan Kai Wat, are Hakka villages. So far, other available information that can inform history of these villages is rare.
- 5.4.2 Historical buildings in Ping Che such as Tin Hau Temple (天后廟) and Cheung Shan Kwu Tsz (長山古寺) can provide some clues about the age of the settlements. The oldest bronze bell found in Cheung Shan Kwu Tsz (長山古寺) was made in the 54th year of Qianlong (乾隆) reign (1789) of

Qing dynasty (Web Source AMO 3). The Tin Hau Temple (天后廟) was moved in Ping Che in the 21st year of Qianlong reign of Qing dynasty according to oral history (Web Source AMO 4). Thus, it is believed the area became settlement place during Qing dynasty.

6 METHODOLOGY

- 6.1.1 The following three-step methodology was implemented according to the requirements of the Specification and Appendix B (Guidelines for Archaeological Impact Assessment) of the Contract No. FL/2010/01.
- 6.1.2 Due to the limitation of the field work findings in the required archaeological survey area, this survey will only outline archaeological potential areas based on results of field scan, auger holes, and test pits in the required archaeological survey area.

Field Scan

- 6.1.3 Field walking was conducted in the archaeological survey areas to identify archaeological deposits on the surface. Locations of archaeological survey areas for field scan are shown in **Appendix B**.
- 6.1.4 The scanning of the surface for archaeological material was conducted, under ideal circumstances, in a systematic manner and was covered the entire archaeological survey areas. Particular attention was given to exposed areas such as riverbed cuts, erosion areas, terraces, etc.
- 6.1.5 Find spots were recorded, and mapped on 1:1,000 scale (see **Figure SS-KTN-5, SS-FLN-1a, 1b, 2a, 3a, 4a, 4b** and **SS-TKL-1a, 3a, 3b, 5a, 5b** in **Appendix B**) and finds were collected during the field scanning and form part of the archive. Topography, surface conditions and existing impacts were noted during the field walking.

Auger Holes

- 6.1.6 Hand auger was employed to drill soil and investigate existence of archaeological resources beneath the ground. A hand auger consists of a hollow auger head with shape blades on one end, a pole and a handle. The tool was used to vertically drill into the ground and extract a column of soil to be examined.
- 6.1.7 To identify and record strata, soil colour, composition and compaction (3C) were measured and stratum depth jotted each time the 3C changed. The depth of any material found was also measured. Augering only stopped when regolith, water table, or rocks is encountered, or the auger head failed to hold the soil due to its low degree in plasticity.
- 6.1.8 Proposed auger hole locations in the Contract were drilled at the designated locations. Adjustments to the proposed auger hole locations were made due to the current landscape up to the excavation date. The location of each drilled auger hole test has been marked on a 1:1000 scale map on Appendix B.

Test Pit Excavation

- 6.1.9 Test pits were excavated to verify the archaeological potential within the proposed development areas and to establish the horizontal spread of cultural material deposits and vertical sequence of cultural materials. Test pit location was set out at the designated locations based on the Contract; adjustments to the proposed test pit locations were made due to the current landscape up to the excavation date.

7 SURVEY FINDINGS – KTN

7.1 General Description

- 7.1.1 Kwu Tung North (KTN) is the western district of the proposed New Development Area, roughly bordered by the Sheung Yue River and Shek Sheung River in the east, the Fanling Highway in the south and the Closed Area Boundary in the north and west. Topographically, the KTN district can be divided into two areas: the approximate two-thirds of the district in the west is characterized by a series of low hills and terraces and the remaining area in the east by relatively low flat fields.
- 7.1.2 In west KTN, the elevation of low hills at Ma Tso Lung and Fung Kong Shan varies from 40 to 60 mPD and the highest point reaches around 80 mPD; the elevation lowers along the extended terraces from 40 mPD to 20 mPD and down to 10 mPD at the river valleys. In east KTN, the elevation is generally lower than 10 mPD except the terraces at the southeastern corner of the district.
- 7.1.3 Geologically, the base rocks of the small hills in west KTN were composed of sandstones and siltstones formed during Lower Carboniferous of the Palaeozoic and coarse ash crystal turf formed during Upper Jurassic to Lower Cretaceous of the Mesozoic.
- 7.1.4 The superficial deposits in west KTN are terraced alluvium and debris flow deposits on gentle slopes developed during the Pleistocene, while in the valleys along small river courses, the superficial alluvial deposits are formed during the Holocene period. In east KTN, the natural deposits are generally Holocene alluvium composed of clay, silt, sand and gravel (Lai, Campbell and Shaw, 1996).
- 7.1.5 The study area in KTN is not entirely covered by the archaeological fieldwork. According to the scope of the archaeological survey in KTN stipulated in the Tender Brief, the archaeological survey in KTN was arranged in 18 sub-areas, which are coded from KTN-1 to KTN-18 in this report. Approximately, the sub-areas KTN-1 to KTN-5 and KTN-7 to KTN-14 are distributed in the terraced locations in the west, while KTN-6 and KTN-15 to KTN-17 on the plains in the east. KTN-18 in east KTN is an exception which is located on a terrace at the southeastern corner of KTN (see **Appendix B, Figure KTN-0**).
- 7.1.6 During the archaeological survey in KTN, surface scans, auger tests and test-pit excavations were carried out to identify the archaeological potential. The surface scanning was performed across the pre-defined 18 sub-areas and organized in six large areas. In total, 25 auger holes were drilled and 24 test pits (1 m X 1 m) excavated. The auger hole(s) and test pit(s) in each sub-area were recorded with the sub-area code followed by an alphabetic letter. For example, the test pit and auger test conducted in KTN-1 were recorded as K1a and K1b respectively. The locations of the auger holes and test pits in the 18 sub-areas are marked in **Figures KTN-1 to KTN-18**, respectively.

- 7.1.7 The total number and specific locations of the auger holes and test pits had already been determined in the Tender Brief. Some auger holes and test pits, however, were relocated during the fieldwork due to site conditions. In most cases, the relocation was made because the pre-determined sites were located on gravel or cement grounds (e.g. roadside, storage/parking place, etc.), where the surface was too hard to be applied with archaeological works; in other cases, the pre-determined work sites were currently occupied by structures such as storage place or workshop.
- 7.1.8 Based on the desktop study, field scanning and field survey excavation to KTN area, one archaeological potential area at Ho Sheung Heung is illustrated on **Figure IAAP- 1** in **Appendix E**.
- 7.1.9 The quantity of finds in relation to the field scanning, auger holes and test pits retrieved from the fieldwork is presented in **Table 7.3**.

7.2 Results of Surface Scan

- 7.2.1 The required surface scanning areas in Kwu Tung North were divided into six sub-areas, recorded as **Figure SS-KTN-1** to **Figure SS-KTN-6**, for convenience of presenting the results. The details of the process and observation of surface walking in each sub-area are recorded in a written form and indicated with colour marking on a plan. It should be explained that each of the surface scanning area was originally divided into several Spots and recorded as so on the Field Walking Recording Sheet in the field; however, as the surface survey did not identify any archaeological remain in all the areas except SS-KTN-5, these spots were merged together in this report for the simplicity and clarity of presentation. The results of surface scanning in these sub-areas are summarized as follows:

SS-KTN-1 (see Figure SS-KTN-1 in Appendix B)

- 7.2.2 This sub-area is distributed in the Ma Tso Lung area.
- 7.2.3 The landscape settings and topographic features in SS-KTN-1 can be grouped into three types:
- (1) slopes and wasted fields covered with high and dense grass, therefore with limited accessibility;
 - (2) valley terraces covered with orchard trees with relatively good visibility; and
 - (3) occupied areas with village houses, deserted pig farms, storage places, roads, shops and public structures.

The surface walking in this sub-area did not identify any archaeological remains.

SS-KTN-2 (see Figure SS-KTN-2 in Appendix B).

- 7.2.4 This sub-area is covered with a small hill in the north and lowered terraces in the south. The small hill was covered thick vegetation and the terraces are occupied with wasted fields, old houses, storage places and roads. The surface scan in SS-KTN-2 resulted in no finding of archaeological remains.

SS-KTN-3 (see Figure SS-KTN-3 in Appendix B)

- 7.2.5 This sub-area is distributed over gentle slopes or lower terraces. Most of this sub-area is covered with permanent structures or facilities, such as roads, parking places, storage places, deserted pig farms, village houses and garbage dumps, etc. The remaining areas are natural slopes covered with thick vegetation. There was no archaeological finding during the surface scan in SS-KTN-3.

SS-KTN-4 (see Figure SS-KTN-4 in Appendix B)

- 7.2.6 The northern part of SS-KTN-4 is located at the Lo Wo Saddle Club and the surface scanning in this area over a horse-training field and its vicinity did not find any archaeological remain. There is also an area to the south surveyed in SS-KTN-4 around an old village house, and the survey did not identify any archaeological remains in this area.

SS-KTN-5 (see Figure SS-KTN-5 in Appendix B)

- 7.2.7 This sub-area is characterized by low terraces distributed along the foot of a small hill in Ho Sheung Heung and currently occupied by old village houses, wasted fields and storage places. In this sub-area, archaeological remains were collected at four Find Spots, including celadon shards probably dated to the Song dynasty (see **Plate 7.1 in Appendix D**) and other porcelain, stoneware shards dated to the Ming-Qing dynasties (see **Plate 7.2 – Plate 7.5 in Appendix D**).
- 7.2.8 This discovery indicated a potential of identifying archaeological deposits of historical periods in this area, and the excavation of a test pit K14a verified this possibility (see below). From Layer 4 of K14a, a shadowy-blue porcelain shard was retrieved along with other ceramic remains, dating this layer as early as to the Song dynasty.

SS-KTN-6 (see Figure SS-KTN-6 in Appendix B)

- 7.2.9 This sub-area is distributed at the Yin Kong village and along the northern side of Castle Peak Road. Most of this area was occupied by village houses, parking lots, storage places and roads. The other parts of this sub-area were either covered with thick vegetation or soaked in water. Therefore, no archaeological remain was identified in SS-KTN-6.

7.3 Result of Auger Test and Pit Excavation

- 7.3.1 The drilling of 25 auger holes and the excavation of 24 test pits were conducted during the field survey in KTN. The detailed results of auger tests are recorded in the Auger Hole Records in **Appendix A**. The

detailed results of test pits excavations, in forms of written description, photograph of section profile and illustration of section profile, are recorded in the Test Pit Records in **Appendix A**. Also, the results of test pits and auger tests are summarized in the following **Table 7.1**, and **Table 7.2** respectively. Of all the auger holes and excavated test pits, archaeological deposit was identified only from one test pit, that is, K14a in Ho Sheung Heung. The details of the archaeological findings from K14a are elaborated as follow.

Test Pit K14a

Landscape/Topographic Setting

- 7.3.2 Test Pit K14a is located on a low terrace with an elevation of c.a. +8.0 mPD under the foot of a small hill on its north-eastern side; approximately 40 meters to its west, a small water course runs from north to south. The specific setting of K14a is now a wasted land planted with trees and covered with garbage on the surface. This tree-covered terrace is the only open filed in the vicinity. To its northeast, this terrace is flanked by Ho Sheung Heung Road; the surrounding areas on other sides are currently occupied by storage or parking places (see **Figure KTN-14** in **Appendix B**).
- 7.3.3 Further to the east of this terrace, ceramic artifacts dated to the Song and Ming-Qing dynasties were collected during this survey. In fact, the discovery of historical ceramics in this area at Ho Sheung Heung had already been made during an archaeological survey of the EIA study for Planning and Development Study on Northeast New Territories under Agreement No. CE64/96 in 2002 (Maunsell 2003).

Finding

- 7.3.4 Five deposit layers were recognized in the test pit during the excavation. Layer 1 is the surface layer and Layer 5 the regolith deposit formed before human occupation. The dating of Layer 2 is unknown because of the lack of associated artifacts, but it was probably formed or at least disturbed during the recent past. Archaeological findings were retrieved from Layer 3 and Layer 4.
- 7.3.5 Two shards were unearthed from Layer 3, including a reddish stoneware probably in the form of basin with gray surface and flat bottom (see **Plate 7.6** in **Appendix D**), and a grayish coarse ware with thick body and large crystal grains in the paste(see **Plate 7.7** in **Appendix D**), which is probably a tile judged by its curved shape.
- 7.3.6 Of the artifacts from Layer 4, the most distinctive and datable piece is a tea-cup base. This shard is a typical shadowy-blue (影青) porcelain ware with incised flower patterns on the inner side (see **Plate 7.8** in **Appendix D**), which was originated in Jingdezhen of Jiangxi Province during the Southern Song period.

- 7.3.7 The other ceramic shards unearthed from Layer 4 in K14a include a grayish stoneware shard with burnished black surface and incised horizontal lines (see **Plate 7.9** in **Appendix D**), a grayish terra-cotta tile with scratching traces on the upside and textile impression on the downside (see **Plate 7.10** in **Appendix D**), and a thick rim belonging to a partially glazed brownish stoneware jar (see **Plate 7.11** in **Appendix D**).

7.4 Dating

- 7.4.1 The chronological analysis of celadon wares unearthed in Hong Kong has been conducted to distinguish stylistic differences between celadon wares from the Tang dynasty, the Song dynasty and the Ming dynasty (HKIA 2000). The shadowy-blue shard from Layer 4 of test pit K14a presents typical characteristics of the Song celadon and it should also be dated to the Song dynasty or, more accurately, the Southern Song dynasty.
- 7.4.2 The gray tile with textile impression from Layer 4 can also be dated to the Song dynasty based on a previous study on tiles of the Song dynasty in Hong Kong (HKIA 1999). The other shards from Layer 4 are uneasy to be dated. Therefore, the deposit of Layer 4 is now dated to the Song dynasty, but it requires further confirmation (of later dates) in the future by more supporting material unearthed from the same layer in the vicinity. Further archaeological fieldwork is recommended near test pit K14a.
- 7.4.3 The ceramic shards unearthed from Layer 3 in K14a cannot be dated based on a solid analysis due to the lack of cross-dating database for these common household wares. Because this layer cannot be safely dated to the Song dynasty but it also contains no obvious Qing or later ceramics, Layer 3 is therefore dated to the Ming dynasty provisionally.

7.5 Archaeological Potential Area of KTN Area

- 7.5.1 The archaeological survey has been carried out in KTN through applying field methods of surface scan, auger hole and test-pit excavation. The results of the archaeological survey reveals, however, the only location in this area with identified archaeological deposit is in Ho Sheung Heung on a terrace between a small hill and a river course. This archaeological potential area in Ho Sheung Heung was found in 2000 and re-identified in this field survey (see **IAAP-1** in **Appendix E**). Based on the datable artefacts, this potential area can be dated from the Song dynasty to the Qing period. The identification of this archaeological potential area is supported by the surface collection of ceramic shards, test pitting and a small terrace landscape in front of the hill. The ceramics found in this potential area are dated to the Song to Qing periods and, more significantly, by the reveal of undisturbed deposit layers dating to the Song and the Ming periods in test pit K14a.

Table 7.1 Summary of Test Pits in Kwu Tung North Area

Test Pit	Surface Altitude	Maximum Excavate d Depth	Landscape	Current Land use	Strata				Archaeological Findings, Dating and Remarks
					Topsoil	Subsoil		Regolith	
						With archaeological deposits	Without archaeological deposits		
K1a	c.a. +12.7mPD	75cm	Valley Terrace	Wasted Land	L1		L2	L3	
K2a	c.a.+14.9mPD	130cm (drilling 90cm in L3)	Valley Terrace	Orchard	L1		L2	L3	
K2c	c.a. +14.8mPD	34cm	Valley Terrace	Orchard	L1		L2	L3	
K3b	c.a. +14.7mPD	64cm	River Terrace	Wasted Field	L1			L2, L3	
K4a	c.a. +18.1mPD	66cm	Hill-foot Terrace	Orchard	L1		L2	L3	
K5b	c.a. +28.8mPD	20cm	Valley Terrace	Roadside	L1			L2	
K5e	c.a. +30.0mPD	90cm	Small Hill	Slope Next to Grave	L1		L2	L3	
K6d	c.a. +11.4mPD	245cm (drilling 120cm in L5)	Hill-foot	Race Field	L1	L2, L4	L3, L5		Fill deposits with glazed wares and tiles
K6e	c.a. +10.4mPD	25cm	Hill-foot	Race Field	L1		L2	L3	
K7a	c.a. +27.6mPD	70cm	Small Hill	Slope with Trees	L1		L2, L3	L4	
K7b	c.a. +24.0mPD	84cm	Hill-foot	Wasted Land in Woods	L1		L2, L3	L4	
K8a	c.a. +22.3mPD	20cm	River Valley	Wasted Land	L1			L2	Water soaked
K8b	c.a. +22.3mPD	20cm	River Valley	Wasted Land	L1			L2	Water soaked

K9a	c.a. +22.0mPD	30cm	Hill-foot	Roadside with Trees	L1			L2	
K9c	c.a. +25.0mPD	110cm	Small Hill	Slope with Graves	L1		L2, L3	L4	
K10b	c.a. +11.5mPD	76cm	Plain	Orchard	L1		L2, L3	L4	
K10d	c.a. +12.3mPD	90cm	River Terrace	Wasted Land	L1		L2		Fill deposit over river bank
K10e	c.a. +11.3mPD	60cm	River Terrace	Garden	L1		L2		Reached water table at bottom
K11d	c.a. +10.5mPD	25cm	Plain	Deserted Storage Place	L1			L2	
K12a	c.a. +8.8mPD	25cm	Hill-foot	Roadside Ditch	L1		L2		Modern fill, reached water table
K13a	c.a. +9.4mPD	80cm	Plain	Wasted Field	L1		L2, L3	L4	
K14a	c.a. +8.0mPD	74cm	Hill-foot Terrace	Wasted Land in Woods	L1	L3, L4	L2	L5	L3 with Ming stoneware and tile shards; L4 with Song celadon, glazed stoneware and tile shards
K16a	c.a. +6.0mPD	36cm	Plain	Wasted Land by Storage Place	L1		L2		Reached water table at the bottom
K17a	c.a. +5.9mPD	50cm+ 90cm (augering)	Plain	Garden by pathway	L1	L1, L2, L3	L4-L5	L6	

Table 7.2 Summary of Auger Holes in Kwu Tung North Area

Auger Hole	Surface Altitude	Maximum Excavate d Depth	Landscape	Current Land use	Strata				Archaeological Findings, Dating and Remarks
					Topsoil	Subsoil		Regolith	
						With Archaeological deposits	Without Archaeological deposits		
K1b	c.a. +11.3mPD	90cm	Valley Terrace	Wasted Field	L1		L2	L3	
K2b	c.a. +18mPD	100cm	Valley Terrace	Orchard	L1		L2	L3	
K3a	c.a. +14.7mPD	90cm	River Terrace	Wasted Field	L1		L2		Reached water table
K5a	c.a. +25.4mPD	15cm	Valley Terrace	Roadside			L1		Hit rocks
K5c	c.a. +29.0mPD	30cm	Valley Terrace	Roadside	L1			L2	
K5d	c.a. +32.0mPD	135cm	Small Hill	Slope next to Grave	L1		L2	L3	
K5f	c.a. +31.0mPD	40cm	Hill-foot	Roadside	L1			L2	
K6a	c.a. +11.4mPD	35cm	Hill-foot	Race Field	L1			L2	
K6b	c.a. +11.4mPD	78cm	Hill-foot	Race Field	L1		L2	L3	
K6c	c.a. +11.4mPD	80cm	Hill-foot	Race Field	L1		L2, L3		
K7c	c.a. +24.0mPD	20cm	Hill-foot	Deserted Parking Lot			L1		Reached cement layer
K8c	c.a. +24.0mPD	30cm	River Valley	Wasted Land	L1			L2	
K9b	c.a. +18.0mPD	35cm	Hill-foot	Roadside	L1			L2	
K9d	c.a. +16.0mPD	65cm	Small Hill	Hill Slope	L1		L2 L3	L4	L2 modern fill

K10a	c.a. +12.3mPD	85cm	Riverside	Village Roadside	L1		L2 L3		Hit rock in sludge
K10c	c.a. +11.3mPD	45cm	River Terrace	Wasted Land	L1		L2		Reached cement layer underneath
K11a	c.a. +13.2mPD	85cm	Plain	Village Roadside	L1		L2	L3	
K11b	c.a. +15.5mPD	75cm	Plain	Village Roadside	L1		L2	L3	
K11c	c.a. +14.3mPD	105cm	Plain	Village Roadside	L1		L2	L3	
K11e	c.a. +10.5mPD	100cm	Plain	Deserted Storage Place	L1		L2	L3	
K12b	c.a. +8.8mPD	30cm	Hill-foot	Roadside Ditch	L1		L2		Reached water table
K13b	c.a. +9.4mPD	100cm	Plain	Wasted Field	L1		L2 L3 L4		Reached water table
K15a	c.a. +6.5mPD	100cm	Plain	Vacant Land	L1		L2	L3 L4	
K17b	c.a. +6.1mPD	55cm	Plain	Village Roadside	L1		L2 L3		Reached road base
K18a	c.a. +10.0mPD	40cm	Hill-foot	Storage Place			L1	L2	

Table 7.3 Quantity of Finds Retrieved from KTN in this Field Survey^

Area	*AH/TP/SS	Grid	Context	Song –Yuan Celadon	Unglazed Stoneware	Ming-Qing blue-and- white porcelain	Glazed Ware	Tiles	Modern wares
KTN	TP	K6d	C2	0	0	0	1	1	0
KTN	TP	K6d	C4	0	0	0	1	0	0
KTN	TP	K10d	C2	0	0	0	0	0	2
KTN	TP	K14a	C3	0	1	0	0	1	0
KTN	TP	K14a	C4	1	1	0	1	1	0
KTN	TP	K17a	C1	0	0	0	1	0	0
KTN	TP	K17a	C2	0	2	0	1	0	0
KTN	TP	K17a	C3	0	1	0	2	0	0
KTN	SS	SS-KTN-5	Spot 1	6	1	1	1	1	0
KTN	SS	SS-KTN-5	Spot 2	2	1	2	0	2	0
KTN	SS	SS-KTN-5	Spot 3	1	0	0	0	0	0
KTN	SS	SS-KTN-5	Spot 4	1	0	0	0	0	0
KTN total 37				11	7	3	8	6	2

* AH=Auger Hole; TP=Test Pit; SS=Surface Scanning.

^ The number of retrieved finds is different from the finds observed and described in the text. The retrieved finds are selected for their archaeological significance.

8 SURVEY FINDINGS – FLN

8.1 General Description

- 8.1.1 According to *Hong Kong Geological Survey Sheung Shui Sheet 3: Soild and Superficial Geology* (Geotechnical Control Office, Lai, Campbell and Shaw, 1996), the natural superficial deposits recorded across this area consist of alluvium (Qa) (clay/silt, gravelly sandy, well-sorted to semi-sorted), terrace alluvium (Qpa) (clay/silt, gravelly sandy, well-sorted to semi-sorted), and debris flow deposits (Qpd) (silt/sand, gravelly, clayey with cobbles and boulders; unsorted).
- 8.1.2 They are formed during Pleistocene through Holocene, while the solid geology is made of undivided coarse ash crystal turf (e.g. the hill rock), formed during Upper Jurassic to Lower Cretaceous. A band of Lok Ma Chau Formation – Mai Po Member rocks (Cmp) (undivided, phyllite, metasiltstone with metasandstone and graphite schist) runs along north Fanling into the northeast.
- 8.1.3 The landscape in the proposed New Development Area in FLN is in the river basin that contains two main rivers. Ng Tung River runs from Ping Che to the west and Fu Tei Au to the east, passing through Hung Leng, Kwan Tei, Ma Tau Leng, Sacred Hill (Tin Ping Shan), Wa Shan and Fu Tei Au, and then joins Sheung Yue River near the Sheung Shui Slaughterhouse. Sheung Yue River itself springs from Lam Tsuen and passes through Kwu Tung and Ho Sheung Heung to the southwest and joins with Shek Sheung River near the Sheung Shui Slaughterhouse. It then runs to the north, joins by Ng Tung River and runs into the Shenzhen River at Lo Wu.
- 8.1.4 To the north of the Ng Tung River lies a range of small hills, namely Sacred Hill (Tin Ping Shan) (c.a. +90mPD), Wa Shan (c.a. +130mPD), Cham Shan (c.a.+110mPD). The general landscape in FLN is on alluvial deposits of the river system, which forms primary (Qa – Alluvium), secondary (Qpa – Terraced alluvium) and tertiary (Qpd – Debris flow deposits) river terraces on both banks of the river. All Auger Holes and Test Pits are positioned on either secondary or tertiary river terrace in this project.
- 8.1.5 A programme of surface scanning trips to investigate archaeological potentials, and locations of the proposed test pit and auger hole were carried out prior to the survey excavation. During the phrase of the survey excavation, in total, 11 test pits were excavated accumulating 16 square meters (surface) and 14 auger holes were drilled in this area.
- 8.1.6 Based on the desktop study, field scanning and field survey excavations to FLN area, archaeological potential areas are illustrated on **Figure IAAP- 2 to 5** in **Appendix E**. The quantity of finds in relation to the field scanning, auger holes and test pits is presented in **Table 8.3**.

8.2 Result of Surface Scan

8.2.1 Proposed surface scan area in Fanling North was fully investigated during July 2010. Four sub-areas (see **Figure SS-FLN-0** in **Appendix B**), titled as **Figure SS-FLN-1** to **Figure SS-FLN-4**, have been divided for convenience of presenting the results. Archaeological potential of each sub-area and accessibility of proposed test pits and auger holes locations were assessed. The surface scanning results as a whole at SS-FLN-1, SS-FLN-2, SS-FLN-3, and SS-FLN-4 are insufficient to indicate that there are stable cultural layers and long term human inhabitancy in the areas. Results of surface scan to each sub-area are described as follows:

SS-FLN-1 (see Figures SS-FLN-1, SS-FLN-1a and SS-FLN-1b in Appendix B)

8.2.2 The area is in proximity to the between the Man Kam To Road and the Sheung Shui Treatment Works by the Fu Tei Au Road. Since this surveyed area contains many fenced orchards and private residences and are not accessible, the surface scan limits to those lands outside these orchards and private residences.

8.2.3 Four spots with archaeological finds are discovered in this area. At Spot 1, tiles and bowl base fragments (see **Plate 8.1** in **Appendix D**) were discovered. At Spot 2, an exposed slope profile revealed a layer of tiles with shards of blue-and-white porcelain and celadon (see **Plate 8.2** in **Appendix D**). Spot 2 is situated on a terrace before the hill slope – the tertiary river terrace of Ng Tung River. At Spot 3, celadon bowl fragments were discovered (see **Plate 8.3** in **Appendix D**). At Spot 4, large areas (approximately 38m × 15m) of the surface contain shards of blue-and-white porcelain (see **Plate 8.4** in **Appendix D**). This Spot 4 has been previously studied in the 2003 EIA (Maunsell 2003) and has discovered an Early Qing housing ruin.

SS-FLN-2 (see Figure SS-FLN-2 and SS-FLN-2a in Appendix B)

8.2.4 The area is between the Man Kam To Road near Hung Kiu San Tsuen and Sheung Shui Wa Shan Village near Ng Tung River. This area contains many fenced factories and dense woodland. Access is limited to roadside where vegetation coverage is thin. Also, most of the surface have been paved with concrete/bitumen or levelled for construction works.

8.2.5 One spot with archaeological finds is discovered in this area. Spot 5 has a yellow tile with cloth patterns, which seems to be related to burial. However, it does not bear characteristics that can yield dating and typological data and hence not collected. Large quantities of quartz cobbles are also observed in the cut slope near this Spot.

SS-FLN-3 (see Figure SS-FLN-3 and SS-FLN-3a in Appendix B)

- 8.2.6 The area is around Wa Shan Public School near Ng Tung River. This area contains many fenced farmlands/orchards and private residence. Access is limited to outside of these lands. The now-abandoned Wa Shan Public School is covered by concrete paving with thick vegetation surrounding the school. No archaeological finds is observed in the school.
- 8.2.7 Two spots with archaeological finds are discovered in this area. Spot 6 has some shards of blue-and-white porcelain, and some yellow tile and bricks; however, they do not bear characteristics that can yield dating and typological data and hence not collected. Spot 7 has a square-geometric pottery (see **Figure 1** in **Appendix C**; also see **Plate 8.5** in **Appendix D**) shard near to some funerary urns on a slope to the south of the School.

SS-FLN-4 (see **Figure SS-FLN-4**, **SS-FLN-4a** and **SS-FLN-4b** in **Appendix B**)

- 8.2.8 The area is on the opposite bank of Wu Nga Lok Yeung of Ng Tung River. Although thin in vegetation, steep slopes have hindered safe access to most area. Only naked-eye observation and landscape topography can be used to ascertain the existence of archaeology in this area.
- 8.2.9 Two spots with archaeological finds are discovered in this area. Spot 8 has some shards of Late Qing blue-and-white porcelains and brown-glazed pottery (see **Plate 8.6** in **Appendix D**). Spot 9 has some shards of Qing blue-and-white porcelains (see **Plate 8.7** in **Appendix D**), as well as some grey tiles.

Dating

- 8.2.10 The surface scanning produced a small quantity of celadon and blue-and-white porcelain shards as well as a square-geometric pottery shard. Celadon shards with greyish green glaze discovered at both SS-FLN-1 Spot 2 and SS-FLN-1 Spot 3 (see **Plate 8.2** and **8.3** in **Appendix D**) can probably be dated to Song to Yuan periods. Some blue-and-white porcelain shards found at SS-FLN-1 Spot 4 and SS-FLN-4 Spot 9 (see **Plate 8.4** and **8.7** in **Appendix D**) are decorated with chrysanthemum pattern painted in the impressionistic manner, some with rows of three vertical strokes on the exterior close to rim, and one shard with patternized chrysanthemum.
- 8.2.11 Such decoration patterns can also be compared with vessels (see Au1997) published in the investigation report on Wun Yiu Site of Archaeological Interest at Tai Po (Au 1997: plate 144 , 136, and 145), which account categorizes them as being produced during Early to Mid Qing period.
- 8.2.12 The square-geometric pottery shard found in SS-FLN-3 Spot 7 (see **Figure 1** in **Appendix C**; also see **Plate 8.5** in **Appendix D**) has a grey clay fabric. Its clay fabric is well-sorted with no sand and stone temper. The firing temperature is relatively high, possibly over 800 degree, resulting in high degree hardness.

8.2.13 This shard can be compared with many other Early Bronze Age layers excavated in Hong Kong's most sites of archaeological interest, for example, Layer C in Sham Wan (Meacham 1978: figure 8.17) and Sha Ha Site at Sai Kung (AMO 2005: plate 95). However, square-geometric pottery was very prevalent throughout Late Neolithic to Bronze Age. A single fragment found at SS-FLN-3 Spot 7 is thus believed that it can be dated to Late Neolithic to Bronze Age.

8.3 Result of Auger Hole and Pit Excavation

8.3.1 In general, no feature of archaeological significance was observed in most test pits and auger holes. A full record of the survey excavation is presented in **Appendix A** while summarized test pit excavation and augering results are presented in **Table 8.1** and **Table 8.2** respectively. Remains which can be dated to Qing were discovered at two locations, namely F1c and F4a. They are elaborated as below.

Test Pit F1c

Landscape/Topographic Setting

8.3.1.1 The locality is situated by the junction of Sheung Yue River (to the west) and Ng Tung River (to the south) near Fu Tei Au (see **Figure FLN-1** in **Appendix B**). Its natural landscape consists of a small hill of volcanic rocks lies to the north of the test pit/auger hole area (Cmp – Mai Po Member of Lok Ma Chau Formation, and JTM – tuff of Tai Mo shan Formation at the hill foot), while three types of quaternary deposits formed the river terraces in the local landscape (Qa – alluvium, Qpa – terraced alluvium, and Qpd – debris flow deposits) (Geotechnical Control Office, Lai, Campbell and Shaw, 1996). The F1c is situated on Qpd (tertiary river terrace).

8.3.1.2 F1c is situated on vacant land owned by the government by a village road of Fu Tei Au (830514E, 841723N) with an altitude of c.a. +5.9mPD. A test pit of 1.7m x 1m was excavated up to a depth of 1.16m, when regolith was encountered.

Finding

8.3.1.3 Stratum L2 (40 – 50cm deep, c.a. 7.7mPD) unearthed some blue-and-white porcelain shards and some pottery jar shards and shattered bricks and tiles (see **Plate 8.8 - 8.10** in **Appendix D**), which could be dated to the Qing dynasty *terminus post quem*. Regolith was encountered at a depth of 116cm (c.a. +2.0mPD). The findings are insufficient to indicate that there are stable cultural layers and long term human inhabitancy in the areas at or surrounding F1c. As a result, the area is not regarded as an archaeological potential area.

Test Pit F4a

Landscape/topographic Setting

8.3.1.4 The locality is situated on a supposed river terrace of Ng Tung River (to the south) near Fu Tei Au (see **Figure FLN-4** in **Appendix B**). Its natural

landscape consists of a small hill of volcanic rocks lies to the north of the test pit/auger hole area (Cmp – Mai Po Member of Lok Ma Chau Formation, and JTM – tuff of Tai Mo shan Formation at the hill foot), while three types of quaternary deposits formed the river terraces in the local landscape (Qa – alluvium, Qpa – terraced alluvium, and Qpd – debris flow deposits) (Geotechnical Control Office, Lai, Campbell and Shaw, 1996). The F4a is situated on Qpd (tertiary river terrace).

- 8.3.1.5 F4a is situated on vacant land owned by the government beside the modern Man Kam To Road (831042E, 841954N) with an altitude of c.a. +9.5mPD. A test pit of 1.4m × 1.2m was excavated up to a depth of 1.2m, when regolith and underground water were encountered.

Finding

- 8.3.1.6 Stratum L3 (90 – 110cm deep, c.a. 7.7mPD) unearthed some shards of blue-and-white porcelain and white wares as well as some pottery vessel bases and jar shards (see **Plate 8.11 - 8.12** in **Appendix D**) and shattered bricks and tiles. Regolith was encountered at a depth of 115cm (c.a. +2.0mPD).
- 8.3.1.7 One of the blue-and-white porcelain shards (see **Plate 8.11** in **Appendix D**) is painted in vivid blue colour in a special painting technique, i.e. to profile object with a darker and solid blue outline using tip of brush pen, and then fill the blank with a lighter and watery blue paint. This painting technique can be compared with that employed on shards unearthed at Wun Yiu (Au1997 plate 55, 83 and 105), which were dated to Ming to Mid Qing period. On the back of this shard is a seal pattern printed by hand, two Chinese characters, possibly “萬壽”, are written in Seal Script style. Another rim shard is decorated with floral pattern in the impressionistic manner, which covers on the exterior. Such floral pattern and the painting method might be of Ming period.
- 8.3.1.8 In addition, several vessel (possibly bowl) bases made of pottery (see **Plate 8.12** in **Appendix D**) recovered from L3 share a same character, i.e., with relatively high foot rim, in comparison to those of other bowl bases made of porcelain of Qing period. However, the remaining bases do not contain sufficient typological data to inform cross-dating reference. Considering that their walls were deliberately knocked off and the bases and foot rims preserved, the broken vessels were possibly reused to serve different purposes rather than their original function.

8.4 Archaeological Potential Areas of FLN Area

- 8.4.1 In general, survey scan reveals some archaeology materials in this area of FLN dating to mainly three periods, i.e., Late Neolithic to Early Bronze Age, Song to Yuan and Ming to Qing periods. No features of archaeological significance were observed in most test pits and auger holes proposed in this area. Finds from F1c and F4a were daily use wares and building materials, suggesting human occupation during Ming to Qing periods around these locations. Findings of F1c are insufficient to identify F1c to be an archaeological potential area.

- 8.4.2 Surface scan results in Fanling North at SS-FLN-1, SS-FLN-2, SS-FLN-3, and SS-FLN-4 as a whole are insufficient to indicate that there are stable cultural layers and long term human inhabitancy in the areas. The areas at these locations cannot be determined as archaeological potential areas with the surface scan results alone.
- 8.4.3 Two archaeological potential areas were identified in this survey at Fu Tei Au West and Hung Kiu San Tsuen, based on the datable artefacts. These two areas are dated to Song to Yuan periods and Ming to Mid Qing period respectively (see **IAAP-2** and **IAAP-4** in **Appendix E**). Two more archaeological potential areas are re-identified, including Fu Tei Au East and an area south to Sheung Shui Wa Shan Public School identified in 2003 NENT EIA, based on the datable artefacts. The Fu Tei Au East and the area south to Sheung Shui Wa Shan Public School are dated to early to middle Qing dynasty and Bronze Age respectively (see **IAAP-3²** and **IAAP-5** in **Appendix E**). The identification of the archaeological potential areas is supported by the surface collection of ceramic shards, test pitting and landscape of a small terrace in front of hill. The ceramics found in the two unknown areas are dated to the Song to Qing periods.

² It should be noted that the small archaeological potential area identified in the northeast of IAAP-3 is located next to a farmland, in which artefacts were found. Based on archaeological analysis, the potential area should be by the side of the farmland, instead of being where artefacts were found.

Table 8.1 Summary of Test Pits in Fanling North Area

Test Pit	Surface Altitude	Maximum Excavated Depth	Landscape	Current Land use	Strata					Archaeo-logical Findings, Dating and Remarks
					Tops oil	Subsoil		Regolith	Bedrock	
						With Archaeological deposits	Without Archaeological deposits			
F1c	c.a. +5.9mPD	116cm	River Terrace	Vacant	L1	L2	L3	L4 L5		Blue-and-white wares, white wares, glazed pottery, tile and bricks at c.a. +2.7mPD (L2 – Late Qing)
F2b	c.a.+18.5mPD	80cm	Small hill	Vacant	L1			L2		
F4a	c.a. +9.5mPD	120cm	Modern Pathway	Vacant	L1	L2, L3		L4		Blue-and-white wares, village wares, tile and bricks at c.a. +8.1mPD (L2 and L3 – Late Qing); white wares' are found in L2 of F4a; underground water was encountered at c.a. +7.8mPD (L4)
F4b	c.a. +7.9mPD	85cm	River Terrace by a slope	Vacant	L1	L1		L2	L3	Tiles and Bricks (L1 – Modern)
F6a	c.a. +10.3mPD	70cm	River Terrace	Orchard	L1			L2		
F6c	c.a. +11.0mPD	75cm	River Terrace	Vacant	L1		L2	L3		
F6g	c.a.	95cm +50cm	Slope	Vacant	L1		L2 L3 L4	L5	L6	

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	+16.5mPD	(augering)		School ground						
F6h	c.a. +16.9mPD	96cm	Slope	Vacant School ground	L1			L2		
F6j	c.a. +22.7mPD	95cm	Slope	Vacant School ground	L1		L2	L3		
F7a	c.a. +8.8mPD	86cm+90cm (augering)	River Terrace	Modern Pathway	L1		L2 L3	L4 L5		
F8a	c.a. +8.6mPD	45cm+23cm (augering)	River Terrace	Beside Modern Electricity Structure and Farmland	L1		L2	L3		Underground water was encountered at c.a. 6.6mPD (L2)

Table 8.2 Summary of Auger Holes in Fanling North Area

Auger Hole	Surface Altitude	Maximum Excavated Depth	Landscape	Current Land use	Strata					Archaeological Findings, Dating and Remarks
					Top soil	Subsoil		Regolith	Bed rock	
						With archaeological deposits	Without archaeological deposits			
F1a	c.a. +7.4mPD	160cm	River Terrace	Village roadside	L1		L2 L3	L4		
F1b	c.a. +8.1mPD	110cm	River Terrace	Village roadside	L1	L3	L2			Bricks encountered at c.a. +7.1mPD (L3)
F2a	c.a. +6.0mPD	60cm	Small hill	Vacant	L1			L2		
F2c	c.a. +8.5mPD	85cm	Plain	Abandoned Agricultural Fields	L1		L2	L3		
F2d	c.a. +11.3mPD	140cm	River Terrace	Village roadside	L1	L5	L2 L3 L4	L6		Brick encountered at c.a. +10.2mPD (L5)
F3a	c.a. +8.0mPD	70cm	Small hill	Vacant	L1			L2		Bed rock encountered at c.a. +7.3mPD (L3)
F4c	c.a. +7.0mPD	80cm	River Terrace	Vacant	L1			L2		
F5a	c.a. +9.0mPD	170cm	Slope	Vacant	L1		L2	L3		
F6b	c.a. +11.0mPD	120cm	River Terrace	Abandoned Agricultural Fields	L1			L2		Bed rock encountered at c.a. +9.8mPD (L3)
F6d	c.a. +16.8mPD	115cm	Slope	Vacant School Ground	L1		L2	L3		
F6e	c.a. +15.4mPD	100cm	River Terrace	Slope	L1		L2	L3		
F6f	c.a. +17.0mPD	130cm	Slope	Vacant School Ground	L1		L2	L3		
F6i	c.a. +20.0mPD	40cm	Plain	Vacant School Ground				L1		
F10a	c.a. +10.4mPD	90cm	Plain	Vacant	L1	L2				Tiles encountered at c.a. +9.6mPD (L2)

Table 8.3 Quantity of Finds retrieved from FLN in this Field Survey^

Area	*AH/TP/SS	Grid	Context	Late Neolithic to Bronze Ages Geometric Pottery	Song to Yuen Celadon	Ming to Qing Blue-and-white porcelain	White Ware	Glazed Ware	Pottery Shards	Tiles	Bricks	Modern wares	Undiagnostic
FLN	AH	F2d	L5	0	0	0	0	0	0	0	1	0	0
FLN	TP	F1c	L2	0	0	1	0	1	6	4	30	0	0
FLN	TP	F4a	L1	0	0	0	0	0	0	0	0	1	0
FLN	TP	F4a	L2	0	0	2	5	0	0	2	0	0	1
FLN	TP	F4a	L3	0	0	6	0	0	18	16	0	0	1
FLN	TP	F4b	L1	0	0	0	0	0	0	4	9	0	0
FLN	SS	SSFLN1	Spot 1	0	0	0	1	0	0	2	0	0	0
FLN	SS	SSFLN1	Spot 2	0	2	1	0	0	0	1	0	0	0
FLN	SS	SSFLN1	Spot 3	0	2	0	0	0	0	0	0	0	0
FLN	SS	SSFLN1	Spot 4	0	0	4	0	0	0	0	0	0	0
FLN	SS	SSFLN3	Spot 7	1	0	0	0	0	0	0	0	0	0
FLN	SS	SSFLN4	Spot 8	0	0	1	0	2	0	0	0	0	0
FLN	SS	SSFLN4	Spot 9	0	0	8	0	0	0	3	0	0	0
FLN Total 136				1	4	23	6	3	24	32	40	1	2

* AH=Auger Hole; TP=Test Pit; SS=Surface Scanning.

^ The number of retrieved finds is different from the finds observed and described in the text. The retrieved finds are selected for their archaeological significance.

9 SURVEY FINDINGS – PC/TKL

9.1 General Description

- 9.1.1 The landscape of the proposed development area in PC/TKL is a basin bounded by Shenzhen River (深圳河) at the north and surrounded by hills at the rest directions. To its west situate hills including Cham Shan (杉山, c.a. +110mPD) and its south Ma Tau Ling (馬頭嶺, c.a. +130mPD). Cheung Shan (長山, c.a. +160mPD), Wo Keng Shan (禾徑山, c.a. +290mPD) and Wong Mau Hang Shan (黃茅坑山, c.a. +220mPD) lie at its east. Within the basin, it composes of river, small hill, and plain and river terrace.
- 9.1.2 Two main E-W running rivers, namely, the Ping Yuen River (平原河 or River Ganges, originating in Ping Yeung 坪洋) and Ng Tung River (梧桐河 or River Indus, originating in Pat Sin Leng 八仙嶺 and Kwan Tei 軍地) run through the survey area. Small hills, such as Ta Kwu Ling (打鼓嶺), with an average altitude of 30mPD, sporadically scatter on the basin plain.
- 9.1.3 According to *Hong Kong Geological Survey: Sheung Shui, Sheet 3: Soild and Superficial Geology* (Geotechnical Control Office, Lai, Campbell and Shaw, 1996), the natural superficial deposits recorded across this area consist of alluvium (clay/silt, gravelly sandy, well-sorted to semi-sorted), terrace alluvium (clay/silt, gravelly sandy, well-sorted to semi-sorted), and debris flow deposits (silt/sand, gravelly, clayey with cobbles and boulders; unsorted), formed during Pleistocene through Holocene, while the solid geology is made of undivided coarse ash crystal turf (e.g. the hill rock), formed during Upper Jurassic to Lower Cretaceous.
- 9.1.4 A programme of surface scanning trips to investigate archaeological potentials, and locations of the proposed test pit and auger hole were carried out prior to the survey excavation. During the phase of the survey excavation, in total, 16 test pits were excavated accumulating 26 square meters (surface) and 17 auger holes were drilled in this area.
- 9.1.5 Based on the desktop study, field scanning and field survey excavations to PC/TKL area, archaeological potential areas are illustrated on **Figure IAAP- 6 to 7** in **Appendix E**. The quantity of finds in relation to the field scanning, auger holes and test pits is presented in **Table 9.3**.

9.2 Result of Surface Scan

- 9.2.1 Proposed surface scan area in Ping Che/Ta Kwu Ling was fully investigated during August 2010. Six sub-areas (see **Figure SS-TKL-0** in **Appendix B**), titled as **Figure SS-TKL-1** to **Figure SS-TKL-6**, have been divided for convenience of presenting the results. Archaeological potential of each sub-area and accessibility of proposed test pit and auger hole locations were assessed. Spot 4 in SS-TKL-3 has the potential to be a possible dwelling site. Surface scan findings in other locations are

insufficient to indicate that there are stable cultural layers and long term human inhabitancy in the areas. Results of surface scan to each sub-area are described as follows:

SS-TKL-1 (see Figure SS-TKL-1 and SS-TKL-1a in Appendix B)

- 9.2.2 The sub-area is a small hill owned by the government situated near Ko Po next to Lau Shui Heung. It is fully fenced and surrounded by village houses at the hill foot. At Spot 1 found a few blue-and-white porcelain shards of a probable Qing dating (see **Plate 9.1 in Appendix D**).

SS-TKL-2 (see Figure SS-TKL-2 in Appendix B)

- 9.2.3 The sub-area covers a land composed of small hill and river terrace on the west side of Ping Che Road, extending north from Sha Tau Kok Road to the land west of Hong Kong Baptist Assembly across the road. The access to this sub-area is largely blocked owing to private ownership of lands used as car parks or open depots. Only a small quantity of orchards and vacant land was available for investigation. No finds and features of archaeological significance were observed.

SS-TKL-3 (see Figure SS-TKL-3, SS-TKL-3a and SS-TKL-3b in Appendix B)

- 9.2.4 The sub-area is located close to Sheung Shan Kai Wat and Ha Shan Kai Wat villages. It consists of plain, small hill and river terrace and is mostly covered by thick grasses and trees. A few pot shards (see **Plate 9.2 in Appendix D**) were found at Spot 2, which locates in a vast land currently used as war game field.
- 9.2.5 A blue-and-white porcelain shard (see **Plate 9.4 in Appendix D**) and a pottery shard were discovered at Spot 3 situated at hill foot.
- 9.2.6 At Spot 4, where lies on river terrace bounding by small hill to its north, discovered dense artefact distribution (c. 70-100 pcs./m²) on ground level. Finds include a large quantity of pottery (see **Plate 9.3 in Appendix D**), blue-and-white porcelain of a probable Qing dating (see **Plate 9.5 in Appendix D**), and tiles with textile imprint (see **Plate 9.6 in Appendix D**). Given such a density of artefact and the composition of surface artefact, it was believed that Spot 4 was a possible dwelling feature.

SS-TKL-4 (see Figure SS-TKL-4 in Appendix B)

- 9.2.7 The sub-area is comprised of Ta Kwu Ling Farm and Tai Po Tin. Ta Kwu Ling Farm and orchards to its north are situated on plain. Modern buildings and pathways largely conceal land surface, and thus surface scanning was not able to identify any find and feature of archaeological significance. Tai Po Tin situates on river terrace, however, a recent construction to straighten the stream has altered the original landscape along the river terrace. As a result, no finds and features of archaeological significance could be observed.

SS-TKL-5 (see **Figure SS-TKL-5**, **SS-TKL-5a** and **SS-TKL-5b** in **Appendix B**)

- 9.2.8 The sub-area is comprised of Ping Che and Kat Tin villages, Ping Yeung Public School and small hill north of the school. Landscape of this sub-area consists of small hill and river terrace and most vacant land is covered by grasses and trees.
- 9.2.9 At Spot 5, where a small hill is at the east of Kat Tin, discovered a large quantity of tile and a small quantity of village ware and blue-and-white porcelain (see **Plate 9.7** in **Appendix D**) of a probable Qing dating. Access to the abandoned Ping Yeung Public School is blocked due to locked school gate. At Spot 6 in the small hill at north observed shards of urn in similar form to village ware, but they were not collected due to the lack of datable characteristics.

SS-TKL-6 (see **Figure SS-TKL-6** in **Appendix B**)

- 9.2.10 The sub-area is located at Nga Yiu Ha where north of Ping Yuen River. It consists of slope and river terrace. Vacant land is covered by thick vegetation and thus no finds or features of archaeological significance can be observed.

Dating

- 9.2.11 The surface scanning produced a small quantity of blue-and-white porcelain shards dating to Qing or earlier period. In comparison to published material on Wun Yiu Site of Archaeological Interest, blue-and-white porcelain shards collected at Spot 1 (see **Plate 9.1** in **Appendix D**) and Spot 4 (see **Plate 9.5** in **Appendix D**) represent local style dating to Qing period. A rim shard found at Spot 3 (see **Plate 9.4** in **Appendix D**) has elaborately fine line drawing outlined in blue colour on the exterior, forming rolls decorated with wing-like pattern. It bears no typical characteristic of Qing period blue-and-white local ware and thus presumably dated to a period earlier than Qing. A bowl base collected at Spot 5 is fully glazed on both the interior and exterior (see **Plate 9.7** in **Appendix D**). On the interior base it is decorated with double circles and interlaced floral design in the centre while dense dotted painting strokes on the exterior. This style can probably be dated to Early to Mid Qing based on the research on Wun Yiu (Au 1997).

9.3 Result of Auger Hole and Pit Excavation

- 9.3.1 In general, no feature of archaeological significance was observed in most test pits and auger holes. A full record of the survey excavation is presented in Appendix A while summarized test pit and augering results are presented in **Table 9.1** and **Table 9.2** respectively. Remains which can be dated to Qing were discovered in three locations, namely, P8c, P8d and P7b. They are elaborated as below.

Auger Hole P7b

Landscape/Topographic Setting

- 9.3.1.1 P7b situated on vacant orchard owned by the government on plain (834249E, 843074N) with an altitude of c.a. +11.4mPD (see **Figure TKL-7** in **Appendix B**). An auger hole of 10cm diameter was drilled up to a depth of 1.37m, when the regolith was encountered.
- 9.3.1.2 Dense pottery and blue-and-white porcelain shards were observed on the ground surface (See **Plate 9.8** in **Appendix D**)³. Five layers were identified in Auger Hole P7b. A few pot shards were recovered from L3 and L4, and some tile fragments from L3 as well (See **Plate 9.9** in **Appendix D**); however, finds were too fragmentary to inform dating.
- 9.3.1.3 The results of Auger Hole P7b are insufficient to indicate that there are stable cultural layers and long term human inhabitancy in the area at or surrounding P7b. As a result, P7b is not regarded as an archaeological potential area.

Test Pit P8c

Landscape/Topographic Setting

- 9.3.1.4 P8c is situated on vacant land owned by the government on the west facing slope of a small hill in Kat Tin (834485E, 843197N) (see **Figure TKL-8** in **Appendix B**) with an altitude of c.a. +15.5mPD. A test pit of 1m x 1m was excavated up to a depth of 1.12m, when regolith was encountered.

Finding

- 9.3.1.5 Five layers were identified in Test Pit P8c, comprising of two modern layers (L1 and L2), a probable Qing layer (L3), a transitional layer (or eluvial horizon, L4) above regolith, and the regolith (L5). A blue-and-white broken bowl was found in L2 (See **Plate 9.11** in **Appendix D**). A small quantity of pottery, roof tile fragments and blue-and-white porcelain (see **Plate 9.10** in **Appendix D**) was recovered from L3.
- 9.3.1.6 The blue-and-white porcelain bowl (See **Plate 9.11** in **Appendix D**) found in L2 was accompanied with modern plastic. Nonetheless, the bowl is with similar floral pattern to another one collected in Wun Yiu Site of Archaeological Interest in the 1980s, which had a thermoluminescent dating of 1800-1700 A.D *terminus post quem*. (Lam 2000:152). Apart from the floral pattern on the exterior, there is one stroke written at the centre on the interior base. Strokes are painted with pale greyish blue while the background is thinly glazed in grey. A circle in the interior base and the exterior base are left unglazed reflecting the up-stacked firing method.
- 9.3.1.7 The blue-and-white porcelain found in L3 (see **Plate 9.12** in **Appendix D**) can be categorized into two types. One type is quiet similar to the bowl found in L2 in the way of decoration pattern and firing method, although the strokes

³ The number of retrieved finds is different from the finds observed and described in the text. The retrieved finds are selected for their archaeological significance.

appear to be dull green while the background colour is greyish green. The second is fully decorated with relatively thicker glaze on both the interior and the exterior, with vivid blue strokes illustrating floral pattern and relatively brighter background.

- 9.3.1.8 Plus the body fabric appears to be white in colour, this type should be able to compare with those made in Upper Wun Yiu (Cheung 1973:14). A fully glazed blue-and-white porcelain bowl is fired in an individual sagger. The firing method is different from the up-stacked firing method which aims to produce a large batch at one go. Full glaze vessels thus are considered expensive commodity targeting the upper class consumers (Ceng 2000:122).

Test Pit P8d

Landscape/Topographic Setting

- 9.3.1.9 P8d is situated on vacant land owned by the government at the foot of the east facing slope of a small hill behind Ping Che Kat Tin Children's Park (834644E, 843185N) (see **Figure TKL-8** in **Appendix B**) with an altitude of c.a. +15.3mPD. A test pit of 1.2m x 1.2m was excavated up to a depth of 0.65m, when regolith was encountered.

Finding

- 9.3.1.10 Two layers were identified in Test Pit P8d, comprising of a probable Late Qing layer (L1) and regolith (L2). A large quantity of blue-and-white porcelain (See **Plate 9.13** in **Appendix D**), pottery and ceramic building materials (See **Plate 9.14** in **Appendix D**) were recovered from L1.
- 9.3.1.11 According to phases made by Wun Yiu archaeological investigation (Au 1997), the blue-and-white porcelain found in L1 (See **Plate 9.13** in **Appendix D**) can be dated at least to Late Qing according to shards in similar patterns published in Au's investigation report on Wun Yiu Site of Archaeological Interest (Au 1997 and Au 2000) at Tai Po. Such patterns include morning glory, continual arrangement of rows of vertical strokes (See **Figure 2** in **Appendix C**), dragon pattern extending from the exterior into the interior across vessel wall (See **Figure 3** in **Appendix C**) and Chinese character "Fu(福)" (See **Figure 4** in **Appendix C**). However, it is worth mentioning that some other research indicates the very dragon pattern had already been a popular decoration at some kilns in Fujian Province during Yongzheng Period (Early Qing) (Ye and Lin 1993: 297).
- 9.3.1.12 According to phases made by Wun Yiu archaeological investigation , an oil lamp with flower-shape rim from L1 (See **Plate 9.13** in **Appendix D**) can probably be date to Mid Qing (see Au 1997: plate 194) and the shard with morning glory pattern to Early to Mid Qing (see Au 1997: figure 66).
- 9.3.1.13 Another bowl base unearthed from L1 is fully glazed on both the interior and exterior (See **Plate 9.13** in **Appendix D**). On the interior base it is decorated with double circles and interlaced floral design (See **Figure 5** in **Appendix C**) in the centre while dense dotted painting strokes on the exterior.

This piece is quite similar to the one recovered at Spot 5, SS-TKL-5, probably dating to Early to Mid Qing period (See **Plate 9.7** in **Appendix D**).

9.4 Archaeological Potential Areas of PC/TKL

- 9.4.1 Surface scan to the six **sub-areas** (see **Figure SS-TKL-0** in **Appendix B**) within the proposed development area in Ping Che/Ta Kwu Ling identified archaeological remains of probable Qing period at three locations, namely, SS-TKL-1, SS-TKL-3 and SS-TKL-5. However, only Spot 4 in SS-TKL-3 has the potential to be a possible dwelling site.
- 9.4.2 At Spot 4 in SS-TKL-3, which lies on river terrace bounded by a small hill to its north. Dense artefact distribution (c. 70-100 pcs./m²) on ground level were discovered. Finds include a large quantity of pottery, blue-and-white porcelain of a probable Qing dating, and tiles with textile imprint. Given such a density of artefact and the mixed composition of surface artefact, it was believed that Spot 4 was a possible dwelling feature of Qing to modern periods. Therefore, it is regarded as an archaeological potential area.
- 9.4.3 Two archaeological potential areas are identified in this survey between Sheung Shan Kai Wat, Ha Shan Kai Wat, and Kat Tin village, based on the datable artefacts. These two sites can be dated to Qing dynasty (see **IAAP-6** and **IAAP-7** in **Appendix E**).
- 9.4.4 Survey excavation and augering observed no features of archaeological significance in most test pits and auger holes proposed in this area. Nonetheless, finds from P8c, P8d and P7b composed of daily use wares and building materials suggest there were human occupation taking place at close vicinity during Early to Late Qing period. However, the findings from Auger Hole P7b in Yuen Ha Tsuen are too fragmentary and was disturbed to inform dating. Kat Tin is regarded an archaeological potential area due to stable cultural layer identified in Test Pit P8c and P8d.
- 9.4.5 The identification of the two archaeological potential areas is not only supported by the surface collection of ceramic shards, but also stable cultural layer and landscape of a small terrace in front of the hill, the ceramics found in the two previously unknown areas are dated to the Qing period .

Table 9.1 Summary of Test Pit Results in Ping Che/Ta Kwu Ling

Test Pit	Surface Altitude	Maximum Excavated Depth	Landscape	Current Land use	Strata					Artefacts / Remarks
					Top soil	Subsoil		Regolith	Bed rock	
						With archaeological materials	Without archaeological materials			
P1a	c.a. +15.6mPD	100cm	Small hill	Vacant	L1		L2	L3		
P2a	c.a. +14.5mPD	110cm	Small hill	Vacant	L1		L2	L3		
P2b	c.a. +15.6mPD	110cm	Slope	Vacant	L1		L2 L3 L4	L5		Fragments of modern flowerpot found in L1.
P3b	c.a. +14.7mPD	80cm	Small hill	Vacant	L1		L2 L3	L4 L5		
P4b	c.a. +15.1mPD	130cm	Small hill	Vacant	L1		L2 L3 L4	L5		
P4c	c.a. +15.5mPD	104cm	Slope	Vacant	L1		L2	L3		
P5a	c.a. +16.9mPD	110cm	Small hill	Vacant	L1		L2 L3	L4		
P6a	c.a. +11.5mPD	60cm	Village	Vacant	L1		L2	L3		Concrete rubbles found in L2
P6b	c.a. +9.3mPD	120cm+40cm (augering)	River terrace	Agricultural land	L1		L2L3 L4	L5		
P6c	c.a. +12.0mPD	106cm	Plain	Orchard	L1	L1	L2	L3		Glass bottles, concrete rubbles, pot shards, bricks found in L1
P7a	c.a. +13.0mPD	108cm	Plain	Orchard	L1		L2 L3	L4		Concrete Rubbles, glass fragments found in L1
P8c	c.a. +15.5mPD	112cm	Slope	Vacant	L1	L2, L3	L4	L5		Blue-and-white porcelain and plastic found in L2; blue-and-white porcelain, roof tiles and pottery found in L3.
P8d	c.a. +15.3mPD	65cm	Slope	Vacant	L1	L1		L2		Tiles, bricks, porcelain and pot shards found in L1.
P9b	c.a. +19.5mPD	90cm	Small Hill	Vacant	L1		L2	L3 L4		
P9e	c.a. +21.7mPD	80cm	Small Hill	Vacant	L1		L2, L3	L4		

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P11a	c.a. +24.5mPD	70cm	Small Hill	Vacant	L1			L2		
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Table 9.2 Summary of Auger Hole Results in Ping Che/Ta Kwu Ling

Auger Hole	Surface Altitude	Maximum Excavated Depth	Landscape	Current Land use	Strata					Artefacts / Remarks
					Topsoil	Subsoil		Regolith	Bed rock	
						With archaeological materials	Without archaeological materials			
P1b	c.a. +15.1mPD	25cm	River terrace	Vacant	L1					
P3a	c.a. +15mPD	45cm	Slope	Orchards	L1			L2		
P3c	c.a. +15mPD	110cm	Slope	Vacant	L1		L2	L3		
P4a	c.a. +16mPD	30cm	Small hill	Vacant	L1			L2		
P5b	c.a. +10.9mPD	145cm	River terrace	Agricultural land	L1		L2	L3		
P5c	c.a. +11.9mPD	140cm	River terrace	Vacant	L1		L2	L3		
P7b	c.a. +11.4mPD	137cm	Plain	Orchards	L1	Ground surface, L3 L4	L2	L5		Ming to Qing blue-and-white porcelain found at ground surface, Pot shards found in L3 and L4, and tiles found in L3
P8a	c.a. +16.8mPD	142cm	Small hill	Orchards	L1	L2	L3	L4		White ware found in L2
P8b	c.a. +16.8mPD	140cm	Agricultural land	Vacant	L1			L2		
P8e	c.a. +15.8mPD	110cm	Hill foot	Vacant	L1			L2		
P9a	c.a. +19mPD	23cm	Slope	Vacant	L1					
P9c	c.a. +19.9mPD	125cm	Small hill	Vacant	L1		L2	L3		
P9d	c.a. +15.5mPD	135cm	Small hill	Vacant	L1			L2		
P10a	c.a. +14mPD	15cm	Plain	Vacant	L1			L2		
P11b	c.a. +21mPD	140cm	Small hill	Vacant	L1		L2	L3 L4		
P12c	c.a. +13mPD	27cm	Plain	Agricultural land	L1					
P13c	c.a. +14.8mPD	39cm	Plain	Vacant	L1		L2			Cloth pieces and glass fragment found in L2. Hard surface reached beneath L2

Table 9.3 Quantity of Finds retrieved from PC/TKL in this Field Survey^

Area	*AH/TP/SS	Grid	Context	Late Neolithic and Bronze Ages Geometric Pottery	Song to Yuen Celadon	Ming to Qing Blue-and-White porcelain	White Ware	Glazed Ware	Pottery Shards	Tiles	Bricks	Modern wares	Undiagnostic
PC/TKL	AH	P7b	SC	0	0	3	0	0	0	0	0	0	0
PC/TKL	AH	P7b	L3	0	0	0	0	0	0	6	0	0	0
PC/TKL	AH	P8a	L2	0	0	0	1	0	0	0	0	0	0
PC/TKL	TP	P2a	SC	0	0	0	0	0	0	0	0	0	1
PC/TKL	TP	P2b	L1	0	0	0	0	0	0	0	0	7	0
PC/TKL	TP	P6c	L1	0	0	0	0	0	0	0	2	3	0
PC/TKL	TP	P8c	L1	0	0	0	0	0	2	1	0	0	0
PC/TKL	TP	P8c	L2	0	0	1	0	0	0	0	0	0	0
PC/TKL	TP	P8c	L3	0	0	7	0	0	14	2	0	0	0
PC/TKL	TP	P8d	L1	0	0	40	0	15	1	7	1	0	0
PC/TKL	SS	SSTKL1	Spot 1	0	0	2	0	0	0	0	0	0	0
PC/TKL	SS	SSTKL3	Spot 2	0	0	0	0	0	3	0	0	0	0
PC/TKL	SS	SSTKL3	Spot 3	0	0	1	0	0	1	0	0	0	0
PC/TKL	SS	SSTKL3	Spot 4	0	0	7	0	0	15	8	0	0	0
PC/TKL	SS	SSTKL5	Spot 5	0	0	1	0	0	0	0	0	0	0
PC/TKL Total 152				0	0	62	1	15	36	24	3	10	1

* AH=Auger Hole; TP=Test Pit; SS=Surface Scanning; SC=Surface Collection.

^ The number of retrieved finds is different from the finds observed and described in the text. The retrieved finds are selected for their archaeological significance.

10 CONCLUSIONS

10.1.1 There is a general pattern in the location of archaeological materials in the NDAs, that they all lie on the gentle hill sides or river terraces on colluvial debris flow deposits (Qpd deposits)(such as K14a – Ho Sheung Heung, F1c and F4a – near Fu Tei Au, SS-FLN-3 –Sheung Shui Wa Shan Public School, SS-TKL-3 – near Sheung Shan Kai Wat, P8c and P8d – in Kat Tin Tsuen).

10.1.2 The previous survey at Sheung Shui Wa Shan suggested that this site did not extend to the river side of the Ng Tung River, while the archaeology lies near the foot of the hill / edge of the river terrace on Qpd deposits.

Archaeological Potential Areas

10.1.3 A total of seven archaeological potential areas are identified in this field survey. Among them, four archaeological potential areas, Fui Tei Au West and Hung Kiu San Tsuen in FLN, and Sheung Shan Kai Wat and Kat Tin in PC/TKL were identified in this field survey(**Appendix E**), based on datable artefacts. These four areas dated to Song-Yuen periods and Ming-Qing periods. Another three archaeological potential areas are re-identified at Ho Sheung Heung in KTN, Fu Tei Au East and an area south to Sheung Shui Wa Shan Public School in FLN (**Appendix E**). These areas dated to Song-Yuen and Bronze Ages based on the datable artefacts. The findings are concluded below.

Ming-Qing period (1368 – 1911)

10.1.4 The archaeological findings can be dated to the Ming-Qing period. Many blue-and-white porcelain shards from F4a and P8c and P8d as well as those from field scans are comparable to those recovered from Wun Yiu Site of Archaeological Interest at Tai Po, which contain characteristics of both early and late Qing period.

10.1.5 There are also a few blue-and-white porcelain shards that contained decoration styles similar to those adopted in Ming period in those assemblages. Indicative archaeological potential areas of this period can be seen on **Figure IAAP-1, Figure IAAP-3, Figure IAAP-4, Figure IAAP-6 and Figure IAAP-7 in Appendix E.**

Song-Yuan period (960 – 1368)

10.1.6 K14a contained a stratum where celadon and blackware have been identified. At Spot 2 and Spot 3 in SS-FLN-1, celadon bowl shards are also recovered which may be identified to be Song-Yuan artefacts. However, it is not possible to discern a clear chronological relationship due to the lack of archaeological features that provides a strong indication of Song-Yuan existence in the stratigraphy, but the findings would indicate that there were past human activities in these areas during and/or after the Song-Yuan period. Indicative archaeological potential areas of

this period can be seen on **Figure IAAP-1** and **Figure IAAP-2** in **Appendix E**.

Late Neolithic / Early Bronze Age (BC2000 – BC 1000)

- 10.1.7 The geometric pottery shard found in Spot 7 of SS-FLN-3 is commonly seen in the Hong Kong region during the Late Neolithic and Bronze Age. Together with previous archaeological works took place in this area, the finding once again indicates the existence of Late Neolithic to Bronze Age archaeological remains on hill slopes at Sheung Shui Wa Shan.
- 10.1.8 In 1978, Lovelace's excavation unearthed 53 pottery shards on the hill slope near Spot 7 of SS-FLN-3 (Lovelace 1978). An archaeological survey undertaken in 1986 also collected 46 pottery shards on surface level of the slope, of an elevation in between +10 and +30m.P.D (Peacock and Nixon 1988 Part I Vol. III 8).
- 10.1.9 The shards uncovered from the two previous works just mentioned includes hard geometric and coarse-ware in (Peacock and Nixon 1988 Part I Vol. III 8) which can be dated back to Late Neolithic Age. In addition, AMO's excavation results at lowland bounding Ng Tung River (AMO 2000), which yield no archaeological finds of this period.
- 10.1.10 It thus is believed that Late Neolithic or Bronze Age archaeological materials may only exist on the lower slope or terrace areas during Late Neolithic period (Peacock and Nixon 1988 Part I Vol. III 8). Archaeological potential areas of this period can be seen on **Figure IAAP-5** in **Appendix E**.
- 10.1.11 The rest of the surveyed area in the NDAs contained no archaeological remains or feature, and is considered having no archaeological significance.
- 10.1.12 Test pits and hand augering holes of this field survey were dug and drilled within NDAs' government lands. Archaeological potential of NDAs' private lands should further be assessed prior to detail design of the NDA's development.

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