APPENDIX H

Report of Utility Survey

SUPPLEMENTARY REPORT OF

THE LAND SURVEY AND

UNDERGROUND UTILITY CHECKING

AT PARKING BAYS

FOR

SOIL VAPOUR EXTRACTION AND

AIR SPARGING PILOT TEST AT

KAI TAK INTERNATIONAL AIRPORT

SUBMITTED BY :
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1. INTRODUCTION

As an extension of ground investigation work being conducted in the existing parking apron of Kai Tak International Airport, four soil vapour extraction holes, one air sparging hole, thirteen soil vapour monitoring holes and four groundwater monitoring holes are to be formed where the computer model has identified the possible plume of fuel oil contamination right below ground. As instructed by the client, one additional air sparging hole, five additional soil vapour monitoring holes and twelve additional groundwater monitoring holes are constructed later. The exact coordinates of the proposed drill point will be determined and any underground utilities in close proximity to the point will be checked for existence. Should this survey confirm a volume clearance of utilities both at a distance 1.5m and at a depth 3m from the drill points, the proceeding coring/ drilling work can be commenced.

This supplement report aims to document the details of the land and utility survey.

2. SITE SURVEY

The thorough site survey involved two sub-surveys in sequence, namely utility survey and land survey. They aimed to check for the presence of underground utilities in vicinity and to determine the drill hole co-ordinates. the land work was conducted on 10 August 1998, 12 August 1998, 19 August 1998 and 14 September 1998.

2.1 Utility Survey

The utility survey typically comprises a desk review of any utility plans and a field verification by a electronic detector. Underground utilities within the area specified by the environmental consultant were checked for utilities with a portable radio-detector. The detection area was a 3 x 3 m^2 square centred at the proposed drill point to a depth 3m below ground. Then area to be scanned was regarded adequate given the drill hole size of not greater than 10" in diameter and utilities unlikely buried too deep beyond 3m below ground.

2.2 Land Survey

The coordinates of the proposed points were determined by an electronic distance measurer (the theodolite) which measured the distance and bearings from the target location to a reference point where the exact elevation and coordinates were known. Forty locations were set out and recorded of their coordinates and elevation. The proposed drill holes are denoted as follow :

Type of Wells	Refer
Soil Vapour Extraction Well	VT1, VT2, VT3, VT4
Air Sparging Well	3AS, 4AS
Soil Vapour Monitoring Well	1A, 1B, 1C, 2A, 2B, 2C, 3A, 3B, 3C, 3D, 3E, 3F, 4A, 4B, 4C, 4D, 4E, 4F
Groundwater Monitoring Well	3W1, 3W2, 3W3, 3W4, 3W5, 3W6, 3W7, 3W8, 4W1, 4W2, 4W3, 4W4, 4W5, 4W6, 4W7, 4W8

3. THE RESULT

3.1 Underground Utility Checking

From the utility plans, cables were shown existing around the originally proposed VT2. By site inspection, the original VT2 was close to the grassland and it may affect the test result. Therefore, the location of VT2 was moved about 30m away from the original one. The area around the proposed drill points was scanned but found no utility lines running under.

3.2 Land Survey

The proposed drill locations are given in Appendix.

4. CONCLUSION

The setting-out of the proposed points were made and coordinates and elevation data recorded. The utility survey revealed that the volume at a distance 1.5m and a depth 3m from the proposed drill points were cleared of any utilities.

APPENDIX

Co-ordinates of SVE / AS Monitoring Drill Holes

Drill Holes No.	Northing	Easting	Gound Level
VT1	820767.17	838193.98	5.14
1A	820768.97	838198.60	5.15
1B	820770.67	838203.32	5.16
1C	820774.05	838212.75	5.18
VT2	820691.97	838074.01	5.29
2A	820696.83	838075.42	5.28
2B	820701.63	838076.82	5.26
2C	820711.19	838079.62	5.22
VT3	820646.01	838313.00	5.02
3AS	820646.00	838312.50	5.02
3A	820647.04	838313.03	5.02
3B	820651.01	838313.16	5.02
3C	820655.97	838313.41	5.04
3D	820665.97	838313.84	5.08
3E	820641.96	838315.97	5.01
3F	820643.31	838308.44	4.99
3W1	820648.49	838312.81	5.01
3W2	820648.49	838313.30	5.02
3W3	820651.47	838312.95	5.02
3W4	820651.43	838313.44	5.02
3W5	820643.98	838314.70	5.01
3W6	820643.58	838314.19	5.01
3W7	820645.90	838313.04	5.05
3W8	820644.86	838310.33	5.00
VT4	820463.65	838315.67	4.51
4AS	820463.16	838315.19	4.51
4A	820464.09	838314.53	4.53
4B	820465.67	838311.13	4.51
4C	820467.70	838306.55	4.51
4D	820471.80	838297.43	4.54
4E	820466.37	838319.56	4.52
4F	820458.67	838316.06	4.52
4W1	820464.42	838313.09	4.55
4W2	820464.90	838313.25	4.55
4W3	820465.58	838310.34	4.54
4W4	820466.13	838310.49	4.53
4W5	820465.19	838317.35	4.52
4W6	820464.75	838317.62	4.52
4W7	820461.20	838316.02	4.53
4W8	820461.12	838315.54	4.53