

Installation of Submarine Gas Pipelines
and Associated Facilities from
To Kwa Wan to North Point for Former Kai Tak Airport Development
Consultancy Services for Feasibility Study and Detailed Design
Environmental Impact Assessment Report



Appendix H2
Marine Archaeological Monitoring Brief

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1. Introduction

The Marine Archaeological Investigation established high archaeological potential for the existence of archaeological remains buried within the sub seabed sediments. During dredging for Kai Tak airport a Ming Cannon was exposed and it is possible that other such artefacts remain buried. Soft marine mud extends across the study area thereby providing sufficient sediment to bury archaeological remains.

A geophysical survey was completed to establish archaeological potential. Three unidentified objects were located and a diver inspection was completed. They were found to be modern material. However, the geophysical survey did not provide 100% coverage due to gas blanking. In these areas no data was obtained and it was not possible to carry out an archaeological assessment. A monitoring brief is therefore required at the locations of the masked areas which are 50m from the centreline of the revised route as set out in Figure H1.

2. Monitoring Brief

It is understood that the dredging may take up to a year to complete. It is therefore not cost effective or practical to have a marine archaeologist on the dredging vessel for the whole time. However, it will be essential to have a commissioned qualified marine archaeologist on standby so that they can respond immediately, if required. The archaeologist does not need to be present on site but easily contactable via email or other means. The marine archaeologist will provide specialist advice and liaise with the Antiquities and Monuments Office (AMO) on behalf of the developer.

On every working barge a member of staff needs to be appointed as the Monitoring Officer. This person will monitor the dredged sediment and look out for unusual objects. A Guide to identifying finds and a Preliminary Record Form have been prepared and included in this document to assist the Monitoring Officer.

It is understood that there is a separate requirement for monitoring of barge loading which is set out in Section 4.6 of the EIA. It would be cost effective to have the same person complete the two monitoring processes.

Immediately that an unusual object is identified, the Monitoring Officer shall inform the Master of the ship. The ship's position shall be noted and dredging within 50m of the location avoided. The Preliminary Record Form should be completed, copied to the AMO and contact with the marine archaeologist established. The object should be stored in seawater, in a clean container which should be covered. Any rust, concretion or marine growth should not be removed.

This procedure should not cause any delay to the dredging programme as work can continue in areas 50m away from the find.

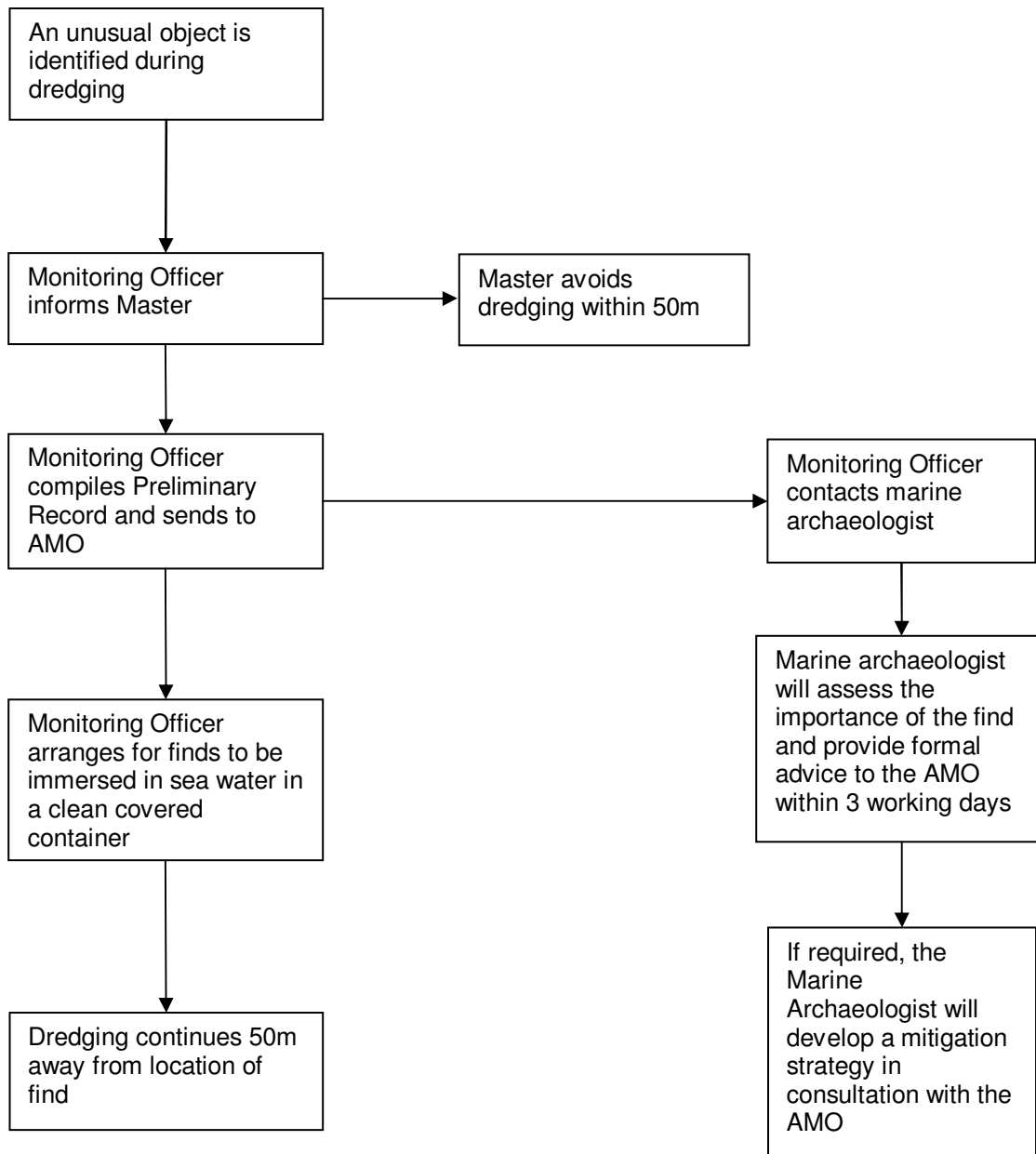
It is important that the marine archaeologist is contacted as quickly as possible, preferably the same day as the discovery and formal archaeological advice should be sent to the AMO in no more than three working days.

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The flow chart set out below shows the key stages that should be followed:

Key Stages for the Monitoring Brief

- The term Master is used for the person in control of the dredging vessel
- The Monitoring Officer is a member of the dredging vessel crew specifically appointed to watch the dredging spoil for unusual objects
- The Marine Archaeologist shall be appointed by the developer and be ready to respond immediately if required
- Antiquities and Monuments Office is abbreviated to AMO



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Types of Find

'Finds' are considered here to mean all forms of artefact that can be found on or in the seabed. To be an artefact, the thing must have been made, modified, used or transported by people i.e. their presence on the seabed is not natural.

3. Guidelines for Identifying Finds of Archaeological Interest

This Guide is provided to assist non professional archaeologists identify objects which may have archaeological potential.

Rubber, Plastic etc.

In most cases rubber, plastic and similar modern materials are not of archaeological interest and can be disregarded.

One exception is where such materials are found in the same area as aluminium objects and structures, which may indicate aircraft wreckage from World War Two. Such material should be reported.

Iron and Steel

The potential range and date of iron and steel objects is so wide that it is difficult to provide general guidance. In broad terms, iron and steel objects, which are covered by a thick concrete like coating ('concretion') are likely to be of archaeological interest and should be reported.

Pieces of metal sheet and structure may indicate a wreck and should be reported.

Other Metals

Items made of thin, tinned or painted metal sheet are unlikely to be of archaeological interest.

Aluminium objects may indicate aircraft wreckage from World War Two, especially if two or more pieces of aluminium are fixed together by rivets.

Copper and copper alloy (bronze, brass) objects might indicate a wreck, or they may be very old. All occurrences should be reported.

Precious metal objects and coins are definitely of archaeological interest because they are relatively easy to date. All occurrences should be reported.

Bone

Large quantities of animal bone may indicate a wreck (the remains of cargo or provisions) and should be reported. Objects made out of bone such as combs, harpoon points or decorative items can be very old and are definitely of archaeological interest. All occurrences should be reported.

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Wood

Light coloured wood or wood that floats easily is probably modern and is unlikely to be of archaeological interest.

Pieces of wood that have been shaped or jointed may be of archaeological interest, especially if fixed with wooden pegs, bolts or nails.

Any wood with branches or bark is unlikely to be of archaeological interest.

Stone

Large blocks of stone that have been pierced or shaped may have been used as anchors or weights for fishing nets. All occurrences should be reported.

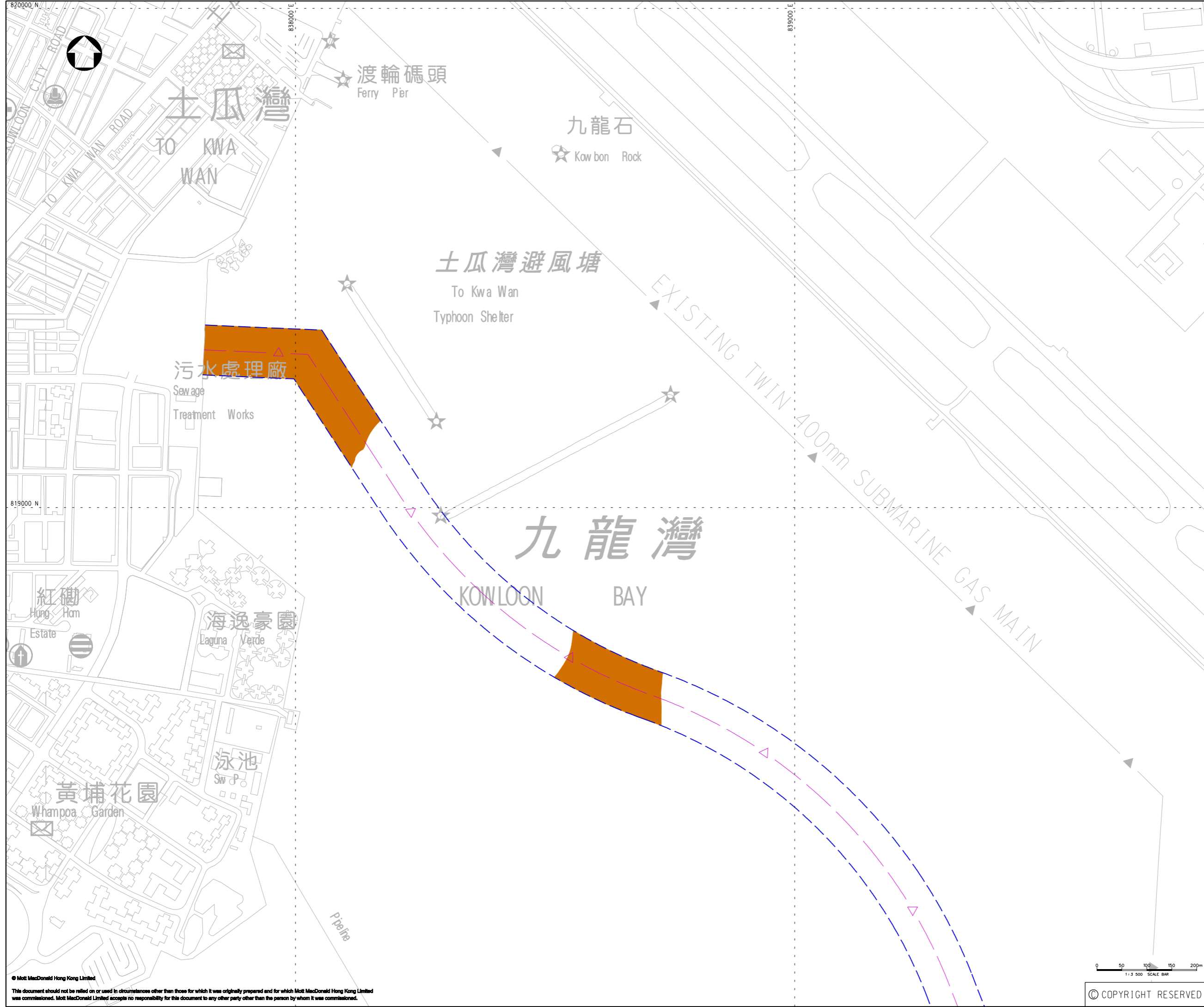
The recovery of numerous stones may indicate the ballast mound of a wreck.

Pottery

Any fragment of pottery is potentially of interest, especially if it is a large fragment. Items which look like modern domestic crockery can be discarded, but if the item has an unusual shape, glaze or fabric it should be reported.

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| Marine Archaeological Monitoring Brief Preliminary Record Form | |
|---|--|
| Date | |
| Name of Monitoring Officer | |
| Vessel Name | |
| Vessel position at time of locating object | |
| Time at which object located | |
| Original position of object on the seabed | |
| Notes on likely accuracy of original position stated above | |
| Description of the object | |
| Details of photographs taken of the object | |
| Details of any drawings of other records made of the object | |
| Details of treatment given to the object | |
| Location of the object on shore | |
| Date and time at which standby marine archaeologist contacted | |
| Signed | |
| Date | |



LEGEND:

- EXISTING TWIN 400 SUBMARINE GAS MAIN
- PROPOSED SUBMARINE GAS MAIN
- 50m FROM THE CENTRELINE
- MASKED AREA

| | | | | | |
|-----|--------|-------|-------------|-------|-------|
| P1 | MAY 10 | MING | FIRST ISSUE | HY | TI |
| Rev | Date | Drawn | Description | Chk'd | App'd |

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Project

INSTALLATION OF SUBMARINE GAS PIPELINES AND ASSOCIATED FACILITIES FROM TO KWA WAN TO NORTH POINT FOR FORMER KAI TAK AIRPORT DEVELOPMENT

Title

MASKED AREA REQUIRING MONITORING DURING DREDGING

| | | | |
|-------------|-----------|--------------|--|
| Designed | HY | Eng.Chk. | FY |
| Drawn | MING | Coordination | KL |
| Dwg.Chk. | HY | Approved | TI |
| Scale | 1:3500@A1 | Project | 237926 |
| | | CAD File | 31\237926\REPORT\ENV\EM&A MANUAL\00531\FIGURE_H1.dgn |
| Drawing No. | FIGURE H1 | Status | PRE |
| | | Rev | P1 |

0 50 100 150 200m
1:3500 SCALE BAR

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