ISSUE
01

FarrimondMacManus Ltd

ARCHAEOLOGY - SURVEY - GIS

This issue

Archaeological Mitigation of Historic Maritime Site

Site/Project:
Victoria Towers/Musgrave PS

Industry:
Public Body

Client:
Estate Services Business Unit

Location:
Belfast

Site Type:
Historic Maritime

Deliverables:
3D Laser Scan survey
2-D output drawings

Archaeological Evaluation, Excavation & Reporting

Benefits:
Cost Effective
i.e. reduced man power/man hours

Rapid Survey

Meets planning requirements imposed upon development under PPS6 BH4

Introduction

Musgrave Police Station is located within the historic boundaries of Belfast within an area to be known as being of having particular maritime importance. The development of the site was to include the construction of a multi-storey car park and new office buildings to include large scale invasive ground works.

While no existing historical or archaeological monuments were known from within the site boundaries, the historic nature of the surrounding area implied a high potential for the existence of under ground building/archaeological remains. As such planning conditions were imposed upon the development by the Historic Monuments Unit of Northern Ireland Environment Agency (NIEA:HMU) under *Planning Policy Guideline PPS6 BH4* to ensure the appropriate treatment of any remains in order to allow the development to proceed.

Archaeological Evaluation

A desk based study was carried out in order to assess the historical significance of the area, the results of which indicated a high potential for the remains of an historic dock known as Mays Dock to extend across the site. The desk based study also noted that no historical archives exist in relation to the construction and use of the dock during the 19th century.

Preliminary site investigations in the form of targeted machine cut trench excavation were implemented as a means informing the likely extent and nature of sub surface archaeological remains. These confirmed the existence of both a man made channel and potential dock wall remains to extend across the site.

As a result of the on site evaluation it was agreed that an Archaeological Programme of Works would be agreed with NIEA:HMU and implemented which would allow for development to proceed and archaeological mitigation to be carried out as laid out in *Planning Policy Guideline PPS6 BH4*.

Mays Dock Wall uncovered during ground reduction

Laser scan survey in conjunction with continuing development works

Applications:

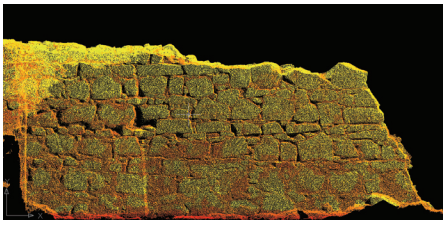
Invaluable aid assisting in the rapid recording of archaeological and heritage sites prior to development.

Invaluable aid in heritage site management and archiving.

Archaeological Mitigation

Archaeological monitoring of bulk ground excavation at the site identified the extensive remains of a 20m wide stone built dock complex consisting of two substantial dock walls built to a height of up to 3m, with associated slipway, retention walls and warehouse foundations.

Rapid archaeological excavation and recording of this historic dock was required under the tight time constraints of the development programme.



Scan point cloud showing detail of Dock Wall

Archaeological Recording & Rapid survey

Each section of Dock Wall uncovered by machinery was fully exposed to facilitate a rapid Laser Scan survey to be carried out.

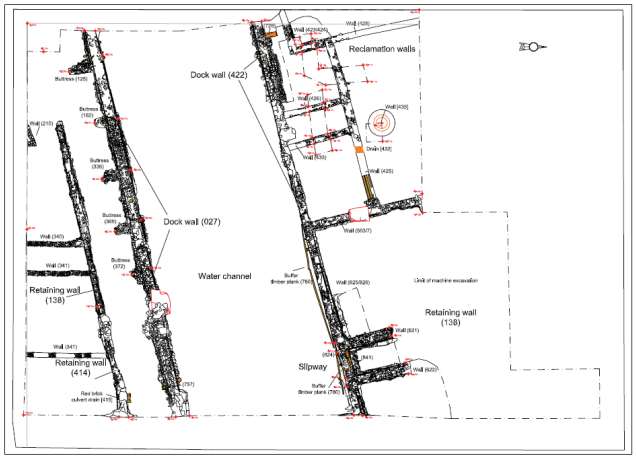
The scanner allowed for a complete digital record of the dock remains to be collected on site within a matter of hours as supposed to the traditional time consuming manual hand drawing by archaeological illustrators, which could take days as supposed to hours to complete.

The digital survey represented a complete “as built” record allowing for the **immediate removal** of the feature upon survey completion.

CAD Analysis and Reporting

The completely registered 3D point cloud scans were taken off site and imported into CAD software for interrogation and visualisation analysis, and to generate accurate scaled 2D plan, section and stone-by-stone detail elevation drawings.

Not only did the scan allow for detailed measured analysis of the dock it aided in the interpretation of the dock’s construction phasing. The survey and associated archaeological recording represented a unique historical archive which was lodged as part of an excavation report with NIEA:HMU representing **full compliance** with imposed planning conditions.



Scale stone by stone plan drawing of Mays Dock produced from laser scan data