



Crindau Pill, Newport, surface water outfall sewer

**Archaeological Written Scheme
of Investigation**

by

**The
Glamorgan-Gwent Archaeological Trust Ltd
(GGAT Projects)**

Marine License Application Number – CML1842

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Summary

A Marine License (CML1842) has been granted to the client for the construction of a surface water sewer pipe running from Albany Street, Newport to an outfall in Crindau Pill, Newport. A condition for granting the Marine License was that the Licensee was to produce an archaeological Written Scheme of Investigation setting out a programme for an archaeological Watching Brief, prior to commencement of any development work.

The Glamorgan-Gwent Archaeological Trust Ltd Projects Department (GGAT Projects) have been commissioned by the client to prepare the archaeological Written Scheme of Investigation (WSI), which provides the framework for archaeological works to be undertaken at the site.

The scheme allows for an archaeological watching brief to be carried out on all groundworks required for the development. The scheme also includes contingency arrangements including the provision of sufficient time and resources to ensure that any archaeological features or finds that are located during the development are properly excavated, recorded and removed. If suitable deposits are encountered, the scheme also includes the provision for any sampling that may prove necessary, post-excavation recording and reporting and possible publication of the results.

The archaeological works will be carried out to the professional standards laid down by the Chartered Institute for Archaeologists' Standard and Guidance for Archaeological Watching Briefs (2014).

Acknowledgements

The project was managed by Martin Tuck MCifA (Senior Project Manager) and the report was prepared by Johnny Crawford BSc MA ACifA (Assistant Project Manager) of GGAT Projects, illustrations were prepared by Paul Jones (Senior Illustrator).

Copyright notice

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Abbreviations

NGR:	National Grid Reference
PRN:	Primary Record Number (in HER)
NPRN:	National Primary Record Number (in NMR)
SM:	Scheduled Monument (Cadw)
LB:	Listed Buildings Grade I, II and II* (Cadw)
RCAHMW:	Royal Commission on the Ancient and Historical Monuments of Wales
ICON:	Institute of Conservation
HER:	Historic Environment Record (curated by the Glamorgan-Gwent Archaeological Trust)

1 Introduction

1.1 Development proposal and planning background

1.1.1 Planning permission has been received under the terms of Marine Licence CML1842, for the construction of a surface water outfall sewer and associated infrastructure near Albany Street, Crindau Pill, Newport, centred on NGR ST 31313 89562 (Figure 1).

1.1.2 A condition of the granting of a Marine Licence was that

‘The Licence Holder must submit a ‘Written scheme of investigation for a Watching Brief’ to NRW on behalf of the Licensing Authority for written approval at least 6 weeks prior to commencement of the works. No works may be undertaken prior to written agreement from NRW on behalf of the Licensing Authority

The License Holder should ensure that the Written Scheme of Investigation is for a Watching Brief to be carried out by a suitably qualified archaeologist during all intrusive groundworks’

1.2 Site description

1.2.1 The proposed development is located within a well developed light industrial area sited on the western side of the River Usk (Figure 1). The route of the sewer follows an un-named roadway that runs approximately south east from a junction with Albany Street to the bank of Crindau Pill, a tidal spur of the River Usk.

1.3 Archaeological Background

1.3.1 Crindau Pill is an area that holds significant archaeological potential and any development work within that area is likely to be subject to archaeological conditioning. The current WSI has been written to comply with a condition for the granting of the Marine License (CML1842) deemed necessary to carry out the development works. The following is a brief summary of the currently known archaeological information for the development area.

1.3.2 The route of the sewer is depicted as undeveloped riverbank on the 1883 Ordnance Survey First Edition map but the same map shows what appears to be a sub-rectangular inlet approximately 60metres north of the sewer route, which may have been a mooring point or similar. This suggests that the Pill, known as Malpas Brook at the time, was still used as a viable waterway. Indeed, the greatest archaeological potential for the site comes from the possibility of remains associated with the use of the Pill as a waterway, such as the remains of boats and waterside structures.

1.3.3 The planned route of the sewer runs approximately 15metres to the north of the site of the Albany Street brickworks. Specifically the route comes close to a number of clay extraction pits, which, whilst of interest in themselves, may have reduced the potential for archaeological remains to remain undisturbed in the area.

1.3.4 The sewer route lies within 100metres of two sets of chemical storage tanks shown on the Ordnance Survey Third Edition map of 1920. The northern set of tanks is associated with a chemical works and jetty served by Crindau Pill, and located approximately 100m to the north. To the west, within 35metres of the western end of the proposed sewer route were a set of storage tanks associated

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with a gasworks. Whilst these features would not be disturbed by the current development, they do indicate that ground contamination may be present along the route of the pipe, as a result of historical industrial activity. Structures associated with the chemical works and gasworks are visible on an aerial photograph of 1945, but it is clear that the current industrialised landscape in the development area is a post Second World War creation.

2 Specification

2.1 Purpose

- 2.1.1 The purpose of this written scheme is to set out a quantifiable schedule of works against which performance, fitness for purpose and achievement of quality can be measured.
- 2.1.2 This written scheme has been prepared to ensure that the work is undertaken to the standard required by the Chartered Institute for Archaeologist's *Standard and Guidance for Archaeological Watching Briefs* (2014).

2.2 Objectives

- 2.2.1 An investigation of the potential archaeological resource through observation and recording in order to ensure the safeguarding of the resource in the development area prior to and during construction works.
- 2.2.2 The presentation of these observations in a written report, taking account of related documentary and historical evidence.
- 2.2.3 The preparation of an archive of data recovered and records made as a result of the project, and the deposition of this archive in a suitable receiving museum or similar institution.

2.3 Timing

- 2.3.1 The archaeological watching brief will commence following the notification of a start date for the development works as provided by the client.
- 2.3.2 The timing of on-site works will be phased according to the development programme and each component will be agreed in advance.

2.4 Nature of effect

- 2.4.1 The scope of works will entail the excavation of trenches and pits suitable for the construction of a surface water sewer pipeline and associated infrastructure such as manholes and foundations. There is the potential for encountering previously unknown archaeologically significant artefacts and features within the proposed development, especially those relating to maritime utilisation of the Crindau Pill waterway.

2.5 Assessment of potential impact

- 2.5.1 Without appropriate forms of mitigation, the following development activities are deemed likely to have a potential impact on the archaeological resource:
 - Demolition works
 - Construction of site compounds
 - Ground preparation/enabling works, including any ground investigation works and access
 - Topsoil stripping

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- Reduction of ground levels and creation of parking
- The excavation of foundation trenches
- The excavation of service trenches
- Landscaping works, including any levelling
- Any other ground intrusive works

2.6 Specification strategy

- 2.6.1 The strategy is proposed based on the likely extent and form of archaeological interests and the proposed extent and form of development effect.
- 2.6.2 The effect of the development on potential archaeological interests will be safeguarded by means of an archaeological watching brief undertaken on the groundwork's specified in 2.5.1 above to meet the requirement of the Chartered Institute for Archaeologist's *Standard and Guidance for Archaeological Watching Briefs* (2014).
- 2.6.3 If archaeologically significant remains are discovered during the watching brief, the archaeologist carrying out the works, in consultation, where appropriate, with the resident engineer (or equivalent agent), will make a decision as to whether it can be adequately recorded and removed without disruption to any nearby development works.
- 2.6.4 In the event that a significant discovery is made during the watching brief, and the provision in paragraph 2.6.3 cannot be put into effect, then arrangements will be made to modify the construction programme and fence off the area of interest to allow its safe and effective investigation and recording.
- 2.6.5 In the event that remains are encountered during the watching brief which are of such complexity or significance that the contingency arrangements would not be of sufficient scope, a meeting with the NRW, the LPA, their archaeological advisors and any other parties that may be relevant to the issue, should be convened in order to agree an appropriate strategy.

3 Resourcing

GGAT Projects will provide the following input to carry out the subsequent archaeological works.

3.1 Staffing

The project staff involved are experienced archaeologists drawn from the team regularly used, these will include:

- Martin Tuck MCIfA, Senior Projects Manager, responsible for the tracking of the project and maintaining quality
- Assistant Project Manager/Archaeologist, responsible for carrying out the watching brief

Additional input is provided by:

- Finds Specialist, responsible for finds recovery policy and arrangement of specialist services
- Project Archaeologists (finds), responsible for cleaning, cataloguing and analysing finds
- Illustrator, responsible for preparing publication-standard drawings, artistic reconstruction drawings, information boards, leaflets and advertisements

3.2 Specialists

Specialist expertise, if required, will be obtained from suitably qualified internal and external individuals. These specialists will be drawn from the following list used by GGAT:

- Ceramic building material: Martin Locock (Freelance)/Dr Edith Evans (GGAT)
- Clay pipes: Charlotte James-Martin (Freelance)
- Coins: Steve Sell (Freelance)
- Conservation: Phil Parkes, Cardiff Conservation services (Cardiff University)
- Faunal remains: Hannah Bowden (GGAT)
- Flints: Elizabeth Walker (NMW)
- Glass: Joyce Compton (Freelance)
- Metalwork: Dr Mark Redknap (NMW) / Prof Bill Manning (Freelance)
- Medieval stone: Dr Mark Redknap (NMW)
- Medieval and Post-medieval coins: Steve Sell (Freelance)
- Medieval pottery: Joyce Compton (Freelance)
- Metalwork and industrial slag: Dr Tim Young (Cardiff University and GeoArch) / Daria Dabal (GGAT)
- Mortar analysis: Rob Dunning (GGAT)
- Palaeoenvironmental remains: University of Wales Lampeter, Archaeological Services (UWLAS) / Wendy Carruthers (Freelance)

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- Post-medieval pottery: Joyce Compton (Freelance)
- Prehistoric pottery: Jody Deacon (NMW)
- Roman pottery: Joyce Compton (Freelance)
- Waterlogged wood: Prof Nigel Nayling / Dr Rod Bale (UWLAS (UWTSD))

Further specialist expertise in other disciplines will be obtained as required from suitably qualified individuals/institutions.

4 Implementation

4.1 General implementation

- 4.1.1 The specified archaeological works will be undertaken to the highest possible standards in line with the requirements of the Chartered Institute for Archaeologist's *Standard and Guidance for Archaeological Watching Briefs* (2014).
- 4.1.2 If stray finds or deposits of minor interest are encountered these will be recorded by the archaeologist as the specified ground works proceed.
- 4.1.3 If more significant deposits are found these will be investigated and recorded within a secured area.
- 4.1.4 Should human remains be encountered, the nature and extent of those remains will be established and recorded, and the coroner informed. However, the remains will be left *in situ*, with suitable measures in place to ensure their protection. Special circumstances may dictate the need to remove human remains if they are thought to be vulnerable to further damage or obstructive to the broader aims of the work. In such cases, the human remains will be archaeologically recorded and removed under conditions that comply with all current legislation. This will include reporting to the relevant authorities, the obtaining of proper licences, and the provision for eventual reburial following appropriate analysis. All human remains will be excavated by hand in accordance with the Chartered Institute for Archaeologist's *Excavation and Post-Excavation Treatment of Cremated and Inhumed Human Remains: Technical Paper Number 13* (1993).
- 4.1.5 It is intended that the site archive, including any finds assemblage, will be deposited with an appropriate institution (Newport Museum), or retained by the landowners, as required.
- 4.1.6 The finds, including artefacts and ecofacts, excepting those, which may be subject to the laws of *Treasure Act* (1996) and/or *Treasure Order* (2002), will be deposited with the same institution, subject to the agreement of the site owners. An agreement with an appropriate institution to accept this material will need to be made on completion of fieldwork and assessment of the nature of the finds recovered.
- 4.1.7 A report describing the works carried out and findings made will be prepared and submitted to the local planning authority.

4.2 Specification methodology

- 4.2.1 Prior to their implementation, a specific Health and Safety risk assessment, will be drawn up before the commencement of the watching brief.
- 4.2.2 Any ground intrusions will be conducted under archaeological watching brief conditions. These include, but are not limited to, those specified in section 2.5.1. No groundworks should be undertaken in the area to which this scheme applies without liaising with the site archaeologist.
- 4.2.3 In the event of particularly significant or complex discoveries being made during the course of the watching brief, those areas will be fenced off and clearly demarked.
- 4.2.4 No machines or contractors should work in such areas until such time as

recording has been completed.

4.3 Method of recording

- 4.3.1 The techniques employed should conform to best current professional practice. During the watching brief, all archaeological deposits should be recorded with a single continuous context numbering system. The archaeological contractor should, upon request, submit a copy of its recording forms and manual to the client. Contexts will be drawn at a suitable scale in plan, and, where appropriate, in section. All significant contexts will be digitally photographed, with a resolution of no less than ten megapixels. Survey information will be related to the Ordnance Survey National Grid and levels related to the Ordnance Survey Datum.
- 4.3.2 All classes of finds will be retained, cleaned, and catalogued until arrangements for final deposition have been agreed, in line with the requirements of the Chartered Institute for Archaeologist's *Standard and Guidance for the collection, documentation, conservation and research of archaeological materials* (2014). If substantial quantities of undiagnostic, residual or modern material are recovered, an on-site recording and discard policy for these classes of find will be devised. If human remains are encountered, they will be archaeologically recorded and removed under conditions, which comply with all current legislation, including reporting to the relevant authorities, the obtaining of proper licences, and the provision for eventual reburial following appropriate analysis. All human remains will be excavated by hand in accordance with the *Chartered Institute for Archaeologists Excavation and Post-Excavation Treatment of Cremated and Inhumed Human Remains: Technical Paper Number 13* (1993).
- 4.3.3 In the event that suitable deposits are encountered, the management of environmental recording and sampling will follow the principles and tenets laid down in Historic England's (formerly English Heritage's) *Environmental Archaeology: A guide to the theory and practice of Methods, from sampling and recovery to post-excavation* published in 2011. All deposits with a high potential for the preservation of palaeoenvironmental material will be sampled, by column, bulk and other method, for possible subsequent analysis, in accordance with a sampling strategy overseen by a specialist with appropriate expertise. Sampling and recording will be the responsibility of an identified member of the field team with relevant experience.

5 Reporting

- 5.1.1 An archive of archaeological records relating to the fieldwork and an archive of records relating to the preparation of the reports will be prepared to the specifications in *The National Standard and Guidance to Best Practice for Collecting and Depositing Archaeological Archives in Wales* (National Panel for Archaeological Archives in Wales 2017).
- 5.1.2 Archaeological and historical sources will be consulted, in order to place the results of the fieldwork in an appropriate archaeological and historical framework.
- 5.1.3 Following a review of the potential of the recovered evidence, a programme of analysis and research will be undertaken, resulting in the preparation of a site narrative and supporting data, including finished drawings and photographs as necessary.
- 5.1.4 The archaeological contractor should identify the internal or external specialists who will be responsible for preparing reports on cultural or palaeoenvironmental material, and dating and for overseeing the sampling programme.
- 5.1.5 Reporting will be phased according to the construction programme but will include a synthesis of the data gathered, together with inclusion of supporting evidence in appendices as appropriate, and illustrations. A PDF of the report will be supplied to the client and if requested two hard copies of the report. It is the submission of this report which enables the discharge of the planning condition.
- 5.1.6 Short archaeological digest reports will be submitted for publication in relevant regional, national and thematic learned journals; as a minimum, a report will be submitted to the annual publication of the regional CBA group or equivalent journal. Non-technical reports will also be produced to inform the general public of the archaeological investigations, this may also include web pages, posters, leaflets or other media forms.
- 5.1.7 It is intended that the site archive, including any finds assemblage, will be deposited with an appropriate institution, or retained by the landowners, as required, in accordance with the ICON and the National Panel for Archaeological Archives in Wales guidelines (*The National Standard and Guidance to Best Practice for Collecting and Depositing Archaeological Archives in Wales* (2017)), and subject to the agreement of the legal landowner.
- 5.1.8 A digital copy of the report and full archive will be deposited with the National Monuments Record, RCAHMW, Aberystwyth, and a digital copy of the report and archive index will be deposited with the Regional Historic Environment Record, curated by the Glamorgan-Gwent Archaeological Trust, Swansea in accordance with the guidance for the Submission of Data to the Welsh Historic Environment Records (HERs).
- 5.1.9 The finds, including artefacts and ecofacts, excepting those, which may be subject to the laws of *Treasure Act* (1996) and/or *Treasure Order* (2002), will be deposited with the same institution, subject to the agreement of the site owners. An agreement with an appropriate institution to accept any such material will need to be made on completion of fieldwork and assessment of the nature of the finds recovered.

6 General

6.1 Insurance

- 6.1.1 The contractor should hold full insurance cover for this type of work, to include Professional Indemnity and Public Liability cover. Full details of these and other relevant policies should be supplied to the client on request.

6.2 Health and Safety

- 6.2.1 The contractor should provide to the client a copy of its Health and Safety statement in accordance with *The Health and Safety at Work Act 1974*. The contractor should prepare any documentation required by the *Construction Design and Management Regulations 2015*
- 6.2.2 Prior to commencement of work, the contractor should carry out a formal Health and Safety Risk Assessment in accordance with *The Management of Health and Safety Regulations 1999*. A copy of the risk assessment should be kept on any site office and be available for inspection on request.
- 6.2.3 In addition to statutory requirements, the contractor should follow best practice for Health and Safety in archaeology as defined in the FAME (Federation of Archaeological Managers and Employers) *Manual of Health and Safety in Field Archaeology* (2010).

6.3 General Limitations

- 6.3.1 The work outlined in this specification will be carried out to the highest professional standards, and the conclusions drawn will be based on a considered review of the evidence available. However, the archaeological resource is unpredictable, and the encountering of unexpected archaeological deposits on the site cannot be ruled out. Examination of such deposits is beyond the scope of the specification and must be agreed by separate negotiation.
- 6.3.2 Should there need to be a variation to the provisions of the specification, this will be agreed in advance with the Client and the relevant Planning Authority or their agents.

6.4 Quality Control

- 6.4.1 The contractor should carry out the work in accordance with the Chartered Institute for Archaeologist's *Code of Conduct*, *Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology*, and other related by-laws, and the *Standard and Guidance for archaeological watching briefs*, *Standard and Guidance For Archaeological Field Evaluation*, *Standard and Guidance For Archaeological Excavation* and the *Standard and Guidance For the Archaeological Investigation and Recording of Standing Buildings or Structures* currently in force.

6.5 Arbitration

- 6.5.1 Any dispute or difference arising out of a contract in relation to this work will be referred for a decision in accordance with the Rules of the Chartered Institute of Arbitrators' *Arbitration Scheme for the Institute for Archaeologists* applying at the date of the agreement.

7 References

Legislative and CIfA guidelines:

- Chartered Institute for Archaeologists. 2014. *Standard and Guidance for Archaeological Watching Briefs*.
- Department for Culture, Media and Sport. 1996. *The Treasure Act 1996 Code of Practice (2nd Revision)*
- Department for Culture, Media and Sport. 2002. *Treasure (Designation) Order 2002*.
- Glamorgan-Gwent Archaeological Trust. 2002. *Manual of Excavation Recording Techniques*
- National Panel for Archaeological Archives in Wales. 2017. *The National Standard and Guidance to Best Practice for Collecting and Depositing Archaeological Archives in Wales*.

Glossary

Archive

An ordered collection of all documents and artefacts from an archaeological project, which at the conclusion of the work should be deposited at a public repository, such as the local museum.

Assessment

A desk-based assessment is a detailed consideration of the known or potential archaeological resource within a specified area or site (land-based, intertidal or underwater), consisting of a collation of existing written and graphic information in order to identify the likely character, extent, quality and worth of the known or potential archaeological resource in a local, regional or national context as appropriate.

Brief

An outline framework of the archaeological situation which has to be addressed, together with an indication of the scope of the works that will be required.

Bronze Age

A chronological division of the prehistoric period, which sees the introduction of copper and the eventual widespread adoption of bronze for use in weapons, jewellery etc. In Britain it is dated between circa 2300 and 700 BC.

Cadw

Cadw is the Welsh Government's historic environment service: Cadw are responsible for the planning issues which affect statutorily protected monuments and buildings. They also grant aid repairs to historic buildings and monuments and manage ancient monuments which are in direct State care.

Early-medieval

The period after the break down of Roman rule and the Norman invasion (circa 410 to 1066 AD).

Field evaluation

A limited programme of non-intrusive and/or intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site; and, if present, defines their character and extent, and relative quality. It enables an assessment of their worth in a local, regional, national or international context as appropriate. The programme of work will result in the preparation of a report and ordered archive

Historic Environment Record (HER)

A documentary record of known sites in a given area. In south-east Wales the HER is curated by the Curatorial Division of the Glamorgan-Gwent Archaeological Trust.

Medieval

The period after the Norman invasion nominally finishing at the Battle of Bosworth and the commencement of the reign of Henry VII (1067 to 1485 AD).

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Mesolithic

A chronological division of the prehistoric period spanning the period from the end of the last ice age to the introduction of farming. It is dated between circa 10,000 and circa 4,400 BC.

Modern

The period since 1901 AD.

Natural

Archaeological term for undisturbed natural geology on a site.

Neolithic

A chronological division of the prehistoric period during which agriculture and domestic animals were introduced to Britain. It is dated circa 4,400 to circa 2,300 BC.

NGR

National Grid Reference

Palaeolithic

The earliest division of the prehistoric period, from the first evidence of tool making by humans to the final retreat of glacial ice from Britain. It is dated circa 22,500 to circa 10,000 BC.

Post-medieval

Period between 1486 and 1901 AD.

Risk Assessment

A document prepared to meet the requirements of *The Management of Health and Safety at Work Regulations 1992* assessing all risks to the health and safety of employees and others arising from a work activity.

Roman

Period when Britain was ruled by Rome circa 44 - 410 AD

Romano-British

Term used to describe a fusion of indigenous late Iron Age traditions with Roman culture

Specification

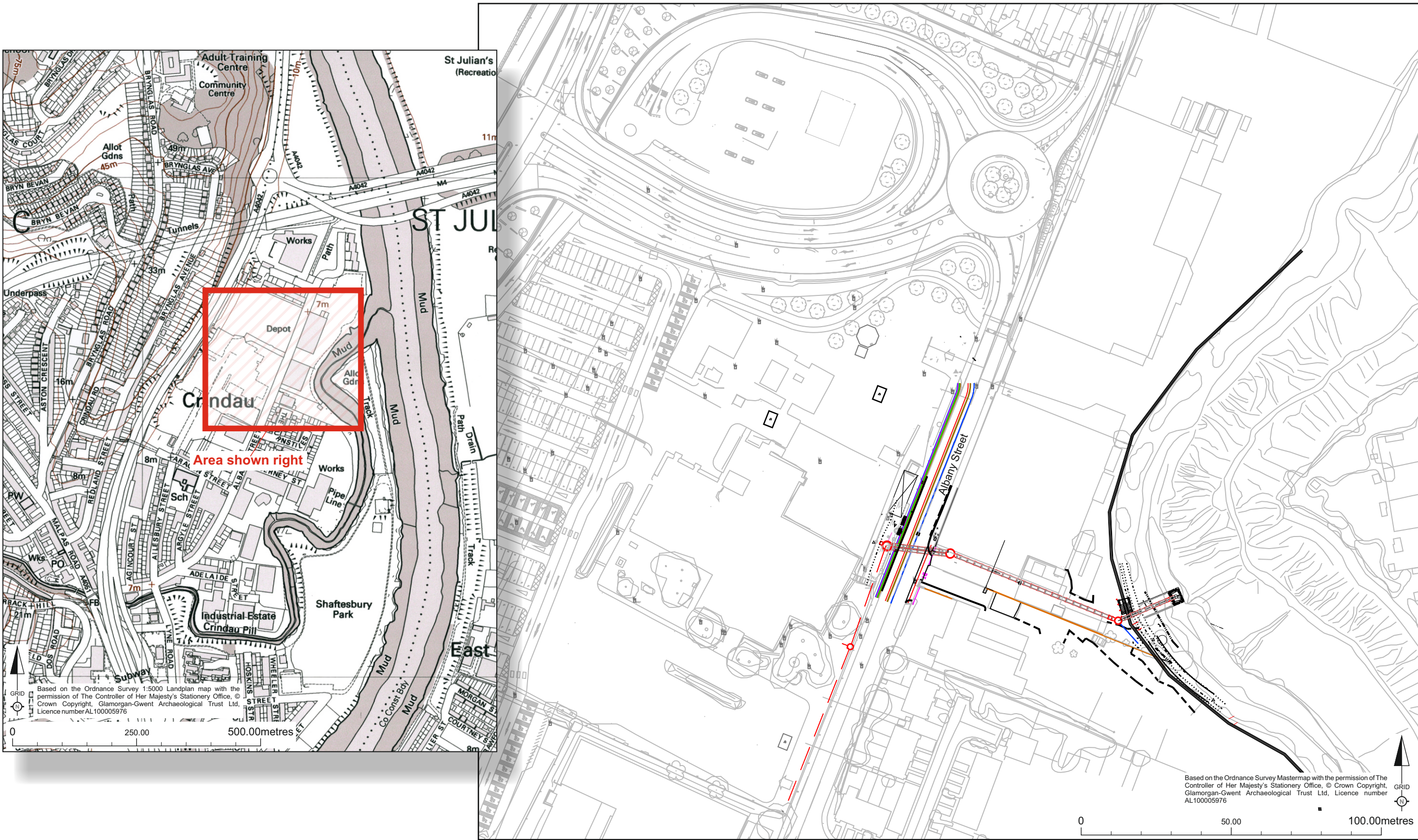
A written schedule of works required for a particular project (by a curator, planning archaeologist or client), set out in sufficient detail to be quantifiable, implemented and monitored. Normally prepared by or agreed with the relevant curator.

Watching brief

An archaeological watching brief is defined as a programme of observation, investigation and recording conducted during any operation carried out for non-archaeological reasons within a specified area or site, where there is a possibility that archaeological deposits may be disturbed or destroyed. The programme of work will result in the preparation of a report and ordered archive.

Welsh Archaeological Trusts

There are four Welsh Archaeological Trusts, Clwyd-Powys, Dyfed, Gwynedd and Glamorgan-Gwent. The Trusts were established between 1974 and 1975 in order to carry out rescue archaeological work in Wales. The Trusts are now divided into Contracts and Curatorial Divisions. They are all charities but are also limited companies.





**Glamorgan-Gwent
Archaeological Trust Ltd
(Projects Department)**



QUALITY CONTROL

Report Title: Crindau Pill, Albany Street, Newport, surface water outfall sewer: written scheme of investigation

Report Date: December 2018

Report Number: 2018/069

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Date: 3/12/2018

Illustrations prepared by: Paul Jones

Position: Senior Illustrator

Date: 3/12/2018

Report checked and authorised by: Martin Tuck

Position: Senior Project Manager

Date: 6/12/2018

As part of our desire to provide a quality service we would welcome any comments you may wish to make on the content or presentation of this report.