

Trevor Basin Area Site Arrival & Car Park

Cultural Heritage Desk-Based Assessment

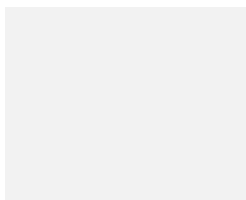
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1 Introduction

1.1 Background

- 1.1.1 Arcadis Consulting (UK) Limited was commissioned by Wrexham County Borough Council to complete a Desk-Based Assessment (DBA) to support a planning application which seeks consent for access improvements and a new visitor car park and associated vehicular access on the brownfield site locally recognised as the “Flexsys Site” hereafter called “the Site”.
- 1.1.2 This project forms part of a programme of work to improve movement infrastructure at key destination sites in Wrexham County Borough and Denbighshire, following a successful joint County Borough application to the UK Government Levelling Up Fund. This project is for a new arrival point and car park primarily for the Pontcysyllte Aqueduct & Canal World Heritage Site (WHS).
- 1.1.3 This DBA is intended to meet the information requirements of national and local heritage planning policy outlined in Section 3.

1.2 Scope

- 1.2.1 The purpose of the assessment is to:
- Identify any known historic assets present within the Site and Study Area;
 - Determine the potential for currently unrecorded archaeological remains within the Site;
 - Assess the significance of historic assets that could be affected by the Proposed Development;
 - Assess the effect of any development on the setting of historic assets within the Site and Study Area;
 - Determine the likely impacts of the Proposed Development upon known and potential undiscovered archaeological assets, including consideration of changes to their setting (where applicable); and
 - Make recommendations for further assessment and/or field investigations, as appropriate.

1.3 Assumptions and Limitations

- 1.3.1 This report has been prepared for the Client in accordance with the terms and conditions of appointment. Arcadis cannot accept responsibility for any use of, or reliance on, the contents of this report by a third party. The copyright of this document, including the electronic format shall remain the property of Arcadis.
- 1.3.2 This report has been compiled from a number of sources, which Arcadis believes to be trustworthy. However, Arcadis is unable to guarantee the accuracy of information provided by others. The report is based on information available at the time. Data from Historic Environment Records (HERs) and other national datasets consists of secondary information derived from varied sources, only some of which were directly examined during the compilation of this report. Furthermore, due to the nature of archaeological remains, the precise location of buried archaeological remains is often uncertain as the majority of such sites have never been subject to archaeological investigation to modern standards. Assessment of the value of such sites is often reliant on informed extrapolation from limited data, comparison with similar remains found in other contexts, and which may change this report's conclusion and for which Arcadis cannot be responsible.

1.4 The Proposed Development

1.4.1 This project is for a new arrival point and car park primarily for the Pontcysyllte Aqueduct & Canal World Heritage Site (WHS), and includes:

- Creation of 252 car parking spaces including electric vehicle charging points. This consists of:
 - 170 standard parking spaces surfaced in reinforced gravel
 - 25 mobility parking spaces surfaced in asphalt
 - 57 overflow parking spaces surfaced in reinforced grass
 - A coach park with the capacity for 9 coach spaces
- Landscaped footpaths with wayfinding features to guide users towards the Aqueduct
- Asphalt and reinforced gravel vehicular routes
- Welcome signage at the entrance of the site
- Seating for users around the site
- Gates and fencing around the perimeter of the site:
 - 1.8m high decorative vertical bar railings along Queen Street
 - 1.8m high weld mesh fencing around remaining site boundaries east of Queen Street
- Additional native tree, woodland, shrub, grass, and fern planting
- Wildflower meadow seeding
- 2 no. drainage ponds for SuDS attenuation
- Safeguarded location for a future kiosk and toilet block

1.4.2 This project represents a significant investment to help ensure the Trevor Basin Area current visitor levels are maintained and appropriately catered for. This forms part of a wider masterplan for the Trevor Basin and surrounding area, which is described further within the Design and Access Statement which accompanies this planning application.¹

¹ Arcadis and Wrexham County Borough Council, 2024. Trevor Basin World Heritage Site Arrival



Plate 1: Plan of the proposed development

1.5 Site Overview

Location, Geology, Topography and Current Conditions

- 1.5.1 The Site is located between the settlements of Cefn Mawr to the east and Trevor to the west, approximately 7 miles south-west of Wrexham. The Site is situated at c. 90m aOD, on sloping ground on the northern side of the Vale of Llangollen, through which runs the River Dee. The River Dee is located c.450m to the south of the Site. The Site is located on sloping ground that rises up towards Acrefair c. 275m to the north. The high sandstone ridge of Cefn Mawr is located c. 200m to the east and the settlement of Trevor is located c. 140m to the west. Approximately 380 to the south of the Site, the landform abruptly plunges steeply downward to the River Dee – it is this steep valley that the Pontcysllte Aqueduct was built to cross.
- 1.5.2 The bedrock geology of the Site is comprised of Pennine Lower Coal Measures Formation and Pennine Middle Coal Measures Formation Mudstone, Siltstone and Sandstone. This is overlain by a superficial deposit of Devensian Till – Diamicton which formed during the Quaternary period.
- 1.5.3 The Site is bisected by Queen Street which runs in a north-west to south-east direction. The parcels of the Site either side of Queen Street are henceforth referred to as “the eastern parcel” and “the western parcel”. The culverted Tref-y-nant Brook runs through the eastern parcel of the Site, on a north-west to south-east alignment.
- 1.5.4 The Site has been extensively terraced by 19th- and 20th-century industrial developments, to create various building platforms and retaining walls. As a result, the ground levels vary across the Site, with various different terraces representing the surviving floors of demolished industrial buildings (and associated infrastructure).



Plate 2: View towards Site from King Street, looking west-south-west



Plate 3: Demolition rubble in north-western part of Site



Plate 4: Demolished 20th-century industrial building in south-eastern part of Site, looking east



Plate 5: Demolished 20th-century industrial buildings in southern part of Site, looking north-east to residential development on the ridge at Cefn Mawr



Plate 6: Remnants of 20th-century industrial structures in south-eastern part of Site, looking south-east



Plate 7: Surviving 20th-century railings and walls in southern part of Site, looking north



Plate 8: Internal access road within south-western part of Site, looking north



Plate 9: 20th-century underpass in the Site, connecting the eastern and western parcels below Queen Street



Plate 10: View across Site from Queen Street overbridge, looking north-east



Plate 11: Western parcel of Site, looking west in direction of Llangollen Canal

2 Methodology

2.1 Study Areas

- 2.1.1 A Study Area of 500m has been utilised for designated historic assets. A smaller study area of 250m has been utilised for non-designated historic assets. HER data was originally requested for a 500m area, however, due to the excessively large volume of HER records the study area was reduced to 250m for non-designated assets.

2.2 Sources

- 2.2.1 A range of sources have been consulted to inform this assessment, in line with best practice guidance issued by Cadw and the Chartered Institute for Archaeologists (CIfA).
- 2.2.2 Data from within the Site and study areas has been obtained from the following sources:
- The DataMapWales website for information on designated heritage assets <https://datamap.gov.wales/maps/cadw-historic-assets/>;
 - LiDAR data from DataMapWales;
 - Glamorgan-Gwent Archaeological Trust Historic Environment Record for non-designated heritage assets and archaeological event data;
 - Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW) - National Monument Record Database 'Coflein' website;
 - Historic mapping from online sources such as the National Library of Scotland and Promap websites for historic OS maps, and the National Library of Wales website for Tithe Maps;
 - Third-party historical websites such as the Plas Kynaston Canal Group and the Pontcysyllte Aqueduct website;
 - A site visit;
 - The British Geological Survey website; and
 - Satellite imagery from Google Earth.
- 2.2.3 A full list of references and sources consulted can be found in Appendix B

2.3 Consultation

- 2.3.1 The scope of this DBA has been informed by consultation with Mark Walters, Senior Planning Archaeologist at the Glamorgan-Gwent Archaeological Trust (GGAT), which was carried out in December 2023 and January 2024.

2.4 Presentation of Data

- 2.4.1 The Historic Environment baseline evidence is presented in Section 4. Numbers and letters in bold and in brackets within the text are unique identifiers (Project ID numbers, prefixed with LB, SM, CA, RPG and EV) assigned to historic assets by Arcadis for the purposes of this report (e.g. LB1). Non-designated historic assets are not prefixed and are represented by a numerical Project ID (e.g. 1, 2 etc.). A gazetteer of all historic assets including archaeological events can be found in Appendix A. All figures are located within Appendix C. All designated heritage assets, non-designated heritage assets and archaeological events are shown on Figures 1, 2, 3 and 5.

2.5 Assessment Criteria

- 2.5.1 Current international guidance on the assessment of historic asset significance is provided by ICOMOS in the 2011 publication 'Guidance on Heritage Impact Assessments for Cultural World Heritage Properties'. This document sets out the basis for assessing historic assets of all significance levels, not just World Heritage Sites.
- 2.5.2 Current national guidance on the assessment of the significance of heritage assets is provided by Cadw. Significance of an asset is described by Cadw as: 'The sum of its cultural heritage values.' These values can be summarised as their physical remains and surviving fabric, pictorial and documentary records that help us understand them, their capacity to illuminate aspects of the past and connect us to it, their aesthetic qualities, the value they have to the people who relate to them.
- 2.5.3 In this assessment due weight has been given to the 'Conservation Principles for the Sustainable Management of the Historic Environment in Wales' (Cadw 2011) in which significance is weighed by consideration of the potential for the asset to demonstrate the following values. The significance of an asset is formed by a combination of any or all of values which are summarised below:
- **Evidential Value:** *"This derives from those elements of an historic asset that can provide evidence about past human activity, including its physical remains or historic fabric. These may be visible and relatively easy to assess, or they may be buried below ground, under water or be hidden by later fabric. These remains provide the primary evidence for when and how an historic asset was made or built, what it was used for and how it has changed over time. The unrecorded loss of historic fabric represents the destruction of the primary evidence."*
 - **Historical Value:** *"An historic asset might illustrate a particular aspect of past life or it might be associated with a notable family, person, event or movement. These illustrative or associative values of an historic asset may be less tangible than its evidential value but will often connect past people, events and aspects of life with the present. Of course the functions of an historic asset are likely to change over time and so the full range of changing historical values might not become clear until all the evidential values have been gathered together. Historical values are not so easily diminished by change as evidential values and are harmed only to the extent that adaptation has obliterated them or concealed them."*
 - **Aesthetic Value:** *"This derives from the way in which people draw sensory and intellectual stimulation from an historic asset. This might include the form of an historic asset, its external appearance and how it lies within its setting. It can be the result of conscious design or it might be a seemingly fortuitous outcome of the way in which an historic asset has evolved and been used over time, or it may be a combination of both."*
 - **Communal Value:** *"This derives from the meanings that an historic asset has for the people who relate to it, or for whom it figures in their collective experience or memory. It is closely linked to historical and aesthetic values but tends to have additional or specific aspects. Communal value might be commemorative or*

symbolic. For example, people might draw part of their identity or collective memory from an historic asset, or have emotional links to it. Such values often change over time and they may be important for remembering both positive and uncomfortable events, attitudes or periods in Wales's history. Historic assets can also have social value, acting as a source of social interaction, distinctiveness or coherence; economic value, providing a valuable source of income or employment; or they may have spiritual value, emanating from religious beliefs or modern perceptions of the spirit of a place."

2.5.4 Table 1: Historic Asset Significance has been developed using Welsh, UK and international guidance and professional judgement. This sets out the overall level of significance that can be assigned to a historic asset, following the determination of its heritage values.

Table 1: Historic Asset Significance

Significance	Criteria for assessing the significance of heritage assets
Very High	World Heritage Sites Assets of recognised international importance Assets that contribute to international research goals
High	Scheduled monuments Grade I and Grade II* Listed Buildings Grade I and Grade II* Registered Parks and Gardens Non-designated assets of the quality and importance to be designated Assets that contribute to national research agendas Landscapes of outstanding or special historic interest
Medium	Grade II Listed Buildings Grade II Registered Parks and Gardens Assets that contribute to regional research goals
Low	Locally Listed Buildings Landscapes of special value Assets compromised by poor preservation and/or poor contextual associations Assets with importance to local interest groups Assets that contribute to local research goals
Negligible	Assets with little or no archaeological/historical interest
Unknown	The importance of the asset has not been ascertained from available evidence

- 2.5.5 Whilst the general values and significance of historic assets are set out above, these only give a guide for the assessment of the importance of heritage assets. The assessed significance of an asset may vary based on the outcomes of research, consultation and professional judgement.

2.6 Setting and Significance

- 2.6.1 Cadw's 'Conservation Principles' Glossary (2011) states that that Significance is "*the sum of the cultural heritage values (evidential, historical, aesthetic, communal)*", to which its setting contributes. Setting is defined by Cadw as: "*The surroundings in which an historic asset is experienced, its local context, embracing present and past relationships to the adjacent landscape.*"
- 2.6.2 How setting may contribute to the significance of a heritage has been assessed within this report in accordance with the guidance set out in Cadw's 'Setting of Historic Assets in Wales' (2017). Assessment of setting takes the following steps:
- Step 1: Identify which heritage assets and their settings are affected; and
 - Step 2: Assess the degree to which these settings and views make a contribution to the significance of the heritage asset(s) or allow significance to be appreciated.

2.7 Assessment of Harm or Benefits

- 2.7.1 This DBA will assess the harm or benefits (if any) that would result to the historic environment as a result of the proposed development. This assessment follows Cadw's best practice guidance document 'Managing Heritage Impact Assessment in Wales' (2017) and ICOMOS guidance (2011). It states that where possible, harm should be avoided, and benefits to heritage assets should be prioritised. Where damage is unavoidable, compensatory measures should be used to offset harm.

Articulation of Harm/Change

- 2.7.2 Cadw's 'Conservation Principles' (2011) defines harm as "Change for the worse, here primarily referring to the effect of inappropriate interventions on the heritage values of an historic asset."
- 'Conservation Principles' (2011) states that "*The assessment of the degree of harm to an historic asset needs to consider the impact of any proposal on its heritage values, and the likely consequences of doing nothing.... The impact of the proposals being put forward need to be assessed by comparing the significance of the historic assets to be affected in their current condition and after the completion of the works.*"
- 2.7.3 The table below is derived from the ICOMOS guidance document "Guidance on Heritage Impact Assessments for Cultural World Heritage Properties" (2011), slightly modified to accord with Cadw guidance and using professional judgement.

Table 2: Assessment of Harm to Historic Assets

Significance of Heritage Asset	Scale & Severity of Impact				
	No Impact	Negligible Impact	Minor Impact	Moderate Impact	Major Impact
For World Heritage Sites: Very High – attributes which convey OUV	Significance of Overall Harm/Benefit				
	Neutral	Slight	Moderate/Large	Large/Very Large	Very Large
Very High	Neutral	Slight	Moderate/Large	Large/Very Large	Very Large
High	Neutral	Slight	Moderate/Slight	Moderate/Large	Large/Very Large
Medium	Neutral	Neutral/Slight	Slight	Moderate	Moderate/Large
Low	Neutral	Neutral/Slight	Neutral/Slight	Slight	Slight/Moderate
Negligible	Neutral	Neutral	Neutral/Slight	Neutral/Slight	Slight

3 Legislation, Policy and Guidance

- 3.1.1 This assessment has been undertaken in accordance with current legislation, national and local plans and policies. Relevant legislation, policy and guidance are outlined below.

3.2 The Convention Concerning the Protection of World Cultural and Natural Heritage (1972)

- 3.2.1 The Convention was adopted by the General Conference of UNESCO in 1972. It set out internationally-accepted definitions of cultural and natural heritage and set out the basis for the designation and protection of World Heritage Sites and their Outstanding Universal Value.

3.3 The Xi'an Declaration on the Conservation of the Setting of Heritage Structures, Sites and Areas (2005)

- 3.3.1 The Xi'an Declaration was adopted by the General Assembly of the International Council of Monuments and Sites (ICOMOS) in 2005. The Declaration consist of a series of principles and recommendations, the purpose of which is to:
- Acknowledge the contribution of setting to the significance of heritage monuments, sites and areas;
 - Understand, document and interpret the settings in diverse contexts;
 - Develop planning tools and practices to conserve and manage settings;
 - Monitor and manage change affecting settings; and
 - Work with local, interdisciplinary and international communities for co-operation and awareness in conserving and managing settings.

3.4 Legislation

- 3.4.1 The relevant Act of Parliament which provides the legislation framework for development and archaeology is the Town and Country Planning Act 1990. This assessment has also taken into account the Planning (Listed Buildings and Conservation Areas) Act 1990, the Ancient Monuments and Archaeological Areas Act 1979 the Well-being of Future Generations (Wales) Act 2015 and the Historic Environment (Wales) Act 2016.

Town and Country Planning Act (1990)

- 3.4.2 The Town and Country Planning Act states that every planning area must have a local plan within which precise policies are made clear. Local plans must state general planning policies for the areas they cover and include details about which specific areas would be considered for housing planning applications. The act also states that planning applications must adhere to the guidance within the local plans.

Planning (Listed Buildings and Conservation Areas) Act (1990)

- 3.4.3 Legislation relating to built heritage is principally set out within the Planning (Listed Buildings and Conservation Areas) Act 1990 which provides statutory protection for Listed Buildings and Conservation Areas. Section 66(1) of the Planning (Listed Buildings and Conservation Areas) Act 1990 states that:

“In considering whether to grant planning permission [or permission in principle] for development which affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State, shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses.”

Ancient Monuments and Archaeological Areas Act (1979)

- 3.4.4 The Ancient Monuments and Archaeological Areas Act 1979 gives statutory protection to any structure, building or work which is considered to be of particular historic or archaeological interest and regulates any activities which may affect such areas. Under the Act any work that is carried out on a Scheduled Ancient Monument must first obtain Scheduled Monument consent

Well-Being of Future Generations Act (2015)

- 3.4.5 Under the Well-being of Future Generations Act 2015, public bodies now have a duty to use sustainable development to shape everything they do, how it is done, and how it is communicated (via reporting), to show how they are contributing to the achievement of the well-being goals. This means that each public body must work to improve the four aspects of well-being in Wales which are: economic, social, environmental and cultural.

The Historic Environment Wales Act (2016)

- 3.4.6 The Historic Environment Wales Act (2016) is intended to make improvements to existing legal provisions for the Welsh historic environment. The Bill ‘gives more effective protection to listed buildings and scheduled monuments, enhances existing mechanisms for the sustainable management of the historic environment, and introduces greater transparency and accountability into decisions taken on the historic environment’.

3.5 National Policy

Planning Policy Wales (PPW) 2021

- 3.5.1 Chapter 6, paragraph 6.1.2, of the PPW identifies that: “The historic environment is made up of individual historic features which are collectively known as historic assets’. Examples of what can constitute an historic asset include:

- *Listed Buildings;*
- *Conservation Areas;*
- *Historic assets of special local interest;*
- *Registered Historic Parks and Gardens;*
- *Townscapes;*
- *Historic Landscapes;*
- *World Heritage Sites; and*

- *Archaeological remains (including Scheduled Monuments)*”

3.5.2 Paragraph 6.1.6 states “The Welsh Government’s specific objectives for the historic environment seek to:

- *“To protect the Outstanding Universal Value of the World Heritage Sites;*
- *To conserve archaeological remains, both for their own sake and for their role in education, leisure and the economy;*
- *To safeguard the character of historic buildings and manage change so that their special architectural and historic interest is preserved;*
- *To preserve or enhance the character or appearance of conservation areas, whilst the same time helping them remain vibrant and prosperous;*
- *To preserve the special interest of sites on the register of historic parks and gardens; and*
- *To protect areas on the register of historic landscapes in Wales.”*

3.5.3 Paragraph 6.1.7 states that: “It is important that the planning system looks to protect, conserve and enhance the significance of historic assets. This will include consideration of the setting of an historic asset which might extend beyond its curtilage. Any change that impacts on an historic asset or its setting should be managed in a sensitive and sustainable way.”

3.5.4 Regarding World Heritage Sites, paragraph 6.1.22 states “World Heritage Sites are international designations recognised for their Outstanding Universal Value, as inscribed by UNESCO. The planning system recognises the need to protect the Outstanding Universal Value of World Heritage Sites in Wales. The impacts of proposed developments on a World Heritage Site and its setting and, where it exists, the World Heritage Site buffer zone and its essential setting, is a material consideration in the determination of any planning application.”

3.5.5 Regarding Listed Buildings, paragraph 6.1.10 states: “There should be a general presumption in favour of the preservation or enhancement of a listed building and its setting, which might extend beyond its curtilage. For any development proposal affecting a listed building or its setting, the primary material consideration is the statutory requirement to have special regard to the desirability of preserving the building, its setting or any features of special architectural or historic interest which it possesses.”

3.5.6 Regarding Conservation Areas, paragraph 6.1.14 states “There should be a general presumption in favour of the preservation or enhancement of the character or appearance of conservation areas or their settings. Positive management of conservation areas is necessary if their character or appearance are to be preserved or enhanced and their heritage value is to be fully realised...”

- 3.5.7 Regarding Historic Landscapes, paragraph 6.1.21 states “Planning authorities should protect those assets included on the register of historic landscapes in Wales. As above, the sharing and use of evidence and assessments undertaken for wider reasons, such as Green Infrastructure Assessments, should be used to identify and better understand historic landscapes and ensure their qualities are protected and enhanced. The register should be taken into account in decision making when considering the implications of developments which meet the criteria for Environmental Impact Assessment or, if on call in, in the opinion of the Welsh Ministers, the development is of a sufficient scale to have more than a local impact on the historic landscape. An assessment of development on a historic landscape may be required if it is proposed within a registered historic landscape or its setting and there is potential for conflict with development plan policy.”
- 3.5.8 Regarding archaeological remains, paragraph 6.1.23 states: “The planning system recognises the need to conserve archaeological remains. The conservation of archaeological remains and their settings is a material consideration in determining planning applications, whether those remains are a scheduled monument or not.”
- 3.5.9 Paragraph 6.1.24 goes on to state “Where nationally important archaeological remains and their settings are likely to be affected by proposed development, there should be a presumption in favour of their physical protection in situ. It will only be in exceptional circumstances that planning permission will be granted if development would result in an adverse impact on a scheduled monument (or an archaeological site shown to be of national importance) or has a demonstrably and unacceptably damaging effect upon its setting.”
- 3.5.10 Paragraph 6.1.25 states “In cases involving less significant archaeological remains, planning authorities will need to weigh the relative importance of the archaeological remains and their settings against other factors, including the need for the proposed development.”

3.6 Local Planning Policy

- 3.6.1 Current planning policy for Wrexham is set out in the Adopted Wrexham Local Development Plan (LDP) which was adopted in December 2023. Policy BE1: Pontcysyllte Aqueduct and Canal World Heritage Site states:

“Development will only be permitted where it would not harm the attributes which justified the inscription of the Pontcysyllte Aqueduct and Canal as a World Heritage Site and the site’s Outstanding Universal Value. The following are considered to be key material considerations:

- i. The authenticity and integrity of the attributes that contribute to the Outstanding Universal Value of the World Heritage Site including views, and features of cultural, artistic, historical, social and natural environmental importance;*
- ii. The setting of the World Heritage Site and attributes important to the Outstanding Universal Value of the site present within the Buffer Zone. Where there is a demonstrable need for essential non-residential visitor attraction facilities for the World Heritage Site which cannot be provided within the settlement limit, their location outside settlement limits will be permitted where there is no adverse impact on the Outstanding Universal Value.”*

3.6.2 Policy SP15: Historic and Cultural Environment states:

“Development will only be supported where it conserves, protects, preserves or enhances the following cultural and historic assets of the County Borough and their setting:

- i. Listed Buildings;*
- ii. Conservation Areas;*
- iii. Pontcysyllte Aqueduct and Canal World Heritage Site;*
- iv. Registered Historic Parks, Gardens and Landscapes; and*
- v. Scheduled Monuments and Archaeological Remains.”*

Local Planning Guidance Note 33, Pontcysyllte Aqueduct & Canal World Heritage Site (2012)

- 3.6.3 This Supplementary Planning Document (henceforth, LGPN 33) was produced and adopted by Shropshire Council, Denbighshire Council and Wrexham County Borough Council in 2012. The purpose of LGPN 33 is to complement local development plan policies and to provide guidance to developers, the public and the Local Planning Authorities. LGPN 33 forms a material consideration in the determination of planning applications that affect the World Heritage Site and its setting.
- 3.6.4 Paragraph 1.2 states: *“The aim is to ensure the integrity of the Pontcysyllte Aqueduct and Canal World Heritage Site, its buildings, structures and landscape are maintained. New development should ensure no adverse impact. It is recommended that dependent on the type and complexity of development that applicants discuss their proposals with the relevant Council prior to submitting any application to ensure there are no specific requirements arising from the World Heritage Site Inscription.”*
- 3.6.5 Paragraph 4.1 states: *“The Outstanding Universal Value of the World Heritage Site is not contained purely within the inscribed area. The cultural, settled and aesthetic landscape which contribute to the presentation, setting, sense of arrival and history of the World Heritage Site are all important to the integrity of the designation. Buildings, archaeology, views and landscape features combine in places to form distinctive character and sense of place which complement the experience and understanding of the World Heritage Site. A Buffer Zone has therefore been drawn around the World Heritage Site to allow historic, cultural and landscape elements which contribute to the authenticity and integrity of the Site and therefore to its Outstanding Universal Value to be conserved.”*
- 3.6.6 Regarding the World Heritage Site’s Buffer Zone, paragraph 4.3 states: *“The Buffer Zone itself is not of Outstanding Universal Value, it simply defines the outer limits of a zone containing areas which by association with the World Heritage Site are important to the Site’s Outstanding Universal Value. It is not the purpose of the Buffer Zone to impose a blanket conservation approach to the entire area, but to encourage sustainable development which through contextual awareness conserves and enhances the World Heritage Site.”*

3.6.7 Paragraph 5.2 states “The following objectives are taken from page 79 of the Pontcysyllte World Heritage Site Management Plan (2007 - 2012):

- To manage the World Heritage Site and Buffer Zone in a sustainable manner to conserve, enhance and present the Outstanding Universal Value of the [World Heritage] Site locally and internationally.
- To balance the needs of protection, conservation and access, the interests of the local community and the achievement of sustainable growth.
- To engage with and deliver benefits to the local communities around the [World Heritage] Site.
- To attract visitors to the area; and
- To generate income that adds value to the local economy or is reinvested in the running of the [World Heritage] Site.”

3.6.8 Paragraph 6.1 states that “All development proposals must demonstrate how they have considered the impact on the World Heritage Site, of particular importance will be:

- An understanding of the character of the area in which the development is located and how development effects the setting of the World Heritage Site and Buffer Zone;
- How the development impacts on views in and out of the World Heritage Site;
- How the development contributes or minimises the impacts on the integrity and authenticity of the World Heritage Site;
- How the development contributes to the visitors “sense of arrival” to the World Heritage Site.

3.6.9 Regarding non-designated archaeology, paragraph 7.1 states: “Several undesignated archaeological features within the Buffer Zone are closely associated with the World Heritage Site and are important for its interpretation (e.g. the industries that provided economic justification for building the site, features associated with the construction of the site e.g. iron works, tramways, settlements and quarry workings).”

3.7 Guidance

3.7.1 Guidance produced by the ClfA, Cadw and the Welsh Government has been taken into account as far as practicable and where relevant to this assessment as detailed below.

Guidance on Heritage Impact Assessments for Cultural World Heritage Properties (2011)

3.7.2 This guidance document was produced by ICOMOS in 2011. Relevant guidance has been incorporated into the methodology section of this assessment (see Section 2, above).

ClfA Guidance

3.7.3 This Desk-Based Assessment was undertaken with regard to all relevant industry guidance, principally the Code of Conduct 2022, Regulations for Professional Conduct 2021, Standards and Guidance for Archaeological Desk-Based Assessments 2020 and Standard and guidance for commissioning work or providing consultancy advice on archaeology and the historic environment 2020.

Conservation Principles for the Sustainable Management of the Historic Environment in Wales (Cadw 2011)

- 3.7.4 This guidance sets out six conservation principles and an approach for making decisions about all aspects of the historic environment.

Principle 1 ‘Historic assets will be managed to sustain their values’

- 3.7.5 Paragraph 1.3 states that to be sustainable historic environment conservation should also bring social and economic benefits.
- 3.7.6 Paragraph 1.5 stipulates that intrusive heritage actions must be justified by demonstrating that the benefits in protecting, increasing the understanding and sustaining the heritage values of the historic asset decisively outweigh the losses and harm caused.
- 3.7.7 Paragraph 1.6 adds to this, stating that new work must respect the setting and significance of the historic assets affected and add long-term value to that site and its setting.

Principle 2 ‘Understanding the significance of historic assets is vital’

- 3.7.8 Paragraph 2.4 states that understanding and articulating the values and significance of an historic asset is necessary to inform the decisions about its future.

Principle 3 ‘The historic environment is a shared resource’

- 3.7.9 Paragraph 3.5 outlines that there is a strong public interest in the heritage values of different places, and the use of law, public policy and investment is justified to protect that interest. These include procedures needed to obtain planning as well as listed building and scheduled monument consents.

Principle 4 ‘Everyone will be able to participate in sustaining the historic environment’

- 3.7.10 Paragraph 4.5 states that people should not carry out work on an historic asset unless they have the appropriate skills or qualifications to undertake the work.

Principle 5 ‘Decisions about change must be reasonable, transparent and consistent’

- 3.7.11 Paragraph 5.1 encourages owners and managers of historic assets to seek advice and examples of good practice in preparing their proposals for change.
- 3.7.12 Paragraph 5.2 states that public authorities will make decisions about changes to the historic environment by applying expertise, experience and judgement, in a consistent and transparent process guided by law and policy.
- 3.7.13 Paragraph 5.3 adds to this, stating that public authorities will undertake sufficient assessment and public engagement to inform and justify the decisions they make.
- 3.7.14 Finally, paragraph 5.4 concludes on this theme, stating that when considering change, public authorities will give due importance to the heritage values of a site when considering the sustainability of proposals submitted to them.

Principle 6 ‘Documenting and learning from decisions is essential’

- 3.7.15 Paragraph 6.1 states that information and documentation gathered in understanding and assessing the significance of an historic asset should be retained by HERs and have copies in archives, so information is available to future generations.
- 3.7.16 Paragraph 6.2 adds to this, stating that the planning decisions which affect an historic asset and the actions that follow, will be maintained as accessible records.
- 3.7.17 Paragraph 6.4 builds on this further, outlining that mitigation of historic assets by recording, investigation and analysis to a level that reflects its significance is required where assets will be wholly removed or lost. This information must then be kept in an appropriate archive.
- 3.7.18 Finally, paragraph 6.5 concludes on this theme, asserting that where such a loss is the direct result of human intervention, the costs of this work should be borne by those who benefit from the change, or whose role it is to initiate such change in the public interest.

Welsh Government Technical Advice Note (TAN) 24, 2017

- 3.7.19 This document is to provide guidance on how the planning system considers the historic environment during development plan preparation and decision making on planning and Listed Building Consent applications. This TAN provides specific guidance on how the following aspects of the historic environment should be considered:
- World Heritage Sites
 - Scheduled Monuments
 - Archaeological Remains
 - Listed Buildings
 - Conservation Areas
 - Historic Parks and Gardens
 - Historic Landscapes
 - Historic Assets of Special Local Interest

ClfA, IEMA and IHBC, Principles of Cultural Heritage Impact Assessment in the UK (2021)

- 3.7.20 This document sets out high-level guidance for assessing the significance of heritage assets and assessing impacts/change to that significance.

4 Historic Environment Baseline

4.1 Overview

- 4.1.1 The westernmost edge of the Site is located within the Pontcysyllte Canal and Aqueduct World Heritage Site. No other designated heritage assets are located within the Site, although non-designated archaeological remains and structures associated with the canal are located within the Site. These historic assets are discussed further in Section 4.2, below. The significance of the World Heritage Site is discussed further in Section 4.4 and other designated heritage assets are discussed in Sections 4.5, 4.6 and 4.7.

4.2 Historic and Archaeological Background

Previous Archaeological Works

- 4.2.1 No previous archaeological works have been recorded within the Site. Within the 250m study area, three investigations are recorded. A trial trench evaluation (**EV2**) took place c. 40m to the west of the Site, adjacent to the Trevor Basin. This recorded archaeological features of low significance associated with 18th to 19th-century residential structures. An archaeological watching brief and condition assessment was carried out during repairs to part of the wash-wall of the Trevor Basin c. 100m to the south-west of the Site (**EV3**). This recorded that the canal base in that area was formed by the natural geology and that the wash-wall blockwork had been constructed in at least three phases. Lastly, a photographic survey took place c. 180m to the south-west of the Site (**EV1**). This was carried out on the Grade II listed Bryn Seion Presbyterian Chapel (**LB6**) to inform a planning application for building conversion works.

Prehistoric (to AD 43)

- 4.2.2 The area of Trevor was situated between the territories of the Iron Age tribes known as the *Ordovices* and the *Cornovii*. No Prehistoric historic assets are recorded within the 250m study area or the Site.

Roman (AD 43 to AD 410)

- 4.2.3 The area of Trevor is likely to have come under Roman control during the mid-1st century, several years after the initial Roman invasion of Britain in AD 43. The closest major Roman settlements were the town of *Viroconium Cornoviorum* (c. 44km south-east of the Site) and Chester (the Roman fort and ancillary settlement of *Deva Victrix*) c. 26km to the north-east of the Site. No Roman historic assets are recorded within the 250m study area or the Site.

Early Medieval (AD 410 to AD 1066) and Medieval (AD 1066 to AD 1539)

- 4.2.4 Following the end of Roman rule, the area became part of the Early Medieval kingdom of Powys. The name comes from a Latin term '*pagus*' which referred to a region of tribal territory. The capital may have initially been based at Wroxeter, later moving to Chester. Offa's Dyke, the Early Medieval earthwork boundary between the kingdoms of Powys and Mercia is located c. 1.6km to the east of the Site.
- 4.2.5 During the Medieval period, the Site was located within the commote of Nanheudwy, a subdivided part of the kingdom of Powys. Following conquest by King Edward I of England, the area became part of the marcher lordship of Chirk. Towards the latter end of this period, the Site and study area are likely to have formed part of the rural parishes of Llangollen and Ruabon. Quarrying of Cefn sandstone took place in the wider area during the Medieval period.² Post-Medieval maps record the Tref-y-Nant Brook as forming the parish boundary, although it is unclear if this was also the case in the Medieval period. No Early Medieval or Medieval historic assets are recorded within the 250m study area or the Site.

Post-Medieval (AD 1539 – AD 1900)

- 4.2.6 The study area contains numerous natural resources such as iron, clay and sandstone, along with coal to process them. During the 18th and 19th centuries, a complex pattern of overlapping extraction and processing industries developed across the study area and the Site, changing and evolving greatly over time. This originally began as localised coal mining, such as the coal shafts in agricultural fields, following the seams around Tref-y-Nant. As the industries expanded in the 19th and 20th centuries, former agricultural land was given over to processing, extraction and dumping of spoil. This greatly altered the character of the landscape from a rural area to a patchwork of fields, scrub, industry and settlement served by canals, roads (38), tracks, tramways (91) and railways (51).
- 4.2.7 Coal mining is recorded in the area north of the River Dee from as early as the 16th century. A number of local landowners developed coal pits on their agricultural lands in the 18th and 19th centuries. Coal workings were established at various locations within the study area. The Cefn Colliery (which may have been a general name for a series of separate workings) may have been worked from c. 1819 to c. 1850 and included a number of coal shafts within the Site (73, 74) and surrounding areas (7, 8, 59, 65).³
- 4.2.8 The Tref-y-nant Fire Clay Works (63) was established c. 160m to the north-west of the Site in 1866. The works was connected to a branch line of the Vale of Llangollen Railway.
- 4.2.9 Cefn Mawr expanded greatly during the 19th century with numerous dwellings built to house the workers of the numerous industrial sites along with chapels and public houses. Cefn Mawr is now a Conservation Area (CA2) which is located c. 130m to the east of the Site. A number of non-designated historic buildings are located within the CA2 and the study area, comprising:
- Garfield Villa (54);
 - Christian Baptist Chapel (31);
 - United Free Methodist Church (30);
 - Saron Welsh Calvinistic Methodist Chapel (33); and

² Wrexham County Borough Council, 2012. Cefn Mawr Conservation Area. 6

³ Cadw, 2014. Cefn Mawr and District: Understanding Urban Character. 16

- The Crane, Terraced Housing (**66, 82**).

- 4.2.10 Plas Kynaston was an 18th-century country house located c. 475m to the south-east of the Site, forming the centre of one of the major local estates. The house was leased by a man named Exuperius Pickering, who was a businessman involved with various local mines and quarries.⁴ Plas Kynaston is now a Grade II listed building (**LB2**) located within Cefn Mawr Conservation Area (**CA2**). Also within **CA2** is the Grade II listed 'Cefn Kynaston including garden walls' located c. 365m to the south-east of the Site.
- 4.2.11 Outside of the Conservation Area, the non-designated Lloyd's Terrace (**43**) and the Seion A'r Tabernacle Welsh Baptist Chapel (**32**). The Plas-Kynaston burial ground was also established c. 150m to the north of the Site (**56**), although it has since expanded greatly.
- 4.2.12 A mill complex appears to have been located on Mill Lane on the western side of the Tref-y-nant Brook, c. 10m to c. 80m to the south of the Site (**77**). A probable millpond is recorded on 19th-century maps at the northern end of this complex, and the Mill Inn Public House is located at the southern end. A mid-20th-century house was built on the now-infilled millpond at the junction of Queen St and Mill Lane, immediately opposite to the car park within the Site.
- 4.2.13 Immediately to the south of the mill (c. 75m south of the Site) is a group of extant mid-19th-century workers houses and gardens at Trevor-isaf (**79**). Further south is another pair of houses (**64**) and an outbuilding (**11**) and another house called Fir View (**37**).
- 4.2.14 A former smithy (**14**) and the Grade II listed Bryn Seion Presbyterian Chapel (**LB6**) are recorded c. 165m and c. 185m to the south-west of the Site. Formerly an isolated building in a rural landscape, the chapel modern residential area of Trevor.
- 4.2.15 Pontcysyllte Canal and Aqueduct is a World Heritage Site (**WHS1**), Scheduled Monument (**SM1**) and Conservation Area (**CA1**). The very westernmost edge of the Site extends within the boundary of these historic assets, although the vast majority of their area is located outside the Site. The construction of the Llangollen Canal (as it was then known) took place between 1795 and 1805. Construction of the Pontcysyllte Aqueduct to carry the canal across the River Dee began in 1795 and the contract for the ironwork was awarded to William Hazeldine in 1804.
- 4.2.16 Hazeldine then established the Plas Kynaston Foundry immediately to the north-east of the Site (**69**), which went on to supply the ironwork for the aqueduct and a number of other construction projects. With the completion of the canal and Trevor Basin and the subsequent establishment of a railway link to the Kynaston branch of the canal (c. 1830, see Figure 2 for the former railway routes), the foundry was well served with transport links which benefited the business.⁵ This canal to railway hub (**13, 41, 48**) included a transfer warehouse (**57**) and a boat lift (**6**) which were formerly located immediately to the west of the Site. Associated buildings were built on the western side of the Trevor Basin in the 19th and 20th centuries, including railway buildings (**47, 61, 62**), and workers houses (**58**).
- 4.2.17 Further along the canal, c. 145m to c. 250m to the south-west of the Site, additional extant and former historic assets associated with the canal are located within the World Heritage Site:

- Trevor Basin Footbridge (**34**);

⁴ Cadw, 2014. Cefn Mawr and District: Understanding Urban Character. 10

⁵ Cadw, 2014. Cefn Mawr and District: Understanding Urban Character. 13

- Trevor Bason Stores Shed (35);
- Scotch Hall Account House Outbuilding (39);
- Rose Cottage Wharfinge's House (40);
- Trevor Basin Culvert 1 (42); and
- Trefor Wharf and Basin (44).

4.2.18 The Grade II listed 'Pair of Docks on E side of Trevor Basin, excluding modern workshop superstructure and swing bridge' (**LB8**) is located c. 290m to the south-west of the Site. The Grade II listed 'Bridge No. 31' is located c. 320m to the south-west of the Site. Both of these historic assets are located within the World Heritage Site (**WHS1**) and Conservation Area (**CA1**).

4.2.19 The Trevor Basin became the principal basin of the Llangollen Canal for trans-shipment of goods between the canal and the railways. From here, engineering products, cast-iron and wrought-iron products and coal were exported.⁶ Subsequently, two branch canals were constructed from the Trevor Basin. One of these is the canal branch (83) which passes through the Site (henceforth, the 'Kynaston Arm') which was commissioned by Exuperius Pickering. It began construction during the 1820s and was completed c. 1835/6, if not earlier. This canal branch serviced coal-working shafts in the area and the Plas Kynaston Iron Foundry. The Kynaston Arm has since been infilled in phases, although the canal branch entrance and footbridge survive at the western Site boundary (45, 46) The HER records remnants of the stone coping of the canal within the north-western part of the Site (52) in a densely vegetated area.



Plate 12: Extract from the 1838 'Township of Trevor Issa' (Llangollen Parish) Tithe Map, showing the Trevor Basin (centre)

⁶ Cadw, 2014. Cefn Mawr and District: Understanding Urban Character. 26

- 4.2.20 The second branch canal was a short spur (c. 55m long) off the Kynaston Arm, which serviced a group of lime kilns **(67)** located immediately to the north of the eastern parcel of the Site.⁷ The lime kilns themselves were built in the 1830s. These were located directly adjacent to the canal branch, which supplied them with raw materials. To the north-east of the lime kilns were two 19th-century buildings, possibly also related to industrial processes **(81, 68)**.
- 4.2.21 The canal branches and the early 19th-century layout of the Kynaston Foundry are visible on the 1838 and 1845 Tithe Maps of the area (Plate 13). A canal wharf serving the foundry, called Ward Wharf, is recorded within the north-eastern part of the Site. The only structure recorded within the Site on the Tithe Map is an extant canal bridge carrying the former Pottery's Road over the canal, to the south of Wards Wharf **(87)**. Another kiln, possibly a brick kiln, was built in the mid-19th century in the fork between the Kynaston Arm and the minor branch to the north. This kiln was located c. 30m west of the Site **(78)**.
- 4.2.22 The former course of the Tref-y-nant Brook **(89)** and a small tributary stream are also recorded within the Site. The field adjacent to Queen Street in the eastern part of the Site (numbered 550) is recorded in the Tithe Apportionment as 'Cae Pistill'. This may be a corruption of 'Cae Pistyll' possibly meaning 'Spout/Waterfall Field'. This may be a reference to the emergence of the Tref-y-nant Brook from a culvert beneath the canal at this location, or simply a reference to the brook itself. The 19th-century culvert and extant sandstone bridge within the Site **(84)** carried the Llangollen Canal over the brook.
- 4.2.23 Apart from the canal and towpaths, the land use across the Site is recorded as pasture (with a small area of woodland in the centre) in the Tithe Apportionments that are contemporary with the maps.

⁷ Cadw, 2014. Cefn Mawr and District: Understanding Urban Character. 15

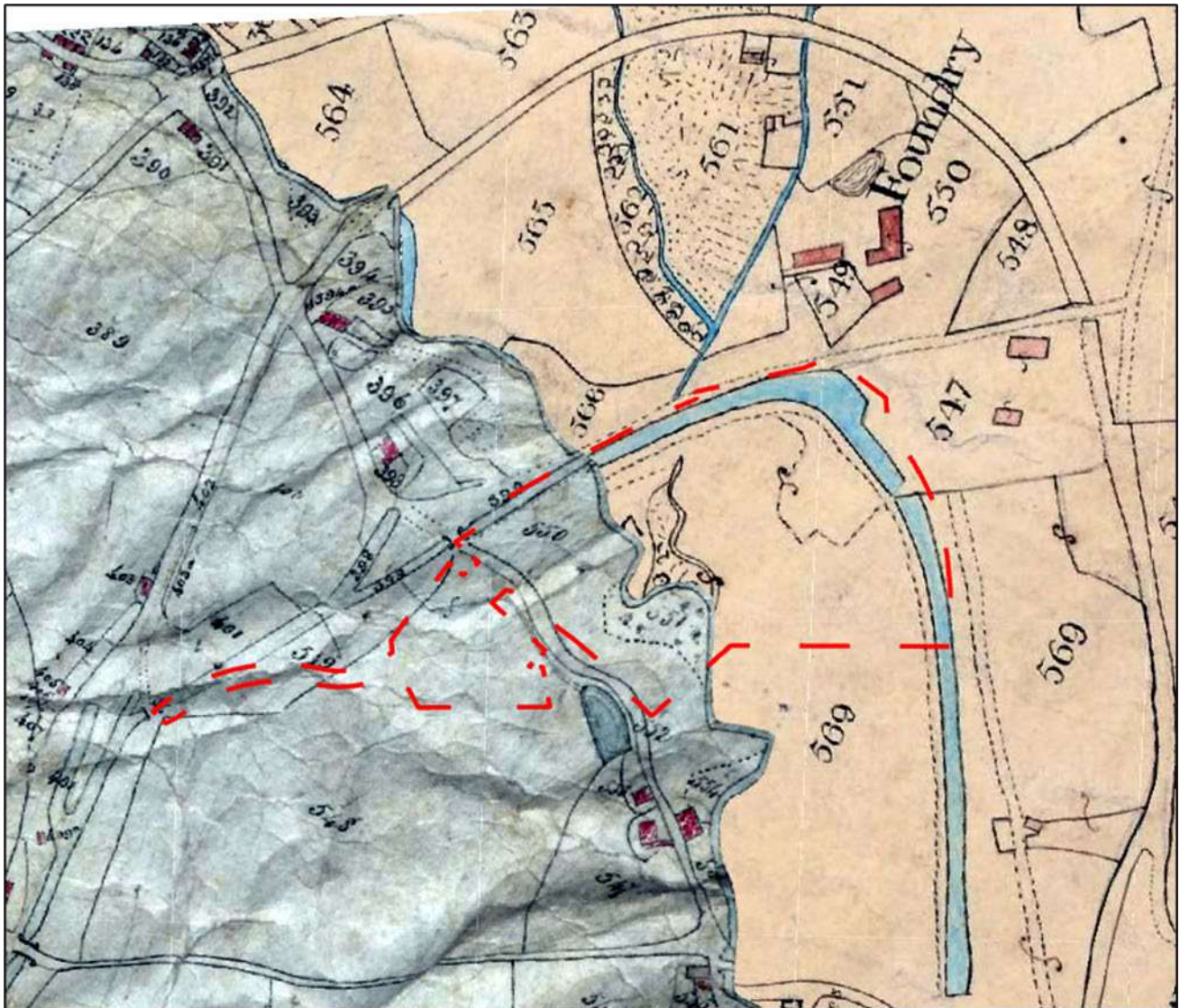


Plate 13: Extract from the (on left) 1838 'Township of Trevor Issa' (Llangollen Parish) and (on right) 1845 'Township of Cristionydd Kenrick' (Ruabon Parish) Tithe Maps

4.2.24 The Plas Kynaston Chemical Works, partially located within the Site (75), was established in 1867. The works originally produced paraffin from colliery shale, later changing to the production of phenol from crude carbolic. By 1910, the works was producing half of the world's supply of phenol.⁸ The coal mineshafts and the Plas Kynaston Chemical Works within the Site are both shown on the 1873 – 1875 25-inch OS map (Plate 14, Plate 15). This OS map also records an area of made ground in the north-eastern part of the Site, which appears to be a spoil heap of coal mining or foundry waste. A rectangular building is recorded on top of the spoil heap within the Site, adjacent to the canal towpath (85). Two buildings (71, 72) with associated grounds/gardens (88) are also recorded in the western parcel of the Site, adjacent to Queen Street. One online source describes this complex as 'Windborne Gate Farm'.⁹ These buildings, which do not survive today, appear to have originally been a farmhouse and barn, although historic mapping and aerial photographs (see footnote 8) appear to show that the house was later split into two properties and the barn was converted into a dwelling.

⁸ Cadw, 2014. Cefn Mawr and District: Understanding Urban Character. 21

⁹ <https://www.plaskynastoncanalgroup.org/canals/plas-kynaston-canal-story/>

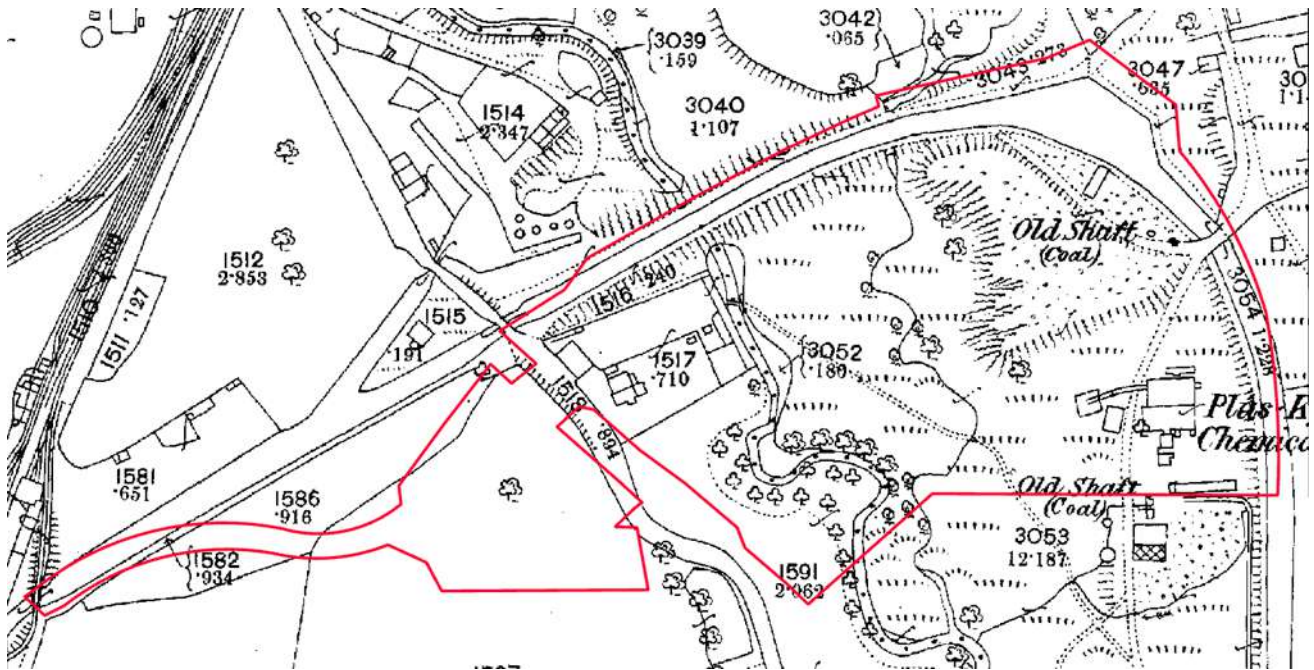


Plate 15: Close-up of 1873-1875 25-inch OS map

4.2.25 The 19th-century Hughes and Percy and Co. Brickworks (also known as Edward Evans' Works) is recorded by the HER and Coflein in different areas of the Site (**49, 70**), however, no brickworks is recorded in the Site on historic mapping. The brickworks appears to only be recorded from a documentary reference in 1874 which states that fireclay goods, bricks, chimney pots and household ware was manufactured there. It is likely that the brickworks was located outside the Site, possibly to the east of the Llangollen Canal where the 1873-1875 map (Plate 14) where a dispersed complex of structures which could be an unlabelled brickworks are present (**70**). It may also have been located within the Plas Kynaston Pottery to the south of the Site or at the Tref-y-nant Fire Clay Works to the north-west of the Site.

4.2.26 The Site had not changed greatly by the time of the 1899 25-inch OS map (Plate 16, Plate 17), apart from changes to the layout of the buildings and infrastructure within the Plas Kynaston Chemical Works. Immediately to the north-east of the Site, the Plas Kynaston Foundry appears to have expanded and taken over the possible site of the Hughes and Percy and Co. Brickworks (**49**). It is also possible that this area was always part of the foundry, and was remodelled in the late 19th century (i.e. the actual location of the brickworks may be further afield again).

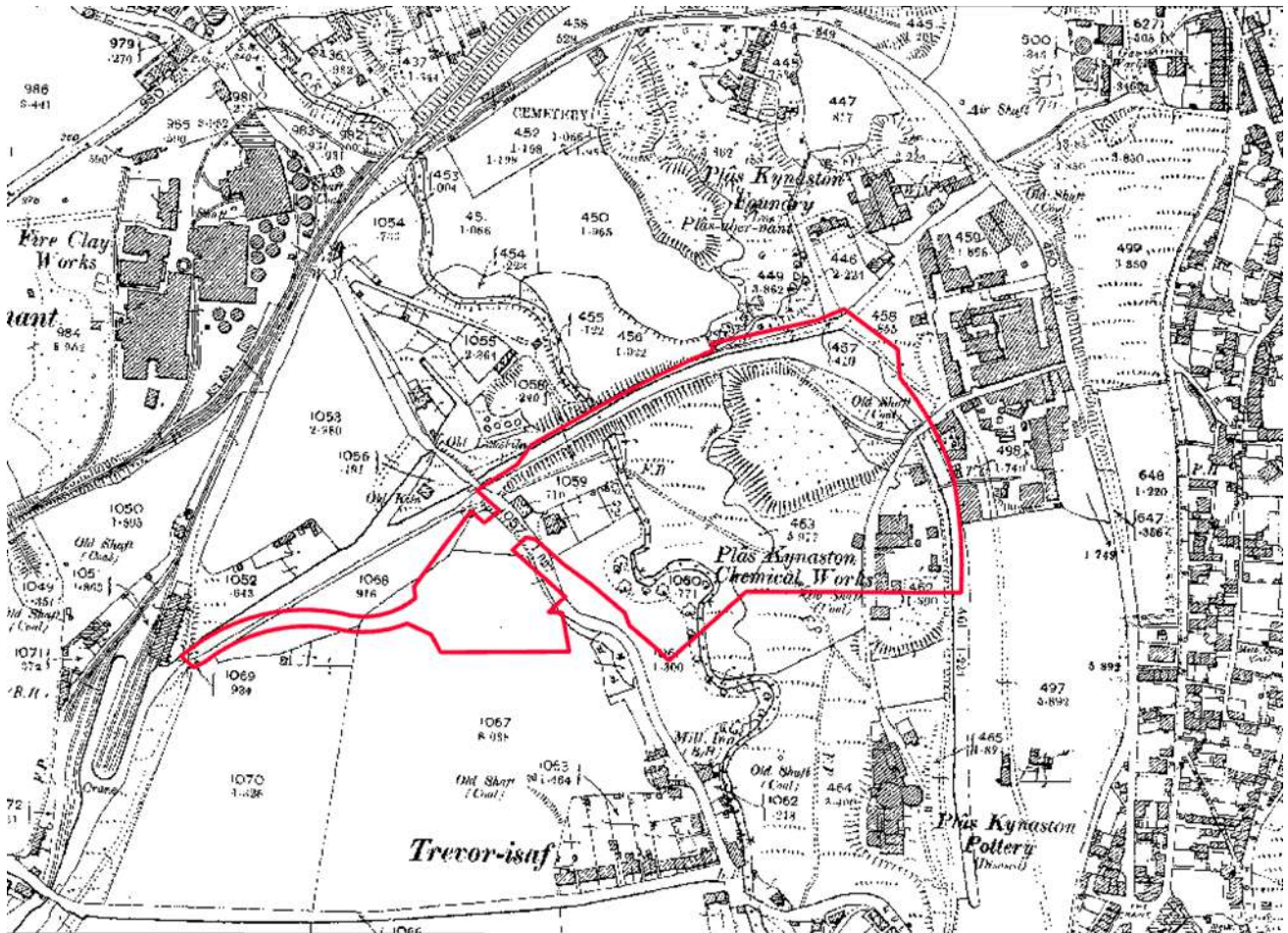


Plate 16: Extract from 1899 25-inch OS map

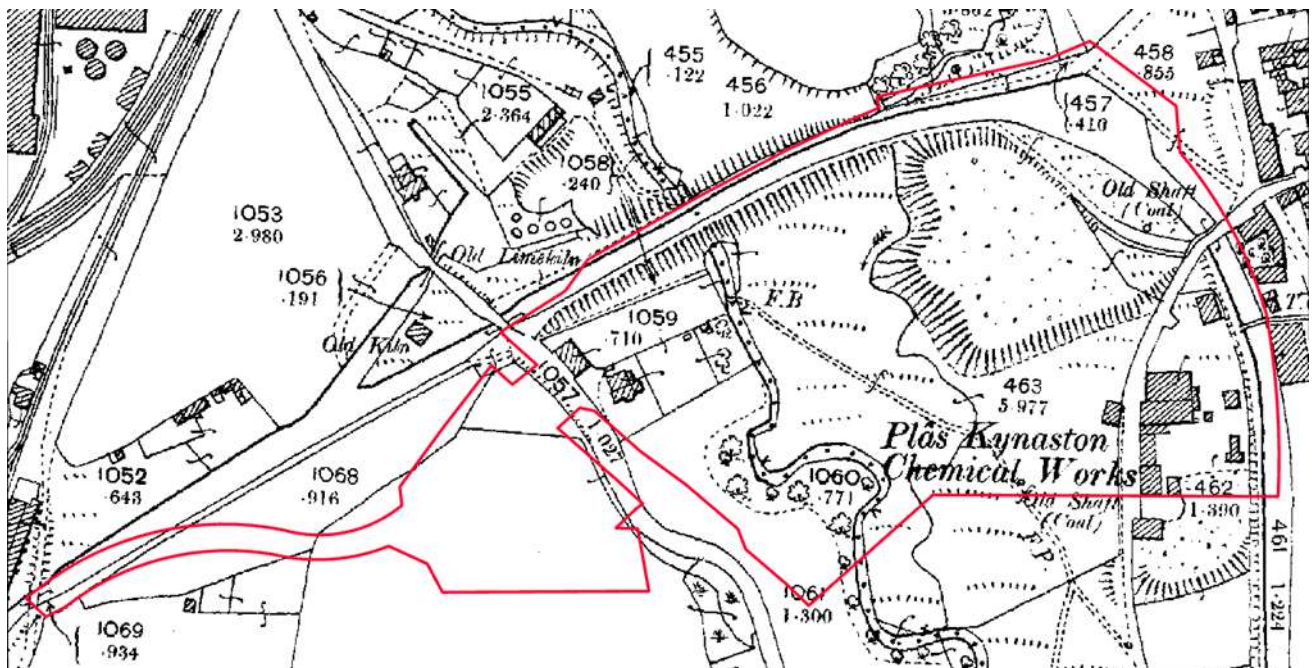


Plate 17: Close-up of 1899 25-inch OS map

Modern (AD 1900 – Present Day)

4.2.27 In 1920, Monsanto acquired a half share of the Plas Kynaston Chemical Works, which changed its production to saccharin, vanillin, aspirin and salicylic acid. From 1930, the focus changed again to produce chemicals required for rubber manufacturing. The Monsanto works (90) expanded throughout the 20th century, absorbing the site of the former Kynaston Foundry. Later in the 20th century, the works became known as the “Flexsys site”. The Flexsys site closed down and was largely demolished in the 2010s. The Kynaston Arm of the canal was dismantled in phases from the 1950s and the Flexsys site was built over a section of it. The Acrefair Chemical Works (80) was established immediately to the west of the Site in the mid-20th century. It was demolished c. 2010 and the site now serves as the Pontcysllte Aqueduct Car Park.

4.2.28 The 1912 25-inch OS map (Plate 18, Plate 19) records changes to the plans of the buildings within the Site at Windborne Gate Farm and the construction of additional structures on top of the spoil heap in the north-eastern part of the Site. A larger change in industrial and transportation practices is shown by the depiction of marshy ground at the Kynaston Foundry wharf and along the southern part of the Kynaston Arm. This indicates that these areas of the canal had fallen out of use by this time.

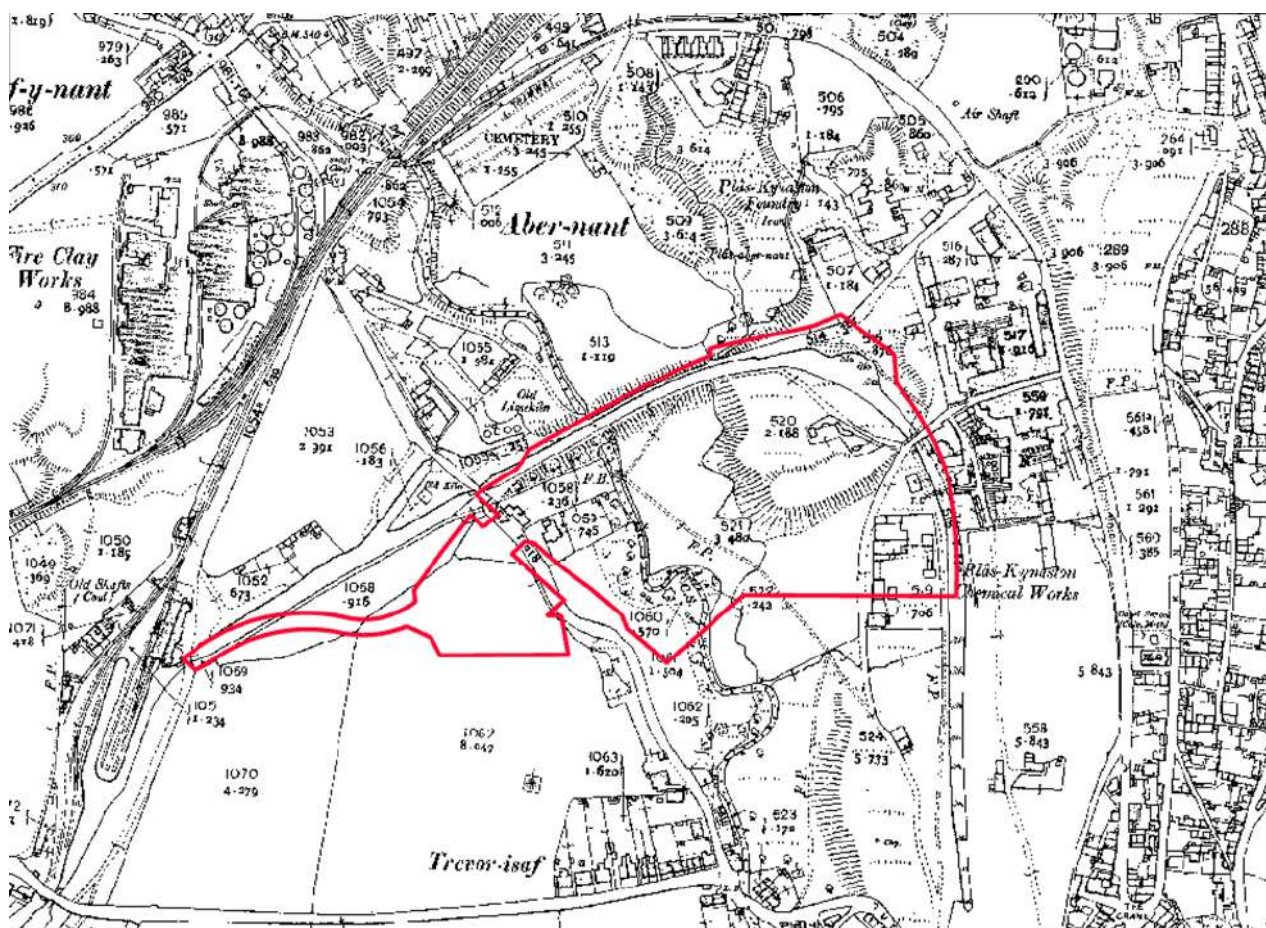


Plate 18: Extract from the 1912 25-inch OS map

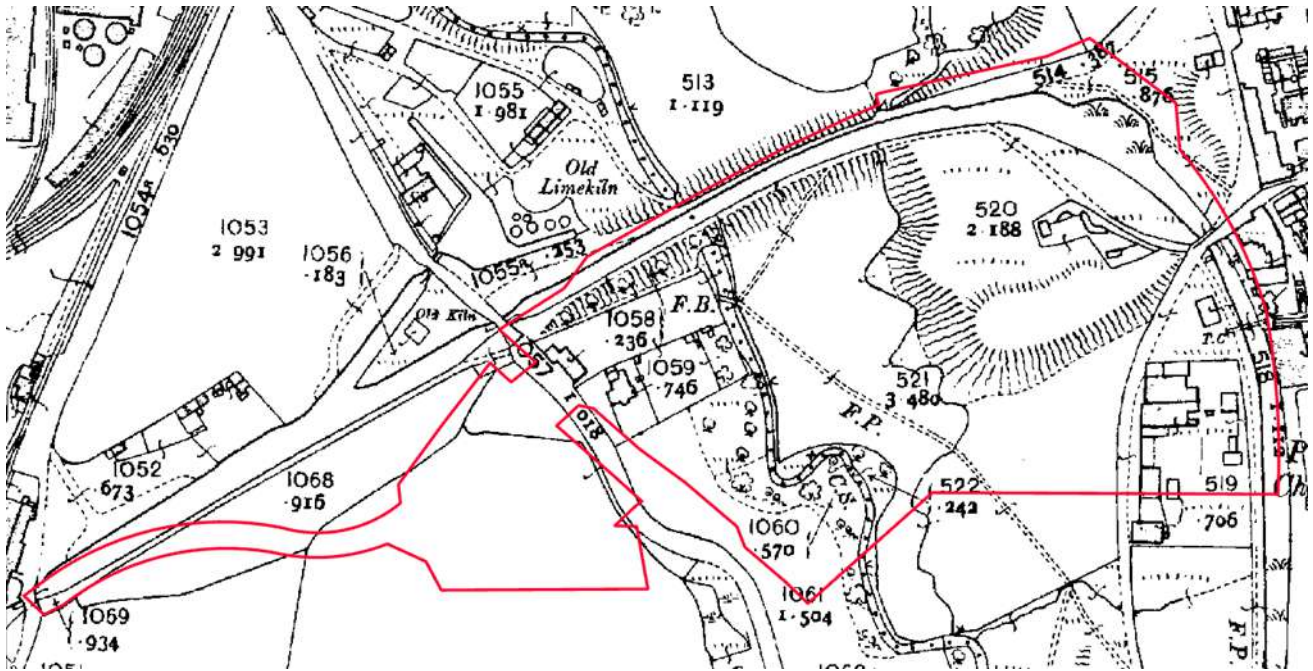


Plate 19: Close-up of the 1912 25-inch OS map

4.2.29 No major changes are recorded within the Site on the 1938 1:10,560 OS map (Plate 20).

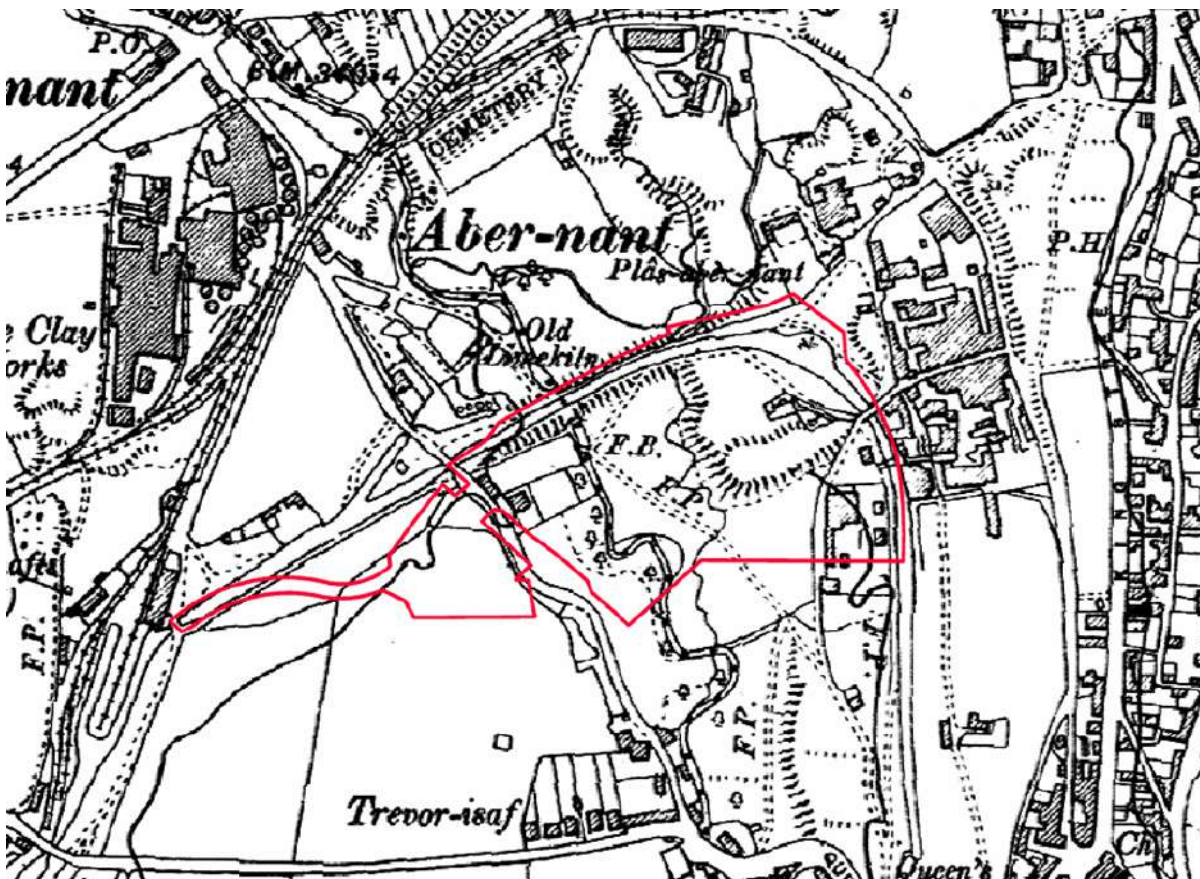


Plate 20: Extract from the 1938 1:10,560 OS map



Plate 21: 1947 aerial photograph with very approximate Site boundary marked in red, looking west (image courtesy of Ian Biggs)

- 4.2.30 By the time of the 1962-1963 1:2,500 OS map (Plate 23, Plate 24) the Site had changed greatly. Both the eastern and western parcels of the Site had been altered with made ground to create level areas. The Tref-y-nant Brook within the Site had been completely buried (Plate 22) and new industrial buildings and infrastructure for the chemical works had been built across the eastern parcel. Part of the Kynaston Arm had been filled in and paved over in the north-eastern part of the Site, although much of its length in the eastern parcel was still present and filled with water. This latter section of the canal is still visible above-ground within the Site in the present day, although it no longer holds water.
- 4.2.31 The buildings at Windborne Gate Farm within the Site adjacent to Queen Street appear to still have been present, albeit in altered form. The newer areas of made ground can be seen encroaching on the eastern parts of the grounds/gardens associated with the houses.
- 4.2.32 The 1962-1963 map also records that a road (no longer present) had been constructed in the western parcel of the Site, linking the chemical works with industrial areas and the railway to the north of the Trevor Basin.



Plate 22: 1950s photo of the culverting of the Tref-y-nant Brook, exact location unknown (possibly to the south of the Site looking towards Cefn Mawr – photo courtesy of Ian Biggs)

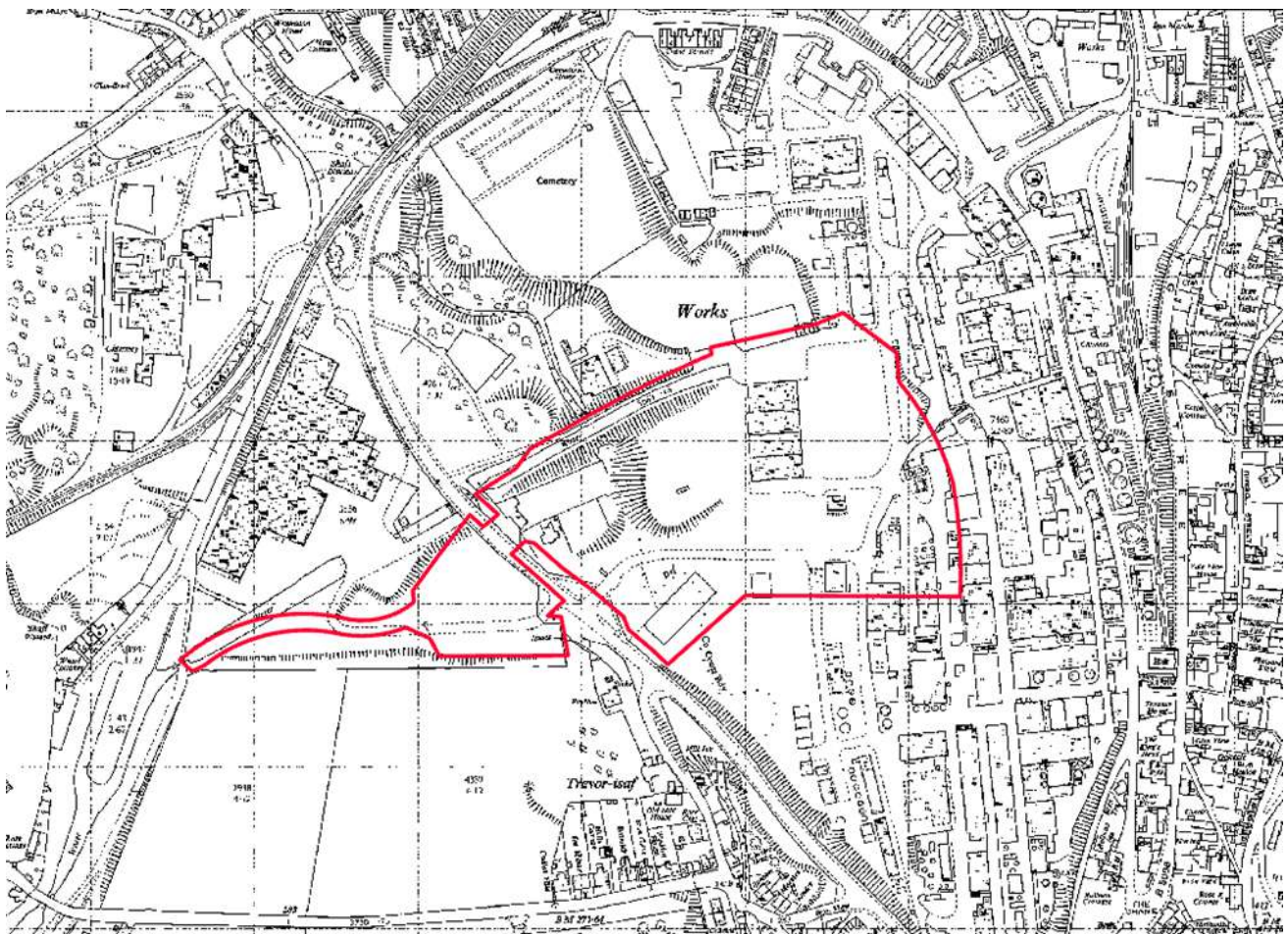


Plate 23: Extract from the 1962-1963 1:2,500 OS map

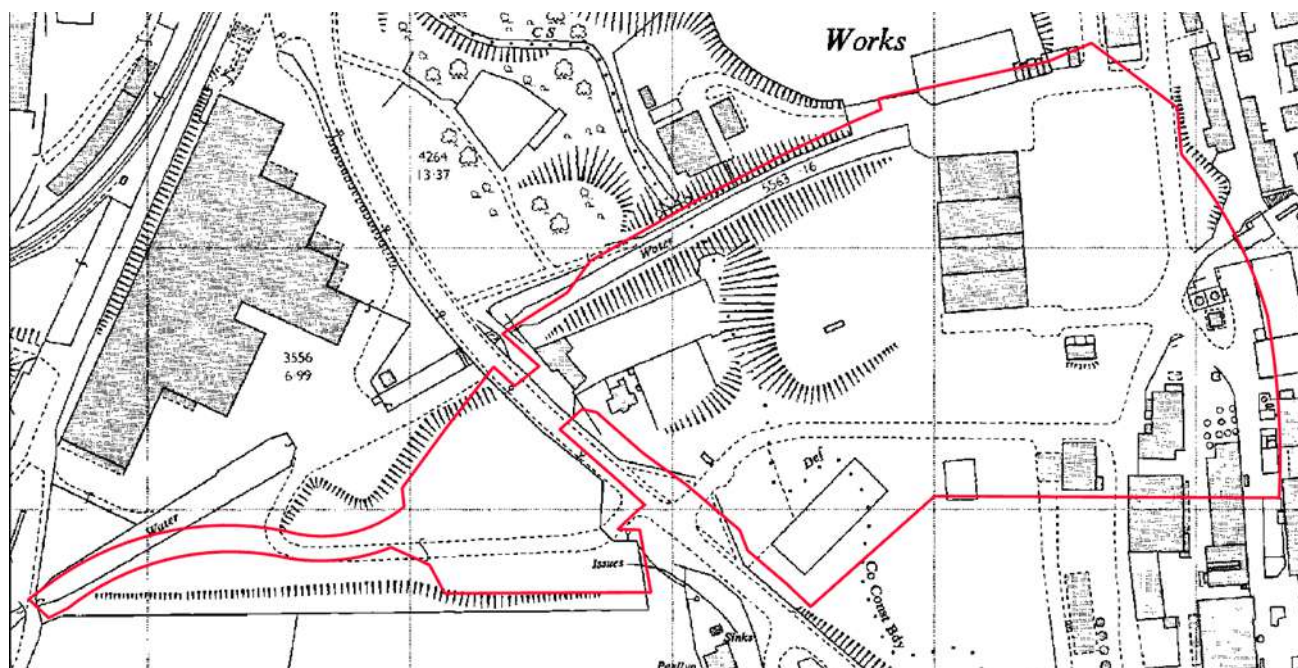


Plate 24: Close-up of the 1962-1963 1:2,500 OS map

4.2.33 The 1986 1:10,000 OS map (Plate 25) records further changes within the Site. The chemical works had been expanded with additional buildings and infrastructure. The buildings within the Site at Windborne Gate Farm had been demolished to facilitate the construction of a new road passing beneath Queen Street, linking the eastern and western parcels of the Site; this road is still present today. It was presumably intended enable transit between works areas without crossing the public highway. The Monsanto works continued to utilise the Kynaston Arm to provide a water supply and part of the canal within the Site remained water-filled until c. 2000. The chemical works remained in production until the early 21st century, as part of the Flexsys business. The works were shut down and were demolished from 2010 onwards.