

Heritage Desk-based Assessment:

Kronospan, Chirk, Wrexham

July 2023



Report No. 2215

By

Susan Stratton



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Summary

Archaeology Wales Ltd was commissioned by AxisPED to carry out an Archaeological Desk Based Assessment (DBA) and site visit in relation to a Proposed Development at land north of Kronospan, Maesgwyn Farm, Chirk, Wrexham, LL14 5NT, centred on NGR SJ 328825 339096. The Proposed Development comprises the construction of an access road, lorry park, 132kV substation and other ancillary works to the north of the existing Kronospan Facility.

This DBA constitutes Appendix 6.1 to the Environmental Statement (ES) Chapter 6.0 (Historic Environment) and provides baseline data only, to be read in conjunction with its associated Annexes.

The Site lies c. 150m to the east of Pontcysyllte Aqueduct and Canal World Heritage Site. There are 20 designated assets within a 1km search area. An additional 13 designated assets in the wider landscape with potential to be impacted have been included in the assessment, including the Grade I listed building of Chirk Castle (LB598). There are 54 non-designated assets recorded on the Historic Environment Record and the National Monument Record within 500m of the Site.

The majority of the assets relate the developments that occurred around Chirk during to the Industrial Revolution from the 19th century onwards. The landscape has retained its rural character, and historic map regression and aerial photography have demonstrated that the Site consisted of agricultural fields during the post-medieval period and probably earlier.

A geophysical survey of the site identified anomalies that were subsequently targeted by evaluation trenches. Only one of the anomalies was found to be archaeological. This was a potential limekiln KHR01, located in the east of the Site. The potential for further unknown archaeology of any period to be present on the Site following the geophysical survey and evaluation is considered to be very low.

Crynodeb

Comisiynwyd Archaeology Wales Ltd gan AxisPED i gynnal asesiad desg archeolegol (DBA) ac ymweliad safle mewn perthynas â datblygiad arfaethedig ar dir i'r gogledd o Kronospan, Fferm Maesgwyn, Y Waun, Wrecsam, LL14 5NT, wedi'i ganoli ar NGR SJ 328825 339096. Mae'r datblygiad arfaethedig yn cynnwys adeiladu ffordd fynediad, parc lorïau, is-orsaf 132kV a gwaith ategol arall i'r gogledd o gyfleuster presennol Kronospan.

Mae'r DBA hwn yn cynnwys atodiad 6.1 i bennod 6.0 (Amgylchedd Hanesyddol) y Datganiad Amgylcheddol (DA) ac mae'n darparu data sylfaenol yn unig, sydd i'w ddarllen ar y cyd â'i atodiadau cysylltiedig.

Mae'r safle wedi'i lleoli tua 150m i'r dwyrain o Safle Treftadaeth y Byd Dyfrbont

Pontcysyllte a'r Gamlas. Mae 20 o asedau dynodedig oddi fewn ardal chwilio 1km. Mae 13 o asedau dynodedig ychwanegol yn y dirwedd ehangach a allai gael eu heffeithio wedi'u cynnwys yn yr asesiad, gan gynnwys adeilad rhestredig Gradd I Gastell y Waun (LB598). Mae 54 o asedau heb eu dynodi wedi'u cofnodi ar y Cofnod Amgylchedd Hanesyddol a'r Cofnod Henebion Cenedlaethol oddi fewn 500m i'r Safle.

Mae'r rhan fwyaf o'r asedau yn ymwneud a datblygiadau a ddigwyddodd o amgylch y Waun yn ystod y Chwyldro Diwydiannol o'r 19eg ganrif ymlaen. Mae'r dirwedd wedi cadw ei chymeriad gwledig, ac mae atchweliad map hanesyddol a ffotograffau o'r awyr wedi dangos bod y Safle yn cynnwys caeau amaethyddol yn ystod y cyfnod ôl-ganoloesol ac yn gynharach mae'n debyg.

Nododd arolwg geoffisegol o'r safle anghysondebau a dargedwyd wedyn gan ffosydd gwerthuso. Dim ond un o'r anghysondebau a ganfuwyd yn archeolegol. Roedd hon o bosib yn odyn galch KHR01, a leolir yn nwyrain y safle. Yn dilyn yr arolwg geoffisegol a'r gwerthusiad, ystyrir bod yna potensial isel iawn ar gyfer archeoleg anhysbys bellach o unrhyw gyfnod yn bresennol ar y safle.

1. Introduction

1.1 Circumstances of the Commission

- 1.1.1 Archaeology Wales Ltd (henceforth – AW) was commissioned by AxisPED to carry out an Archaeological Desk Based Assessment (DBA) and site visit in relation to a Proposed Development at land north of Kronospan, Maesgwyn Farm, Wrexham, LL14 5NT, centred on NGR SJ 328825 339096 (Figure 1).
- 1.1.2 The Proposed Development comprises the construction of an access road, lorry park, 132kV substation and other ancillary works to the north of the existing Kronospan Facility (ES Figure 4.3a).
- 1.1.3 The local planning authority is Wrexham County Borough Council (WCBC) and their archaeological advisors are Clwyd-Powys Archaeological Trust – Development Control (CPAT-DC).
- 1.1.4 This report is **Appendix 6.1** to the Environmental Statement (**ES**) **Chapter 6.0 (Historic Environment)** and provides baseline data only, to be read on conjunction with the following:
- Environmental Statement Chapter 6.0.
 - Appendix 6.1: Settings Assessment (Annex 1 to this report).
 - Appendix 6.1: Heritage Impact Assessment (Annex 2 to this report).
 - Appendix 6.2: Geophysical Survey Report.
 - Appendices 6.3 and 6.4: Written scheme of investigation for, and report on, trenched evaluation.
 - Appendix 6.5: Limekiln archival research report.

1.2 Site Description

- 1.2.1 A detailed description of the Site and the wider site context is provided at **Section 1.3 of ES Chapter 1.0 (Introduction)**.

2. Methodology

2.1 Policy Context

2.1.1 The relevant national and local planning policies are:

- Historic Environment (Wales) Act, 2016.
- Ancient Monuments and Archaeological Areas Act, 1979.
- Planning (Listed Buildings and Conservation Areas) Act, 1990.
- Planning Policy Wales (Edition 11, 2021) Section 6.1.
- Technical Advice Note (TAN) 24: The Historic Environment, 2017.
- Wrexham Unitary Development Plan (UDP) 1996 – 2011.
- Pontcysyllte Aqueduct & Canal World Heritage Site. Local Planning Guidance Note 33. Adopted June 2012 (Shropshire Council, Denbighshire County Council and Wrexham County Borough Council 2012).
- The relevant policies of the emerging Wrexham Local Development Plan (2013 – 2028) are a material planning consideration.

2.2 Best Practice and Guidance

2.2.1 This assessment has been produced in line with the following guidance:

- Setting of historic assets in Wales (Cadw, 2017);
- Conservation principles for the sustainable management of the historic environment in Wales (Conservation Principles) (Cadw, 2011);
- Standard and guidance for historic environment desk-based assessment (ClfA, 2020);
- Guidance on Heritage Impact Assessments for Cultural World Heritage Properties (ICOMOS, 2011);
- Guidance and Toolkit for Impact Assessments in a World Heritage Context (UNESCO/ICCROM/ICOMOS/IUCN, 2022);
- Pontcysyllte Aqueduct and Canal World Heritage Site. Management Plan 2019-2029 (ARCADIS, 2019);
- Principles of Cultural Heritage Impact Assessment in the UK, IEMA, IHBC and ClfA, July 2021; and,

- Research Framework for the Archaeology of Wales (2017).

2.2.2 The border between England and Wales is c.1.6km to the south of the Site, and therefore outside of the 1km study area described below. A small area of the Pontcysyllte Aqueduct and Canal World Heritage Site is in Shropshire, where it is also designated as the Scheduled Monument 1021433, 'a 1.43km length of the Ellesmere Canal and associated features at Chirk Bank.' However, Welsh policy provisions and guidance are most relevant to this report and are similar to those in England in relation to the World Heritage Site provisions and Scheduled Monument legislation.

2.3 Study Areas

2.3.1 Study areas for both designated and non-designated assets (Figure 2) were established to ensure the inclusion of appropriate data to understand the historic environment character of the area and its archaeological potential.

2.3.2 In agreement with CPAT-DC, data for all designated heritage assets was obtained for the Proposed Development area and a surrounding 1km buffer area. In addition, after consideration of the ZTV produced by the LVIA for this project and in consultation with Cadw, a further 13 assets that lie outside the 1km area have been included. These are:

- DE117 Castell y Waun Castle Mound;
- DE133 Offa's Dyke: Caeau-Gwynion Section;
- DE134 Offa's Dyke: Chirk Castle Section extending NE from Castle Mill;
- DE135 Offa's Dyke: Chirk Park Section extending NE from the Lake;
- DE138 Offa's Dyke: Section N & S of Plas-Offa;
- DE140 Offa's Dyke: Section N & S of Tan-y-Cut;
- DE198 Offa's Dyke: Chirk Park Section extending 340m NE of Home Farm;
- DE223 Darland Wood Round Barrows;
- DE288 The Holyhead Road: the Chirk Embankment and earlier

trackways;

- LB598 Chirk Castle;
- PGW(C)15(WRE) Brynkinalt;
- PGW(C)42(WRE) Argoed Hall; and,
- PGW(C)64(WRE) Wynnstay.

2.3.3 Data on non-designated assets was obtained for the Proposed Development from a 500m buffer area, again in agreement with CPAT-DC.

2.4 Data Sources

2.4.1 This report utilises the following data sources:

- Historic Environment Record (HER) held by Clwyd-Powys Archaeological Trust;
- National Monuments Record of Wales (NMRW);
- Cof Cymru - National Historic Assets of Wales, Cadw data on designated heritage assets;
- Wrexham County Borough Council for conservation area appraisals;
- Archive records held at local archives, the National Library of Wales (NLW) and the Royal Commission on Ancient and Historical Monuments in Wales (RCAHMW);
- British Geological Survey data;
- Archaeological Data Services;
- Historic mapping from online and local archives, including historic Ordnance Survey maps, tithe maps, and estate plans;
- Aerial photography from the Central Registers of Aerial Photography Wales (CRAPW), Cambridge University Collection of Aerial Photography (CUCAP) and the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW); and satellite imagery via Google Earth;
- LiDAR data from DataMapWales; and,
- Site walkover.

2.5 Criteria for Assessing Asset Value

2.5.1 The heritage value (also referred to as significance) of the baseline data assets has been assessed using the heritage values set out in Conservation Principles (Cadw, 2011). These consider the various aspects and attributes that give value to a heritage asset, and are:

- Evidential value. The physical remains or surviving historic fabric that can provide information about the asset's date, construction, and changes over time.
- Historical value. This could derive from an association with a notable individual or event, or it from being an illustrative example of a certain type of asset or aspect of past life.
- Aesthetic value. Significance originates from the asset's appearance, such as its form, style, and/or setting, and can be designed or fortuitous.
- Communal value. The meaning of a heritage asset to individuals. This could be social, symbolic, spiritual, and/or economic and can change over time.

2.5.2 The assessment criteria utilised are provided in Table 1 below. The criteria broadly align with those used to assess heritage asset value in both the ICOMOS 2011 *Guidance on Heritage Impact Assessments for Cultural World Heritage Properties* and Highways England 2007 *Design Manual for Roads and Bridges*.

2.5.3 Heritage value has been assessed as Very High, High, Medium, Low, or Negligible. Some elements of heritage value are subjective, and the determination of an asset's value is a professional judgement made in relation to Conservation Principles (Cadw, 2011) utilising all available information about the asset.

2.5.4 Designated assets (Listed Buildings, Scheduled Monuments, and Registered Parks and Gardens) will have High or Very High value, as they have already been assessed to meet the national criteria for designation. Assets categorised as of Very High value are of exceptional interest and

international importance.

- 2.5.5 Non-designated assets are likely to be assessed as of Medium, Low or Negligible value. However, a professional judgement could be made during the course of the assessment that a non-designated asset is of equivalent significance to a designated asset, resulting in a higher value attribution.

Table 1. Assessment criteria

Value	Description
Very high	Assets of acknowledged international value. Assets that strongly convey the outstanding universal value of the WHS.
High	Nationally designated assets. Assets that contribute to national research objectives.
Medium	Assets that contribute to regional research objectives. Assets with lower levels of preservation.
Low	Assets of local importance. Includes locally listed buildings and assets of limited value or poor preservation.
Negligible	Assets with little surviving archaeological, architectural, or historic interest.
None	Assets with no heritage interest or value.

3. Archaeological and Historical Background

3.1 Introduction

- 3.1.1 This section outlines the archaeological and historical background of the Chirk area, providing context for the known designated and non-designated assets around the Proposed Development and the history of the development area itself.

Prehistoric: Palaeolithic (c.450,000 – 10,000 BC), Mesolithic (c.10,000 – 3,800 BC), Neolithic (3,800 BC – 2,300 BC), Bronze Age (2,300 BC – 700 BC) and Iron Age (700 BC – AD 43)

3.1.2 The earliest evidence of activity within the landscape surrounding the Site dates to the Neolithic period. There is no known activity within close proximity to the Site, with the majority of the known Neolithic find spots and monuments being located to the north, focusing along the Clwydian Range and the Dee Valley (<https://www.clwydianrangeanddeevalleyaonb.org.uk/>). The evidence of Neolithic activity is low with no indication of habitation sites in the area.

3.1.3 Activity increased dramatically during the Bronze Age, with a large number of funerary monuments, both round barrows and cairns, known within the wider landscape. These include the Darland Wood Round Barrows (DE223), which are located 2.5km to the north-east of the Site. A number of Bronze Age artefacts have also been found within the area, largely around Wrexham to the north-east. These include axeheads, palstaves and rapiers, as well as a sickle (HESH-199F11) which is suggestive of domestic activity. The Portable Antiquities Scheme database holds the record for a small hoard which was also recovered from the area, which included a torc, necklace pendant, gold beads and palstaves (PAS-5B1745).

3.1.4 The Iron Age is represented by a number of hillforts within the landscape, such as Pen y Gaer hillfort (DE231), which is 5km to the north-west of the Site. It is not known when the hillfort was constructed or if there is any evidence of domestic occupation as no excavation has taken place within the hillfort. No upstanding hillforts survive in the immediate vicinity of the Site, however, an enclosure at Halghton Farm, approximately 2km to the east, is shown on an aerial photograph. A further enclosure is also evident on aerial photographs to the north-east (Frost 1995). It is possible that these enclosures may be of Roman date or have continued to be occupied into the Roman period.

Roman (AD 43 – c. AD 410)

3.1.5 The Roman military had reached the area of modern Chirk by the late AD 40s,

with a Vexillation Fortress located 2.5km to the south-east of Chirk at Rhyn Park (SM1003716). Small-scale excavations at the Site have suggested the fortress was constructed by troops led by Governor Publius Ostorius Scapula in his campaigns against the Deceangli in AD 47. Roman historians, such as Tacitus, tell us that the area of modern Wales was split into four large tribal areas by the end of the Iron Age, with the territory of the Deceangli roughly covering what are now the modern counties of Wrexham, Mold and Denbigh (Jones and Mattingly 2007).

- 3.1.6 The Vexillation Fortress would only have been occupied for a short space of time before being dismantled once the army moved on. A second fort was built over the earlier remains in approximately AD 75, during the campaigns in North Wales under Governor Sextus Julius Frontinus (Jones and Mattingly 2007).
- 3.1.7 A projected line for a Roman Road – Rhyn Park to Rhug (PRN 47505) – is documented in the HER running adjacent to the eastern boundary of the Site.
- 3.1.8 There are no known settlements of Roman date within the immediate vicinity of the Site. Excavations at Plas Coch, which is within the modern town of Wrexham to the north-east, did reveal evidence of a wealthy settlement, which began life as a farmstead but may have developed into a villa complex. Findspots of Roman brooches (CPAT-DA6ED2 for example) and coins just to the north of Chirk suggest settlements of Roman date were likely located within the area of the town.

Early Medieval (c. AD 410 – AD 1086), Medieval (1086 – 1536)

- 3.1.9 Two early medieval linear earthworks, Offa's Dyke and Wat's Dyke, represent the known early medieval activity in the area. Offa's Dyke is the UK's longest linear earthwork, stretching approximately 220km from Treuddyn in north-east Wales to Sedbury Cliffs in south Gloucestershire. The monument is believed to have been constructed during the reign of King Offa and so dates to the late 8th century AD. The Dyke is thought to have formed a boundary between the Saxon kingdom of Mercia and the Welsh kingdoms, although its exact function has been debated, with suggestions it may have served as

a defensive structure as well as a boundary (Hadley, 2017).

3.1.10 Wat's Dyke is also a linear earthwork, consisting of a bank and ditch, which stretches for 40 miles from Basingwerk Abbey on the river Dee to Maesbury in Shropshire. The dyke runs largely parallel to Offa's Dyke. Wat's Dyke is thought to date to the same period as Offa's Dyke, although there is no secure dating for the former at present (Hill 2020).

3.1.11 It has been suggested that Chirk developed from an early medieval *maerdref*, which was a township from where demesne land was administered (Silvester 2015). The suggestion has been made based on placename evidence, with the sub-township name of *Y Faerdre* indicating the presence of a nucleated settlement in the vicinity of modern Chirk prior to the Norman conquest (Silvester 2015). In the mid-11th century, Chirk formed part of the Kingdom of Powys Fadog, with the last Welsh prince to rule the area being Gruffyd ap Madoc Maelor (WCBC, 2014).

3.1.12 The Norman incursions into Wales began shortly after the conquest of England. Castles were established along the border between England and Wales, known as Marcher Castles. A motte and bailey castle, Castell-y-Waun, was constructed at Chirk, located 1.3km to the south of the Site. The castle itself does not survive, with only the motte remaining. The castle is mentioned in 1165 and was located within the borough of Chirk (Cadw Scheduled Monument Report). The castle was likely constructed by William Peverel of Dover (WCBC, 2014).

3.1.13 Castell-y-Waun is located adjacent to the Church of St Mary (LB 615; PRN 101108; NPRN 12599), which was originally constructed in the early 12th century and so potentially pre-dated the construction of the motte and bailey castle. The church was originally dedicated to St Tysilio (WCBC, 2014).

3.1.14 After the defeat of Llywelyn ap Gruffydd by Edward I in 1282, the King established a new Marcher lordship at Chirklands, which led to the construction of Chirk Castle in the late 13th century, 2km to the west of the smaller motte and bailey castle. The lordship was granted to Roger Mortimer,

who later joined a rebellion against King Edward II and was subsequently captured and ended his life in the Tower of London. The Lordship passed through a number of different families before the castle was bought by the merchant adventurer Thomas Myddelton, in 1595, remaining in the Myddelton family until the present day (Cadw Listed Building Report).

3.1.15 The borough of Chirk received its first market charter in 1324 although the village remained relatively small, with only 23 burgage plots recorded in 1391. The village was devastated during the revolt of Owain Glyndŵr in the early 15th century. The town suffered further during the War of the Roses, with only a handful of properties noted by Leland in 1530 (WCBC, 2014).

Post Medieval (1536 – 1899) & Modern (1900 – present day)

3.1.16 During the Civil War of 1642-47, Chirk Castle was seized for King Charles I by Colonel Ellis of Wrexham, as the Myddelton family were Parliamentary sympathisers. The Castle was surrendered by the Royalists and returned to the Myddelton family in 1646. Myddelton became disenchanted with Cromwell and later switched allegiance. Chirk was consequently besieged by parliamentary forces in 1659. The castle was captured and slighted, but Myddelton rebuilt when the castle was returned (WCBC, 2014).

3.1.17 Settlement and activity within the landscape surrounding the Site increased rapidly during the later post-medieval period, largely due to the expansion of industry across Britain.

3.1.18 One of the most prominent industrial features of the post-medieval landscape surrounding the Site is the Llangollen Canal. In the late 1700s a group of landowners wanted better routes to export goods in order to exploit new centres of industry that had emerged around the Welsh border. In 1793, they obtained an Act of Parliament, subsequently founding the Ellesmere Canal Company. The canal was constructed in sections and eventually connected Llangollen in Denbighshire to Hurleston in Cheshire.

3.1.19 The London to Holyhead Road (PRN 79833), now the modern A5, is one of the most significant traces of post-medieval activity in the area. At the

beginning of the 19th century, the crossing from Holyhead to Dublin grew in importance, becoming the main route for Royal Mail deliveries across to Ireland, which led the need to make Holyhead more accessible by road. As a result, Thomas Telford presented a new road design to Parliament in 1811, with funds becoming available to construct the road in 1815. The road was completed in 1826, when the Menai Suspension Bridge was opened.

3.1.20 The canal, road and other infrastructure were developed to support industry, such as coal mining and quarrying, allowing goods to be moved long distances and reach new markets. There is a large amount of evidence for these industries within the landscape surrounding the Proposed Development site, as well as limekilns, smithies and forges. The iron forge at Pont-y-Blew (LB20260), approximately 2.5km to the east of the site, is believed to be some of the earliest evidence for industry in North Wales, dating to 1634. The forge was owned by Sir Thomas Myddelton along with Edward Eyton of Ruabon, Thomas Mytton of Halston, and Thomas Kinaston of Ruyton. Pig iron was transported from the smelting furnace at Glyn Morlas, to the Pont-y-blew forge, where the huge hammer of the forge was operated by water power from the Afon Ceiriog (Cadw Listed Building Report).

3.1.21 A number of farmsteads and associated buildings within the landscape also date to this period. This includes Afon Bradley Farm (PRN145630) and Lodge Farm, with the farmhouse at the latter being a Grade II Listed Building (LB626). The Lodge farmhouse had been originally constructed as a lodge for Black Park and was used as the residence for the manager of Black Park colliery between 1805 and 1854 (Cadw Listed Building Report).

3.1.22 The town of Chirk underwent little expansion until the 20th century, when Chirk Castle Estate sold most of the land it held in 1911. After the sale of land new developments began, with expansion continuing into the later 20th century, with Chirk more than trebling in size during this time (WCBC, 2014). Development of the industrial area to the west of Chirk Green, which includes the existing Kronospan Facility, started in the 1970s.

3.2 Map Regression

Early mapping

3.2.1 Chirk was important enough to be named on 16th and 17th century maps of Wales, such as the 1579 *Cambriae Typvs* produced by Humphrey Llwyd and Abraham Ortelius. Subsequent county maps from the 17th and 18th centuries, including Speed's 1612 map of Denbighshire, depicted both the settlement of Chirk and Chirk Castle. The 1752 *Actual survey of the county of Salop* by John Rocque provides early detail of the area, showing Chirk Castle sitting in its park on the top of a raised area. The park is shown as being partially wooded and partially open land, with roads leading east to Chirk as well as north and west crossing it. Offa's Dyke is also shown. Chirk is depicted as settlement with a church on either side of the road to Wrexham.

Plan of Chirk Castle Estate Demesne and Lands Adjoining, 1788

3.2.2 This plan does not extend as far as the Site, but it does provide a detailed depiction of the castle estate that is very similar to its current appearance. The main routes through the park, including the drive from the road to the north-east and another to the south-east are shown. The south-eastern route is flanked by an avenue of trees still in existence. The woodland areas and fields are also very similar to their modern appearance.

Chirk Castle Estate Plan, 1820

3.2.3 The estate plan dating from 1820 extends farther to the east, covering the Proposed Development area and Chirk Green (Figure 3).

3.2.4 The plan shows that the Site spans eight different parcels of land. The majority of the land, plots 7-11, is shown as being occupied by Joseph Davies, who according to the map also occupied Afon Bradley farm, which is on the western edge of the Site. Plot 10 is shown on the map as having been split into two fields Upper and Lower Cae Cook (Coch). The south-western section of the Site is shown as being within plot 18, which formed part of the lands leased by Mr Dicken. The lands leased by Mr Dicken extended west towards Chirk Castle. To the south, in the area now occupied by the existing Kronospan Facility was largely covered by Maes Gwyn Farm, leased to John

Lloyd.

- 3.2.5 Ellesmere Canal is depicted just to the west of the Site, with the London to Holyhead road also being shown. An amendment appears to have been made to the map, showing the altered route of the new road. The new course cut a small bend off the road, with the new route cutting across plot 7. A bridge is depicted where the new course of the road crossed a small stream that formed the north-western edge of plot 7. The map shows four buildings on the eastern edge of the new road, which had been constructed around a junction along the course of the road's previous route. These buildings include the Royal Oak, which may have been a public house.
- 3.2.6 To the north of Site, a small park (now Whitehurst Registered Park and Garden) is depicted. The park has a triangular shaped waterway at its centre and a number of paths running around the outside of the water channel. A small area of woodland is shown at the south-western edge of the park.
- 3.2.7 The map does depict field boundaries, although the accuracy of these is uncertain. The field boundaries suggest that areas of the landscape had been farmed during the medieval period, with sections of the irregular medieval strip fields having been fossilised in the post-medieval field boundaries. This is most clearly evident in the boundary drawn around the lands occupied by Joseph Davies of Afon Bradley Farm, with the southern section of this boundary including a number of steps, where the strip fields were enclosed into larger fields. Some slightly more curvilinear field boundaries are evident to the north-west of the Site and these boundaries may be indicative of prehistoric field systems.

Ordnance Survey Drawing, Llangollen, 1832, William Durrant

- 3.2.8 The Site is shown on the very eastern edge of the map. Very little detail is shown on the map, with no field boundaries depicted, although farmsteads, the road system, areas of woodland and other topographical and historical sites are shown.
- 3.2.9 The canal is shown to the west of the Site, with Offa's Dyke, Chirk Castle and

Chirk Park shown beyond. Afon Bradley farm is depicted on the north-western edge of the Site and a kiln is shown just to the south-west of the farm buildings. The remains of limekilns associated with the construction of the canal are known to survive in this location (NPRN405795).

3.2.10 A canal spur or small dock is shown at the southern edge of the Site, which was connected to the Black Park Collieries Railway. The railway was a horse-worked railway that ran from the dock to the colliery which was over a mile to the east (NPRN405791).

Tithe map of the parish of Chirk in the County of Denbigh 1839 (Figure 4)

3.2.11 By 1839, the Proposed Development area is divided into six fields (plots 549-44). All the fields were owned by Mrs Charlotte Myddelton. The fields to the south (544-545) are associated with a house and gardens, while the others correspond to land used for agricultural purposes – e.g. 546 Barley Field, 547 Cae Coch and 548/9 Maes y Felin.

3.2.12 The canal (LB 1303; PRN 101202; NPRN 34410) is depicted on this map edition, as well as Afon Bradley Farm (PRN 14527-31) complex to the west of the Proposed Development. Furthermore, limekilns (NPRN 405795) are recorded to the west of the canal in plot 554.

3.2.13 The canal spur is also depicted within plot 542, with the apportionment showing it as Fradley Wharf, owned by Mrs Charlotte Myddelton. The railway line is also depicted on the map, running east towards the colliery.

3.2.14 Whitehurst Park, shown to the north of the Site on the 1820 Estate plans, is also depicted on the tithe map. The apportionment shows it as Chirk Castle Garden, owned by Mrs Charlotte Myddelton. The park is shown as unchanged from the 1820 plan.

3.2.15 The tithe map shows a series of irregular field boundaries to the north-west of the Proposed Development site, which, as suggested above, are indicative of prehistoric field systems. Medieval strip farming is suggested in the field boundary patterns surrounding Chirk itself, to the south of the Proposed Development Site.

OS County Series, Surveyed 1873 and Published 1879, 1:2,500 (Figure 5)

3.2.16 The field division observed on the tithe map is not depicted on this map edition. Instead, the Site is shown as three large fields. The house and gardens shown on plots 544-545 of the tithe map are labelled as Ivy Cottages. The wharf at the southern end of the Proposed Development is shown to have expanded to two wharfs with an area of water in between. Both wharfs were associated with railways lines that connected to the main Black Park Colliery line to the east, on the southern edge of Ivy Cottage. The wharf is shown as Bottom Wharf, with Top Wharf located to the east, on the eastern side of the Holyhead to London road. Further coal shafts are shown to the north of Black Park Colliery and were likely part of the colliery rather than separate shafts. A second colliery is also shown at Bryn-Kinallt, just to the north of the current Brynkinallt park boundary.

3.2.17 The Great Western Railway runs adjacent to the eastern side of the canal. The Shrewsbury to Chester line of the Great Western Railway was completed in 1848. The construction of the line also included the building of stations, with a station at Chirk to the south of the Proposed Development Site, with Llangollen Road station to the north.

3.2.18 The map also shows a change Whitehurst Park, with the central water channels having been backfilled. A formal garden is shown as having been developed across the park, with a well close to the centre.

OS County Series, Revised 1899 and Published 1902, 1:2,500

3.2.19 There are very few differences shown on this map to the preceding map. However, it does show the Site across five different fields rather than three.

3.2.20 The map shows the expansion of Brynkinallt colliery to the south-east of the site. The colliery has shifted south-west, with the old shafts still shown on the northern edge of the park. The new colliery is centred at Chirk Green, with a number of houses shown surrounding the colliery, as well as a smithy at the southern edge. A new railway line is shown connecting the colliery to the Great Western Railway to the west. The Glyn Valley tramway is shown running alongside the Canal and the Great Western Railway and it is possible that the

Brynkinalt siding connected to the tramway rather than the railway line.

3.2.21 There are no substantial changes between the 1873 map edition and the 1892 and 1910 map edition.

Ordnance Survey Revised Pre-1930 to 1954, Published 1954, Scale 1:10,560 (Figure 6)

3.2.22 By the time this map was revised, the field divisions observed within the Site were almost identical to those observed today. An area of works is demarcated adjacent to the south-western end of the Proposed Development, while Bottom Wharf is still shown. The Black Park siding is still shown connecting Bottom Wharf to the colliery suggesting it was still active. Brynkinalt colliery is shown as disused.

3.2.23 The main development the map highlights is the expansion of Chirk, with new housing and road systems shown immediately to the south-east of the Site, and further new housing shown to the south at the northern edge of Chirk itself.

3.3 Aerial Photographs

3.3.1 All aerial photographs stored at the Welsh Government Cartographic department have been examined for the present report. Collections held by the Cambridge University Collection of Aerial Photography (CUCAP) and the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW) have also been consulted.

3.3.2 1971 71127 OS71-478 431: This is a black and white vertical photograph centred on the area now occupied by the factory complex, bounded by the former railway and Ellesmere Canal (DE175; PRN 124694, NPRN 405725). The image shows the factory currently owned by Mendelez south of the Site, with Maes Gwyn Farm (PRNs 126304 - 126308; NPRN27487) to the north-east of it. The earthworks of the former Black Park Colliery railway sidings are still visible on the ground to the north of the complex. A cluster of buildings are located along the B5070 where the former siding met it, at what is now the entrance to the existing Kronospan Facility. North of the siding is a small

rectangular factory building, which is now encompassed by the northern Kronospan factory building. The sewage works site, which bounds the Proposed Development area to the south-west, is clearly visible. Only the southern end of the Proposed Development is documented by the photograph, shown as fields with the same layout as exist today.

- 3.3.3 The strip of land between the railway and canal, to the west of the existing Kronospan Facility appears to be pasture. The canal is shown as being lined by trees along this stretch. To the west are fields and woodland in the same layout as today, including parts of Chirk Castle Park.
- 3.3.4 1973 7370 OS 73_220 004 (Figure 7): This is a black and white vertical photograph taken at a high altitude. It shows the first elements of the main building at Kronospan, including two long, rectangular buildings, and one of the stacks at the western end, which was established in 1972. Maes Gwyn Farm appears to still exist on the south-eastern edge of the site. The former railway siding has been utilised as an access track.
- 3.3.5 The fields of the Site appear the same as they are today.
- 3.3.6 1985 8534 JAS 5484 067 (Figure 8): This is a black and white vertical photograph also taken at a high altitude. The buildings on the existing Kronospan Facility have been added to, and there is a large timber storage area to the north. Two buildings have been established on the area between the railway and canal. The Proposed Development Site is unchanged.
- 3.3.7 The first high resolution Google Earth satellite image is from 2008 (Figure 9). It shows an expansion of the existing Kronospan Facility to the north and east, including both buildings and storage areas, which largely equates to the modern layout. The area of land between the railway and canal has been entirely developed into another small industrial area. To the west of the Site and west of the canal a golf course has been established. To the north-west of the Site, Chirk Marina (NPRN405794) has been built on the western side of a small bend in the canal. The Site appears unchanged.
- 3.3.8 Subsequent satellite imagery shows no notable changes either to the Site or

surroundings.

3.4 LiDAR

- 3.4.1 LiDAR 1m DTM was processed (Hillshade) for this report (Figure 10). The former boundaries documented on the map regression/aerial photography are shown. The large modern anomaly observed on the geophysical survey (see **Appendix 6.1, Figure 4**) located toward the north-west end of the field is also apparent.
- 3.4.2 Within the wider landscape, the LiDAR data shows field systems surrounding Chirk Castle and either side of Offa's Dyke that are likely to be medieval in date. These appear to have been rectilinear in form and bounded by large banks. It is possible they represent early enclosure of open medieval field systems, possibly dating to the later medieval period and pre-dating the establishment of the park surrounding Chirk Castle.

3.5 Previous Investigations

- 3.5.1 There have been two previous investigations within the search area surrounding the Site, as well as a geophysical survey and evaluation carried out by AW within the site boundary (see below).
- 3.5.2 Of the two investigations within the search area, one is shown as being within the Site. This is an error as the investigation relates to a photographic survey of The Lodge Stables, which are located 250m to the east of the site. The photographic survey (PRN129388) was conducted in 2010 prior to development.
- 3.5.3 The second previous investigation relates to an evaluation that took place in Whitehurst Gardens, to the north of the Site, in 2016 (PRN140117). The evaluation was undertaken to locate the water channels that had once been within the centre of the park, as evident on the estate plan of 1820 and the tithe map. The report for the evaluation shows that the water channels were successfully located, with the channels likely being of 17th century date. The artefactual evidence suggested that the final backfilling of the channels had

occurred in the 19th century (Logan 2016).

3.6 Geophysical Survey

- 3.6.1 From the 13th to 17th of June 2022, Archaeology Wales Ltd carried out a geophysical survey on the Site, using a Bartington Grad601 dual-fluxgate gradiometer (Muller 2022, **Appendix 6.2**). The aim of the geophysical survey was to determine the nature and extent of any buried archaeological features within the Site.
- 3.6.2 The survey identified anomalies of possible archaeological origin in two fields (Fields A and B), namely positive curvilinear anomalies, one of which is a ditch-like feature in Field A (F1) that extends outside the survey area; and a sub-rectangular, ditched enclosure in the northern end of Field B (F4). Further to these, two anomalies of positive polarity with negative polarity in their centres within Field B (F5 and F6) merit further investigation as possible pits.
- 3.6.3 The full survey report can be found in **Appendix 6.2**.

3.7 Evaluation

- 3.7.1 An evaluation was carried out across the Site in September 2022. A total of eight trenches were excavated to target anomalies evident on the geophysical survey.
- 3.7.2 Only two of the trenches were found to contain archaeology. Trench 2 contained a large modern rubbish pit, which was not fully excavated. Within Trench 5, a large circular feature was recorded, which measured 4.5m in diameter. The feature was excavated to a depth of 4m where excavation had to cease due to health and safety constraints. The sides of the feature were red in colour, likely through heat affection. It was interpreted as the remains of a limekiln.
- 3.7.3 The full excavation report is provided in **Appendix 6.4**, and archival research relating to the possible limekiln is in **Appendix 6.5**.

3.8 Site Visit

- 3.8.1 Site visits to the Site and surrounding assets were carried out in March 2022 and May 2023. On both occasions the weather was generally sunny with occasional cloud and visibility was good.
- 3.8.2 The Site fields are currently used for grazing. The field boundaries low hedgerows, while larger trees are found along the B5070 around the access to Afon Bradley Farm along the north-west site boundary, and on the southern boundary with the existing Kronospan Facility. No evidence of any previously unknown archaeological or heritage sites were identified within the Site during the visit (Plates 1-5).

4. Designated and non-designated assets

4.1 Pontcysyllte Aqueduct and Canal World Heritage Site (Figures 11 and 12)

- 4.1.1 Pontcysyllte Aqueduct and Canal WHS (DE175; PRN124694, NPRN405725) lies c. 150m to the west of the Proposed Development. It was inscribed as a WHS in 2009, as “early and outstanding examples of the innovations brought about by the Industrial Revolution in Britain” (ARCADIS, 2019).
- 4.1.2 The WHS is c. 18km long, with 17km located within Wales and 1km in England (Figure 11). It can be divided into two distinct sections: (1) from Gledrid Bridge to Trevor Basin and (2) the Llangollen arm from Trevor Basin to the Horseshoe Falls (ARCADIS 2019). It is the first section that the Site lies adjacent to (Figure 12).
- 4.1.3 The idea for a canal for the transportation of goods from the coal producing and ironworking region around Ruabon was first discussed in 1789 by a group of industrialists who owned land in the area. Two routes were proposed: the eastern route would link the River Mersey to the River Dee at Chester then run via Overton to Shrewsbury, with a branch from Overton to Ruabon and on to Llangollen and Bersham; the western route was through more difficult terrain, but ran directly through the Welsh mining areas, going from Chester to Shrewsbury via Ruabon (Figure 13).

- 4.1.4 After the passing of the Ellesmere Canal Act in 1793 and the formation of the Ellesmere Canal Company a compromise route was agreed which primarily followed the western route but also included a branch to the Chester Canal that satisfied the supporters of the second route.
- 4.1.5 The route ran through challenging mountainous landscape which required innovative engineering to construct. The civil engineers William Jessop and Thomas Telford (who acted as the General Agent) were employed to design it (Arcadis 2019). The route required the construction of two aqueducts and two tunnels along its route, as well as earthworks, and embankments. It utilised new building materials and new designs, particularly evident in the construction of the aqueducts, which had tall masonry piers supporting iron arches. The Chirk Aqueduct over the Afon Ceiriog opened in 1801, and the Pontcysyllte Aqueduct over the Dee was completed in 1805.
- 4.1.6 The significant costs involved in these major engineering projects caused the Ellesmere Canal Company to abandon their original plans to create a single navigable route between the River Mersey and the River Severn. Two sections of the envisaged main line were constructed, the northern section from the River Mersey to Chester, and the middle section from Trevor Basin to Weston Lullingfields, c. 14km to the north-east of Shrewsbury. The isolated central section was connected to the wider canal network by a link to Hurleston on the Chester Canal from Frankton, c. 4km to the south-west of Ellesmere. The isolated section was also in need of a water source, which resulted in the construction of the Llangollen branch as a navigable feeder. Water was drawn from the River Dee by the 140m-long Horseshoe Weir, which was also designed by Thomas Telford. An Act of Parliament was passed in 1804 and work on the line finished in 1808.
- 4.1.7 Despite the introduction of railways from the mid-19th century, the canal continued in use for good transportation into the early 20th century, when traffic along it declined in the aftermath of World War One. The picturesque setting of the canal began to draw tourists from the late 19th century. Following the Second World War the canal was decommissioned, but the

importance of the Llangollen branch to the local water supply it was retained, although largely unnavigable. Visitor interest in the canal remained and the route became a designated cruiseway after the passing of the Transport Act 1968.

4.1.8 In 1958, the aqueduct was designated as a Scheduled Monument. However, this designation did not include the canal and other associated infrastructure. It was subsequently revised to encompass the entire length of the Llangollen Branch (including the weir at the Horseshoe Falls), the Trevor Basin and the heavily engineered canal section south of Pontcysyllte (including the Froncysyllte Embankment, Chirk Tunnel and Whitehouse Tunnel, the Canal Wood Cutting and Irish Bridge Cutting, and the Chirk Basin and Aqueduct).

4.1.9 In 2009, Pontcysyllte Aqueduct and Canal was inscribed as a World Heritage Site. At this time the existing Kronospan Facility was roughly the same as its current scale, and despite lying within 150m of the WHS it did not prevent the inscription. The Statement of Outstanding Universal Value (OUV) of the WHS is provided below:

4.1.10 *The Pontcysyllte Canal is a remarkable example of the construction of a human-engineered waterway in a difficult geographical environment, at the end of the 18th century and the start of the 19th century. It required extensive and boldly conceived civil engineering works. The Pontcysyllte Aqueduct is a pioneering masterpiece of engineering and monumental architecture by the famous civil engineer Thomas Telford. It was constructed using metal arches supported by tall, slender masonry piers. The Pontcysyllte Aqueduct and Canal are early and outstanding examples of the innovations brought about by the Industrial Revolution in Britain, where they made decisive development in transport capacities possible. They bear witness to very substantial international interchanges and influences in the fields of inland waterways, civil engineering, land-use planning, and the application of iron in structural design.*

4.1.11 *Criterion (i): The Pontcysyllte Aqueduct is a highly innovative monumental civil engineering structure, made using metal arches supported by high, slender*

masonry piers. It is the first great masterpiece of the civil engineer Thomas Telford and formed the basis of his outstanding international reputation. It bears witness to the production capacities of the British ironmaking industry, which were unique at that time.

4.1.12 *Criterion (ii): The intensive construction of canals in Great Britain, from the second half of the 18th century onwards, and that of the Pontcysyllte Canal in particular in a difficult region, bear witness to considerable technical interchanges and decisive progress in the design and construction of artificial waterways.*

4.1.13 *Criterion (iv): The Pontcysyllte Canal and its civil engineering structures bear witness to a crucial stage in the development of heavy cargo transport in order to further the Industrial Revolution. They are outstanding representatives of its new technical and monumental possibilities.*

4.1.14 The WHS designation recognises the aqueduct and canal as a heritage asset of international significance and **Very High** heritage value. As the Statement of OUV describes, it has high evidential and historic value as a well-surviving example of innovative engineering associated with the Industrial Revolution. Its aesthetic value is also high, particularly for the aqueducts spectacularly spanning the Dee and Ceiriog Valleys.

4.2 Scheduled Monuments (Figure 14)

4.2.1 No Scheduled Monuments are located within the Site. The only Scheduled Monument which lies within the 1km search area is Pontcysyllte Aqueduct and Canal (DE175). Nine Scheduled Monuments outside the 1km study area have been scoped into this assessment.

4.2.2 Castell y Waun Castle Mound (DE117; PRN101109; NPRN30701) is located 1.4km south of the Site on the southern edge of Chirk. The mound was part of a motte and bailey castle built by William Peveral of Dover in the late 11th or early 12th century. It was one of three he built (the others being at Whittington and Ellesmere) to consolidate his power in the Welsh border area, where he had been granted lands following their confiscation from

Roger Montgomery. The castle was central to the area until the construction of Chirk Castle by Roger Mortimer at the turn of the 13th century, after which it was abandoned and fell into decay. It survives as a circular, flat-topped mound around 30m in diameter and 5.7m high. No other earthworks survive, but the motte itself is largely undisturbed and is considered to have high archaeological potential.

4.2.3 Within 100m south-west of the Castle Mound is DE288, the London to Holyhead Road - Chirk embankment and earlier trackways (PRN79833). The Holyhead Road was part of an improvement to the road between London and Holyhead. The final part of the route through north Wales presented significant engineering challenges. It was designed by Thomas Telford and built between 1815 and 1826. It is also significant as the first major civil engineering project funded by parliament. The stretch scheduled as DE288 includes Chirk Embankment, a gradually rising earthen embankment which carries the road for about 200m as it approaches Chirk from the south-east before it turns to the east and traverses the slope of the hill. The Scheduled Monument also includes braided trackways and the earlier turnpike.

4.2.4 Darland Wood Round Barrows (DE223) are located 2.7km to the north of the Site. They are the remains of two round barrows, thought to date to the Bronze Age. Both are circular, with rounded profiles. Barrow A has a diameter of 15 - 20m and is around 0.5 - 1m high, despite being reduced by levelling in 1890 and subsequent ploughing. Barrow B is 26m in diameter and between 0.4 and 1.3m high. Despite the levelling disturbance the barrows are likely to be well preserved and have significant archaeological potential. They may contain surviving burial deposits, and environmental and structural evidence.

4.2.5 As Scheduled Monuments, Castell y Waun Castle Mound, the London to Holyhead Road - Chirk embankment and earlier trackways, and Darland Wood Round Barrows have **High** heritage value. Both Castell y Waun and Darland Wood have good potential for surviving archaeological deposits and finds and therefore a high potential evidential value. The London to

Holyhead Road has high historical value.

4.2.6 Offa's Dyke is the UK's longest linear earthwork, stretching approximately 220km from Treuddyn in north-east Wales to Sedbury Cliffs in south Gloucestershire. The monument is believed to have been constructed during the reign of King Offa and so dates to the late 8th century AD. The Dyke is thought to have formed a boundary between the Saxon kingdom of Mercia and the Welsh kingdoms, although its exact function has been debated with suggestions it may have served as a defensive structure as well as a boundary (Ray and Bapty, 2016).

4.2.7 The Dyke is formed of an earthen bank with a ditch on its western side (Williams, 2019). It survives in varying states of preservation, with some sections surviving as visible earthworks while some have been buried and levelled. Along its best-preserved sections the bank stands to 3.5m high, with excavated sections showing the ditch to be at least 3.5m wide and 1.7m deep (Hill, 2020). Six sections of the Dyke are included in this report:

- DE134 Offa's Dyke: Chirk Castle Section extending NE from Castle Mill measures 400m, running from Castle Mill to Home Farm, within Chirk Castle Registered Park and Garden. It has been truncated in places by the park boundary, access road and buildings but otherwise survives well (Jones, 2017).
- DE198 Offa's Dyke: Chirk Park Section extending 340m NE of Home Farm runs north of DE134 across Chirk Castle Registered Park and Garden. This section has been subject to historic levelling as part of landscaping activity. It survives as a low, wide bank, around 9m wide and 1m high. It has been truncated by an ornamental lake which forms the end of this section. Excavation By CPAT in 2018 just outside the scheduled area to the north-east encountered a 6m wide, 2.8m deep V-shaped ditch with a vertically sided trough at the base, on the west side of the bank (Belford, 2019).
- DE135 Offa's Dyke: Chirk Park Section extending NE from the Lake runs north-north-east from the ornamental lake for 810m, where it is

truncated by a road cutting. This section of the monument is well preserved although overgrown and obscured by vegetation.

- DE133 Offa's Dyke: Caeau-Gwynion Section stretches for 650m across Caeaugwynion farm towards Wern Wood. At its southern end it is truncated by a track and a farm track cuts through the centre. The monument is well defined in this section, surviving up to c. 1.5m high.
- DE138 Offa's Dyke: Section N & S of Plas-Offa is a 700m long stretch of the Dyke located just over 1km to the north-west of the Site. It is cut by the A5 in the centre and by the Llangollen Canal to the north.
- DE140 Offa's Dyke: Section N & S of Tan-y-Cut runs for c. 500m north-east from the Llangollen Canal to the River Dee.

4.2.8 All the Offa's Dyke sections have high historical value. Their evidential value varies according to the level of survival but is also generally high. Likewise, their aesthetic value, which is primarily incidental and based on their landscape setting, also varies between the sections but is overall high. Their heritage value is therefore considered **High**.

4.3 Listed Buildings (Figure 15)

4.3.1 There are 17 listed buildings within the 1km search area. None lie within the boundary of the Site. There is one Grade II* building and the remainder are Grade II. In addition, Chirk Castle, LB598, located 2km to the south-west of the Site, has also been included due to its prominent landscape position and the potential for visual impacts on the building demonstrated by the ZTV.

4.3.2 The closest listed building to the Site is LB1286, Whitehurst Garden gatepiers with gates and perimeter garden wall, which is c. 200m to the north of the Site. Five other listed buildings are located within the garden. Queen Anne's Cottage (LB1288) is a Grade II* late seventeenth or early 18th century brick building, which is thought to have been a banqueting house. Whitehurst House (LB1287) is a Grade II two storey 19th century stone building that incorporates an earlier building, thought to have been another banqueting house. The three other listed buildings in the garden (LBs20224, 20225 and 20226) are all Grade II walls of the garden terraces.

- 4.3.3 Across the A5 from Whitehurst Gardens, c. 300m to the north-west of the Site, is Drumore, [LB1289](#). This Grade II listed building is a 17th century lobby-entry house constructed in rubble stone. It was divided into two properties in the 19th century. It has historic associations with the Chirk estate, with records showing that in the 18th century it was an alehouse that supplied the castle.
- 4.3.4 Around 300m to the east of the Site is The Lodge, [LB626](#), a Grade II red brick Late Georgian building. Its name derives from an earlier building on the site, documented in the 17th century but potentially of earlier date, which was the lodge for Black Park, part of the Chirk Castle estate. The current building was either a remodelling or rebuilding carried out by the manager of Black Park Colliery, T.E. Ward at some time in the first half of the 19th century.
- 4.3.5 Less than 1km to the east of the Site is Ley Farmhouse, [LB1297](#). The Grade II building is a 16th century cruck framed house with 17th and 20th century alterations.
- 4.3.6 There is a cluster of five listed buildings c. 900m to the south of the Site, four of which lie within the Chirk Conservation Area. The closest to the Site is [LB20236](#), a Grade II listed milestone on the London to Holyhead Road built by Thomas Telford in the early 19th century. Three of the buildings relate to Chirk Town Council Offices, built in 1902 in neo-Jacobean style. The office building ([LB20215](#)), North Gate Piers ([LB20228](#)), and South Gate Piers ([LB20229](#)), are all Grade II listed. To the south of these is the former National Girl's School ([LB1290](#)), originally built as a schoolroom and attached residence in 1843-4. Funded by Charlotte Myddelton, it was designed by A.W.N. Pugin in an Elizabethan style.
- 4.3.7 To the west, 900m from the Site, is Barc-du, also known as Sawmill Cottage, [LB620](#). It is a small, 16th or 17th century timber framed cottage.
- 4.3.8 Around 900m to the north-west of the Site is the 19th century Smithy at Whitehurst and House attached ([LB627](#)). The two storey, L-shaped stone building is believed to have been occupied by a smith, Mr. Davies, who was employed by Telford during the construction of the Holyhead Road.

- 4.3.9 Whitehouse Bridge ([LB87548](#)) lies 200m to the east of the smithy. It is a stone bridge with elliptical arch over the Ellesmere Canal and towpath. It is thought to be of late 18th century construction.
- 4.3.10 As Grade II and II* listed buildings these assets are all of **High** heritage value.
- 4.3.11 Chirk Castle ([LB598](#)) is a Grade I listed building located 2km to the south-west of the Site. The castle is thought to have been built around 1295 for Roger Mortimer after the lands of Llewelyn ap Gryffydd ap Madog were granted to him by Edward I. Its location was chosen to guard the Dee Valley to the north and the Ceiriog valley to the south (Plunkett-Dillon and Latham, 1998).
- 4.3.12 The original design was rectangular with large towers at the four corners and halfway along the long sides. Similarities in its design with Harlech and Beaumaris castles suggests it may have been designed by the royal mason, Master James of St. George. The height of the towers, which do not extend above the height of the walls, suggests it may have been unfinished.
- 4.3.13 In 1322, Mortimer's nephew, also Roger Mortimer, was imprisoned in 1322 for leading a revolt of the Marcher lords. The castle was given to the Fitzalans, Earls of Arundel. It was subsequently held by various prominent families, passing to the Beauforts, Richard, Duke of Gloucester (later Richard III), Sir William Stanley, Sir Thomas Seymour, and Robert Dudley, Earl of Leicester.
- 4.3.14 It was bought by Sir Thomas Myddelton, a merchant, in 1595 and it remained in the Myddelton family until it was transferred to the National Trust in 1981. Sir Thomas notably helped finance the first popular translation of the Bible into Welsh (Morgan, 2008). His son, of the same name, initially supported the parliamentarians in the Civil War but later switched allegiance. Chirk was besieged by parliamentarian forces in 1659. The castle was captured and slighted, but Myddelton rebuilt when the castle was returned.
- 4.3.15 The interior was significantly altered in the late 18th century by Richard Myddelton, who spent enormous sums to redesign the state rooms and staircase in a neo-classical style. Further changes were carried out in the

1840s by Colonel Robert Myddelton Biddulph, who commissioned A.W. Pugin to bring neo-gothic style to the state rooms. Windows and crenelations to the upper parts of the towers were also added in the late 19th century.

4.3.16 Despite numerous alterations over the years, the 13th century core of the building remains to the exterior. However, very little of the medieval interior survives, instead they represent the lavish and luxurious changes made by the Myddelton family from the 17th century onwards.

4.3.17 Chirk Castle is an exceptional building which has remained in continuous use since its construction in the 13th century. It has high evidential, historical, aesthetic, and communal value, and is considered to have a **Very High** heritage value.

4.4 Conservation Areas (Figure 14)

4.4.1 Chirk Conservation Area (PRN144098) was designated in 1975, although its boundaries have been altered in 1997 and 2014 (Wrexham County Borough Council, 2014). The protected area integrates the historic core and encompasses the medieval settlement around the Church of St Mary (LB615; PRN101108; NPRN12599), extending west to Station Avenue and Castle Road to include the Chirk aqueduct (LB618) and viaduct (LB20210) (Figure 15).

4.4.2 The streets of the Conservation Area reflect the planned pattern of the medieval settlement, with the Church of St. Mary (LB615) at its core. The earliest parts of the church, the nave and chancel, were built in the 12th century, although the building has been subject to various alterations and additions since.

4.4.3 Significant destruction during both Glyndŵr's campaign and the War of the Roses in the 15th century means little else survives of the medieval town. The earliest buildings are found around the church, including Trevor House (LB617) and a terraced row on Castle Street (LBs 20255 - 20257), which are all thought to be of 17th century origin.

4.4.4 The majority of the buildings in the Conservation Area date to the late 18th

century onwards, as Chirk developed following the construction of the canal, the Holyhead Road, and later the railway, and the exploitation of coal, slate, limestone and clay in the surrounding area. Notable buildings include the Chirk Aqueduct (LB618), Chirk Viaduct (LB20210), The Hand Hotel (LB1298), and The Mount (LB617).

- 4.4.5 The buildings of the Conservation Area include both commercial and residential buildings (Wrexham County Borough Council, 2014). The style is generally understated, with interest generated through the type and positioning of windows and doors. The materials used are mainly local red brick or yellow sandstone.

4.5 The Historic Landscape (Figure 14)

- 4.5.1 The Site does not fall within any **Registered Historic Landscape**.
- 4.5.2 Five **Registered Parks and Gardens** are included in this assessment, two of which lie within the 1km search area. The heritage value of Chirk Castle RPG is considered **Very High**, while the other four are **High**.
- 4.5.3 Whitehurst (PGW(C)11(WRE); NPRN266506) is a small Grade II* walled garden located c. 200m to the north of the Site. The garden was built by Sir Thomas Myddelton II in 1651 as a place to entertain visitors instead of travelling the additional 3km to Chirk Castle. The pleasure garden included banqueting houses (the Grade II* Queens Anne's Cottage (LB1288) and Whitehurst House (LB1287)), walled gardens, and a series of terraces. A number of other structures within the garden are listed, including the terraces (LBs 20224-6), and the gates and gate piers associated with the garden wall (LB1286). It was designed to be productive as well as ornamental and is a rare example of a 17th century ornamental fruit garden (Hankinson, 2018).
- 4.5.4 The Registered Park and Garden of Chirk Castle (PGW(C)63(WRE); NPRN70048) is located to the west of the Site, with the closest part just clipping the 1km search area. It is a Grade I listed park that forms the grounds of Chirk Castle. The park has its origins in the 14th century, when the Mortimer family built a wooden-fenced deer park around the castle that

included 100 acres of woodland. By the time of the Civil War the Myddeltons had cleared the woods, and it was only after the Restoration that replanting occurred again. In 1675, the park was extended and was recorded as holding 500 deer.

- 4.5.5 A depiction of the park from 1742 shows that it then included baroque formal gardens with avenues extending across it. The remnants of the baroque layout are still found in the route of the southern road (now a drive) and the lake. However, most of this layout was superseded by a new landscape design, created by the English landscape designer William Emes for Richard Myddelton in the late 18th century. His additions included the ha-ha, formal gardens, layout of the grassland, and woodland planting. Planting of the formal gardens dates to the late 19th and early 20th centuries.
- 4.5.6 The park survives in good condition. It is now owned and managed in part by the National Trust and is open to the public. Including the castle itself there are 26 listed buildings within the park, which are all features of the park, such as gates, entrance lodges, formal garden walls and ornaments, and estate workers' cottages. Offa's Dyke runs roughly north – south across the park at its highest point.
- 4.5.7 Brynkinalt Park PGW(C)15(WRE) is a large, landscaped Grade II* park which forms the grounds of Brynkinalt Hall. It is situated to the east of Chirk, just over 1km to the south-east of the Site, on land rising to the north of the Ceiriog valley. The estate has a long history, having been associated with the Trevor family since 942, but the current appearance of the park was created by Lady Charlotte Dungannon in the early 19th century. There is evidence that some of the woods were established earlier, and parts of the Hall itself date to 1612. Lady Dungannon's landscaping was in the picturesque style, and included winding drives, a gothick folly, and a rustic cottage. Formal gardens lie to the west and north-east of the house, including a lawn with a circular pool. A kitchen garden is located on the northern edge of the park.
- 4.5.8 Argoed Hall PGW(C)42(WRE) is a Grade II listed Victorian garden located to the north-west of Froncysyllte and 2.5km to the north-west of the Site. The

garden consists of a formal terraced garden around Argoed Hall (LB1348) and stables (LB1349) and woodland on the steep slope down to the River Dee. The woodland is laid out with walks, and steps lead from the Hall to a summer house on the riverbank. The gardens survive reasonably well intact, although a narrow lake in the woodland to the north is now overgrown and partially silted up.

4.5.9 Wynnstay (PGW(C)64(WRE)) is a large Grade I Park and Garden on high land rising north of the River Dee. Its southernmost point lies c. 1.3km to the north-north-east of the Site. The park origins are as a Deer Park created by Sir John Wynn in 1678. An estate map dating to c. 1740 shows that some of the formal landscaping still existing had already been carried out, including a north-west – south-east running avenue. In the late 18th century, Sir Watkins Williams Wynn, 4th Baronet, commissioned major alterations by Richard Woods and later Lancelot ‘Capability’ Brown, which included a new lake that has not survived. He also commissioned the architect James Wyatt to build a bath house on the edge of the lake.

4.5.10 Much of the park survives intact, including the Victorian mansion house (LB1627), formal and informal gardens, walled kitchen garden, a ha-ha, the Bath House (LB15745) and other listed estate buildings, parkland, and woodland. The park is crossed by the A483, which runs north – south through the middle of the area, while a section of the former parkland in the north-west has had residential streets and housing built on it.

4.6 Non-designated Assets

4.6.1 There are 63 individual sites recorded on the HER and NMR within a 500m search area of the Site, nine of which relate to designated assets already described (Figure 16; Table 2). One new asset, KHR01, was identified during archaeological evaluation of the Site (**Appendix 6.4**).

4.6.2 Three non-designated assets lie within the Site. However, PRN132631 refers to The Lodge, Black Park, and is almost certainly in the wrong location, as other assets associated with The Lodge, including the listed building, are

located 300m to the east. The other two assets, PRN140789, the turnpike road, and PRN47505, the presumed route of a Roman road following Thomas Telford's Holyhead Road, are both on the route of the existing B5070. The locations of both routes are assumed, and any surviving physical remains will likely have been destroyed by the construction of the B5070. Their heritage value is **Negligible**.

- 4.6.3 Twelve of the sites are part of the WHS, including Whitehouse Tunnel (NPRNs 87008 and 406591), Afon Bradley Limekilns (NPRN405795), and Black Park Collieries Railway Bottom Wharf Dock (NPRN405791). As assets that contribute to the OUV of the WHS they are of **Very High** heritage value. A further eight relate to designated assets discussed above.
- 4.6.4 Three clusters of non-designated assets relate to farmsteads recorded as part of CPAT's survey of traditional farm buildings (McCullough et al, 2017). The closest to the site is Afon Bradley (PRNs 145627 - 145631), which borders the Site to the north-west. The farms were all noted as appearing on the Second Edition 25-inch OS map as part of the project, although in fact they are all on the earlier 1820 Chirk Castle estate plan. They are of local significance. Afon Bradley and Lodge Farm (PRNs 147261 - 147276; NPRN26965) still survive and are of **Low** heritage value. Maes Gwyn (PRNs 126304 - 126308; NPRN27487) was located on what is now the existing Kronospan Facility, c. 300m to the south of the Site, and has **Negligible** heritage value.
- 4.6.5 Pen y Clawdd coal mine (PRN13341; NPRN408100), located c. 400m north-north-east of the Site, refers to the approximate location of a coal mine documented in 1597 and a later coal mine in Black Park from around 1620. The heritage value of this asset is **Negligible**.
- 4.6.6 Two of the assets, both c. 500m to the north of the Site, relate to the railway. Llangollen Road Station (NPRN87007) was opened in 1848 (disused-stations.org.uk). Located on the southern side of the Holyhead Road, it provided a connection for onward road journeys to Llangollen. It went out of use as a passenger service after the GWR opened a line from Ruabon to Llangollen in 1862 but continued to be used for goods until its closure in

1963. Whitehurst Railway Halt (NPRN87009) was opened by GWR on the north side of the Holyhead Road in 1905 due to a passenger demand for the location (disused-stations.org.uk). It remained in use until 1960. Both assets were demolished soon after being closed and only the station building, now a house, survives. Both are of **Low** heritage value.

4.6.7 Chirk milestone DEN_HH82 (PRN165023) was one of Telford's milestones located on the Holyhead Road, now the A5. The monument had been destroyed and was replaced with a modern replica in 2003 (PRN213739). The heritage value of both assets is **Negligible**.

4.6.8 A small number of the assets refer to the modern history of Chirk. They include the Kronospan Woodchip Factory (NPRN300005), the Chirk Marina (NPRN405794), and planned mid-20th century housing estates (NPRNs 402945, 420610, and 420611). These assets are of **Low** heritage value.

4.6.9 The newly identified asset KHR01 is the sub-surface remains of a limekiln of possible medieval or post-medieval date (**Appendix 6.5**). Only the pit with heat-affected sides survives. There is no evidence to connect the limekiln to the construction of the WHS (**Appendix 6.1, Annex 2**). The asset is considered to be of **Low** heritage value.

Table 2. Assets recorded on the HER and NMR within a 500m buffer of the Proposed Development.

Asset ID	Site Name	Description	Period	Designation	Other	Heritage Value
PRN13341; NPRN408100	Pen y Clawdd coal mine	Reference to a mine of sea coal found in Pen-y-Clawdd c. 1597, and c.1620 a coal mine found in the Black Park.	Post-medieval			Negligible
PRN22993; NPRN266506; PGW(C)11(WRE)	Chirk Castle, Whitehurst Gardens	Seventeenth century walled garden of Chirk Castle	Post-medieval	Grade II* P&G		High
PRN25631; NPRN26965; LB626	Chirk, The Lodge	Grade II listed late Georgian house associated with Black Park Colliery	Post-medieval	Grade II LB		High
PRN25803; LB1286	Chirk Castle, Whitehurst Gardens, walls, gatepiers and gates	Grade II listed garden wall, gatepiers and gates.	Post-medieval	Grade II LB	Part of PGW(C)11(WRE)	High
PRN25804; NPRN35592; LB1287	Whitehurst House	Grade II listed late 17 th century banqueting house, altered and extended in the 18 th and 19 th centuries.	Post-medieval	Grade II LB	Part of PGW(C)11(WRE)	High
PRN25805; NPRN23052; LB1288	Chirk, Queen Anne Cottage	Grade II* listed late 17th/early 18th century banqueting house	Post-medieval	Grade II* LB	Part of PGW(C)11(WRE)	High
PRN25806; NPRN27120; LB1289	Chirk, Drumore	Grade II listed 17th century lobby-entry house	Post-medieval	Grade II LB		High
PRN42856; NPRN35591; LB20226	Chirk Castle, Whitehurst Gardens, lowest terrace wall	Grade II listed 17th century red brick terrace garden wall	Post-medieval	Grade II LB	Part of PGW(C)11(WRE)	High
PRN42869; NPRN35591;	Chirk Castle, Whitehurst	Grade II listed 17th century red brick terrace garden wall	Post-medieval	Grade II LB	Part of PGW(C)11(WRE)	High

Asset ID	Site Name	Description	Period	Designation	Other	Heritage Value
LB20225	Gardens, second terrace wall					
PRN42883; NPRN35591; LB20224	Chirk Castle, Whitehurst Gardens, upper terrace wall	Grade II listed 17th century stone terrace garden wall	Post-medieval	Grade II LB	Part of PGW(C)11(WRE)	High
PRN47504	Rhyn Park to Rhug	Predicted line of Roman Road.	Roman		RRN8	Negligible
PRN47505	Rhyn Park to Rhug	Predicted line of Roman Road, presumed to be on the line of Telford's 1815-1820 Holyhead Road.	Roman/Post-medieval		RRN8	Negligible
PRN126304	Maes-gwyn, building I	Building noted on early Ordnance Survey mapping during Glastir private woodland project	Post-medieval			Negligible
PRN126305	Maes-gwyn, building II	Building noted on early Ordnance Survey mapping during Glastir private woodland project	Post-medieval			Negligible
PRN126306	Maes-gwyn, building III	Building noted on early Ordnance Survey mapping during Glastir private woodland project	Post-medieval			Negligible
PRN126307	Maes-gwyn, building V	Building noted on early Ordnance Survey mapping during Glastir private woodland project	Post-medieval			Negligible
PRN126308; NPRN27487	Maes-gwyn, building IV	Building noted on early Ordnance Survey mapping during Glastir private woodland project	Post-medieval			Negligible
PRN132631	Chirk, Black Park, The Lodge, Stables	Stable	Post-medieval			Moderate
PRN140789	Turnpike	Presumed route of turnpike pre construction of Telford's Holyhead Road	Post-medieval			Negligible

Asset ID	Site Name	Description	Period	Designation	Other	Heritage Value
PRN144300	Chirk Castle, Whitehurst Gardens, Ornamental Canal	Triangular 17th century ornamental canal	Post-medieval		Part of PGW(C)11(WRE)	Moderate
PRN145627	Afon Bradley Farm	Potential traditional farm building noted on Ordnance Survey 2nd Edition	Post-medieval			Low
PRN145628	Afon Bradley Farm	Potential traditional farm building noted on Ordnance Survey 2nd Edition	Post-medieval			Low
PRN145629	Afon Bradley Farm	Potential traditional farm building noted on Ordnance Survey 2nd Edition	Post-medieval			Low
PRN145630	Afon Bradley Farm	Potential traditional farm building noted on Ordnance Survey 2nd Edition	Post-medieval			Low
PRN145631	Afon Bradley Farm	Potential traditional farm building noted on Ordnance Survey 2nd Edition	Post-medieval			Low
PRN147261	Lodge Farm	Potential traditional farm building noted on Ordnance Survey 2nd Edition	Post-medieval		Part of NPRN26973	Low
PRN147262	Lodge Farm	Potential traditional farm building noted on Ordnance Survey 2nd Edition	Post-medieval		Part of NPRN26974	Low
PRN147263	Lodge Farm	Potential traditional farm building noted on Ordnance Survey 2nd Edition	Post-medieval		Part of NPRN26975	Low
PRN147264	Lodge Farm	Potential traditional farm building noted on Ordnance Survey 2nd Edition	Post-medieval		Part of NPRN26976	Low
PRN147265	Lodge Farm	Potential traditional farm building noted on Ordnance Survey 2nd Edition	Post-medieval		Part of NPRN26977	Low
PRN147266	Lodge Farm	Potential traditional farm building noted on Ordnance Survey 2nd Edition	Post-medieval		Part of NPRN26978	Low
PRN147267	Lodge Farm	Potential traditional farm building noted on Ordnance Survey 2nd Edition	Post-medieval		Part of NPRN26979	Low
PRN147268	Lodge Farm	Potential traditional farm building noted on Ordnance Survey 2nd Edition	Post-medieval		Part of NPRN26980	Low
PRN147269	Lodge Farm	Potential traditional farm building noted on	Post-		Part of	Low

Asset ID	Site Name	Description	Period	Designation	Other	Heritage Value
		Ordnance Survey 2nd Edition	medieval		NPRN26981	
PRN147270	Lodge Farm	Potential traditional farm building noted on Ordnance Survey 2nd Edition	Post-medieval		Part of NPRN26982	Low
PRN147271	Lodge Farm	Potential traditional farm building noted on Ordnance Survey 2nd Edition	Post-medieval		Part of NPRN26983	Low
PRN147272	Lodge Farm	Potential traditional farm building noted on Ordnance Survey 2nd Edition	Post-medieval		Part of NPRN26984	Low
PRN147273	Lodge Farm	Potential traditional farm building noted on Ordnance Survey 2nd Edition	Post-medieval		Part of NPRN26985	Low
PRN147274	Lodge Farm	Potential traditional farm building noted on Ordnance Survey 2nd Edition	Post-medieval		Part of NPRN26986	Low
PRN147275	Lodge Farm	Potential traditional farm building noted on Ordnance Survey 2nd Edition	Post-medieval		Part of NPRN26987	Low
PRN147276	Lodge Farm	Potential traditional farm building noted on Ordnance Survey 2nd Edition	Post-medieval		Part of NPRN26988	Low
PRN147277	Lodge Farm	Potential traditional farm building noted on Ordnance Survey 2nd Edition	Post-medieval		Part of NPRN26989	Low
PRN165023	Chirk, milestone, DEN_HH82	Post medieval milestone, on the A5, 100m NW of junction with B5070 on grass verge, Bryn-yr-Eos. Telford Plate.	Post-medieval			Negligible
PRN213739	Chirk, replacement milestone, DEN_HH82	Replacement milestone and plate erected in 2003	Modern			Negligible
NPRN87007	Llangollen Road Station, near Chirk		Post-medieval			Low
NPRN87008	Whitehouse Tunnel North Portal, Llangollen Canal; Ellesmere	Early 18th century cut and cover construction tunnel, designed by Thomas Telford	Post-medieval		Contributes to WHS OUV Doubled with NPRN405796	Very High

Asset ID	Site Name	Description	Period	Designation	Other	Heritage Value
	Canal; Shropshire Union Canal					
NPRN87009	Whitehurst Railway Halt, near Chirk		Post-medieval			Low
NPRN300005	Woodchip factory, Chirk	A modern woodchip factory situated North West of Chirk town centre.	Modern			Low
NPRN402945	Housing estate, Chirk Green	Planned housing estate on the B5070 north of Chirk town centre	Modern			Low
NPRN405791	Black Park Collieries Railway Bottom Wharf Dock, Llangollen Canal; Glyn Valley Tramway Dock; Ellesmere Canal; Shropshire Union Canal	Entrance to former canal spur to former Black Park Collieries Railway, later the Glyn Valley Tramway Dock.	Post-medieval		Contributes to WHS OUV	Very High
NPRN405792	Afon-Bradley Overflow Weir, Culvert 91 and Black Park Sluice 10, Llangollen Canal; Ellesmere Canal; Shropshire Union Canal	A brick and masonry overflow sluice on the west side of the canal with a wide spillway and apron leading down to a culvert under the canal.	Post-medieval		Contributes to WHS OUV	Very High
NPRN405793	Red Bridge Number 42, Abutments, Llangollen Canal; Ellesmere Canal;	A narrowing of the canal with a masonry revetment in the location of a former bridge.	Post-medieval		Contributes to WHS OUV	Very High

Asset ID	Site Name	Description	Period	Designation	Other	Heritage Value
	Shropshire Union Canal					
NPRN405794	Chirk Marina, Llangollen Canal; Ellesmere Canal; Shropshire Union Canal	Modern canal marina on the Llangollen Canal	Modern			Low
NPRN405795	Afon-Bradley Limekilns, Llangollen Canal; Ellesmere Canal; Shropshire Union Canal	Ruinous limekilns built into the towing-path (eastern side) of the canal, nineteenth century.	Post-medieval		Contributes to WHS OUV	Very High
NPRN405986	Black Park Collieries Railway Dock Turning Basin, Llangollen Canal; Ellesmere Canal; Shropshire Union Canal	Oval widening of the west side of the canal opposite the former entrance to the Black Park Collieries Railway Dock at the north end of the Chirk Cutting	Post-medieval		Contributes to WHS OUV	Very High
NPRN405987	Blocked Entrance to Bottom Wharf	Entrance to former canal spur to former Black Park Collieries Railway	Post-medieval		Contributes to WHS OUV	Very High
NPRN406591	Whitehouse Tunnel Southern Approach Cutting, Llangollen Canal; Ellesmere Canal; Shropshire Union Canal	Deep cutting of Ellesmere Canal built between 1795-1802	Post-medieval		Contributes to WHS OUV	Very High
NPRN406666	Glyn Ceiriog Tramway Wharf,	Remains of the tramway wharf, constructed in 1888	Post-medieval		Contributes to WHS OUV	Very High

Asset ID	Site Name	Description	Period	Designation	Other	Heritage Value
	Llangollen Canal; Ellesmere Canal; Shropshire Union Canal					
NPRN406667	Afon Bradley Stream Feeder, Llangollen Canal; Ellesmere Canal; Shropshire Union Canal	The Afon Bradley is a substantial stream which was diverted to become a feeder for the Llangollen Canal in the 19th century.	Post-medieval		Contributes to WHS OUV	Very High
NPRN406695	Red Bridge Cutting Nos.29-30, Llangollen Canal; Ellesmere Canal; Shropshire Union Canal	A shallow cutting on both sides of the Llangollen Canal, to facilitate a straight course.	Post-medieval		Contributes to WHS OUV	Very High
NPRN406721	Afon-Bradley Culvert No. 92, Llangollen Canal; Ellesmere Canal; Shropshire Union Canal	Culvert to take a small stream under the Llangollen Canal	Post-medieval		Contributes to WHS OUV	Very High
NPRN420610	Cilcoed, Chirk		Modern			Low
NPRN420611	Crogen, Chirk		Modern			Low
KHR01	Limekiln	Sub-surface remains of a possible Medieval or Post-medieval limekiln	Medieval /Post-medieval			Low

4.7 Assessment of Archaeological Potential

- 4.7.1 The designated and non-designated assets within 500m of the site date almost exclusively to the later post-medieval period, from the start of the 19th century onwards. Historic map regression and aerial photography has demonstrated that the development area was agricultural fields over this period, and probably earlier.
- 4.7.2 Earlier activity is documented in the wider landscape. The town of Chirk, over 1km to the south of the Site, was established in the medieval period, as was Chirk Castle to the south-west. The early medieval monument Offa's Dyke is located just over 1km to the west of the Proposed Development. Evidence of Roman and prehistoric activity in the area is sparse, although the projected line of a Roman road runs to the east of the Site.
- 4.7.3 A geophysical survey of the site (Muller, 2022) identified anomalies that were subsequently targeted by evaluation trenches (Garcia Rovira, 2022). Only one of the anomalies was found to be archaeological. This was a potential limekiln [5003], located in the eastern extent of the Site.
- 4.7.4 The potential for unknown archaeology of any period to be present on the Site following the geophysical survey and evaluation is considered to be very low. The lack of recent disturbance on the site means that any unknown subsurface archaeological remains would be well preserved below topsoil depth.

4.8 Statement of Significance

- 4.8.1 The Site contains no designated assets. Three non-designated assets are recorded within the Site. PRN132631 (The Lodge, Black Park) has been wrongly located. PRN140789, the turnpike road, and PRN47505, the presumed route of a Roman road, are both on the route of the existing B5070 and are highly unlikely to survive physically.
- 4.8.2 Historic map regression demonstrates that the Site has been agricultural fields since the early 19th century. The Site has been subject to a geophysical

survey and archaeological evaluation. The work encountered one archaeological feature, a probable post-medieval limekiln. There is a very low potential for the presence of any further unknown archaeological remains from any period.

- 4.8.3 The Site lies c. 150m to the east of the Pontcysyllte Aqueduct and Canal WHS, which has a **Very High** heritage value. Two other assets of **Very High** value are considered to have the potential to be impacted by the Proposed Development, which are the Grade I listed building and the Grade I Registered Park and Garden of Chirk Castle.
- 4.8.4 The remaining designated assets considered are all of **High** heritage value. These include seventeen listed buildings and Chirk Conservation Area within the 1km search area, and four Registered Park and Gardens and eight Scheduled Monuments with potential to be impacted located outside it.
- 4.8.5 63 non-designated assets are recorded on the HER and NMR within a 500m search area, 54 of which do not correspond to designated assets. Their heritage values range from **Moderate** to **Negligible**.

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National Library of Wales

Roller Map C89, Plan of Chirk Castle Estate Demesne and Lands Adjoining, 1788

Roller Map C90, Chirk Castle Estate Plan, 1820

Figures

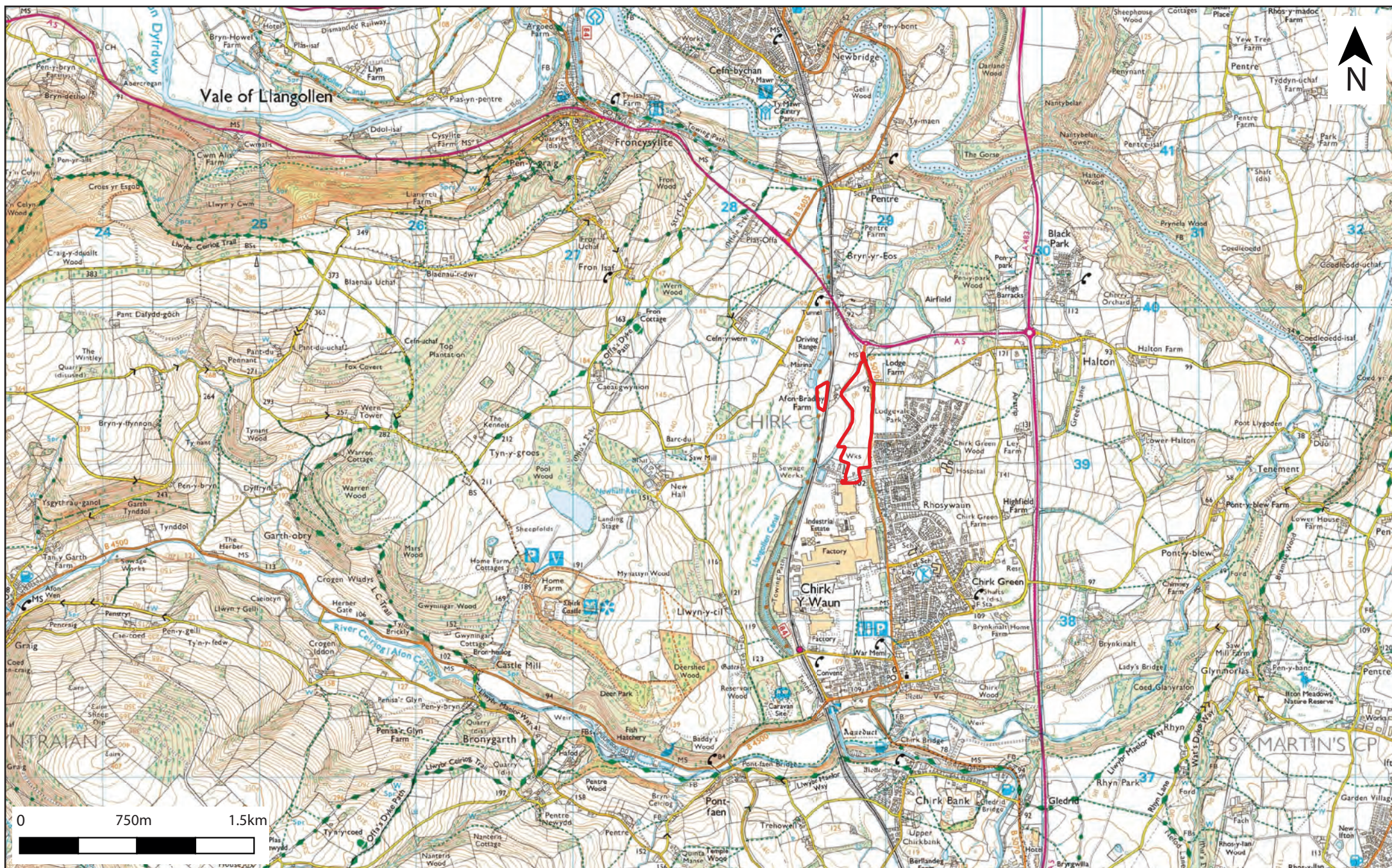


Figure 1. Location of site (red)



Figure 2. Location of site (red), 500m study area (blue) and 1km study area (green)

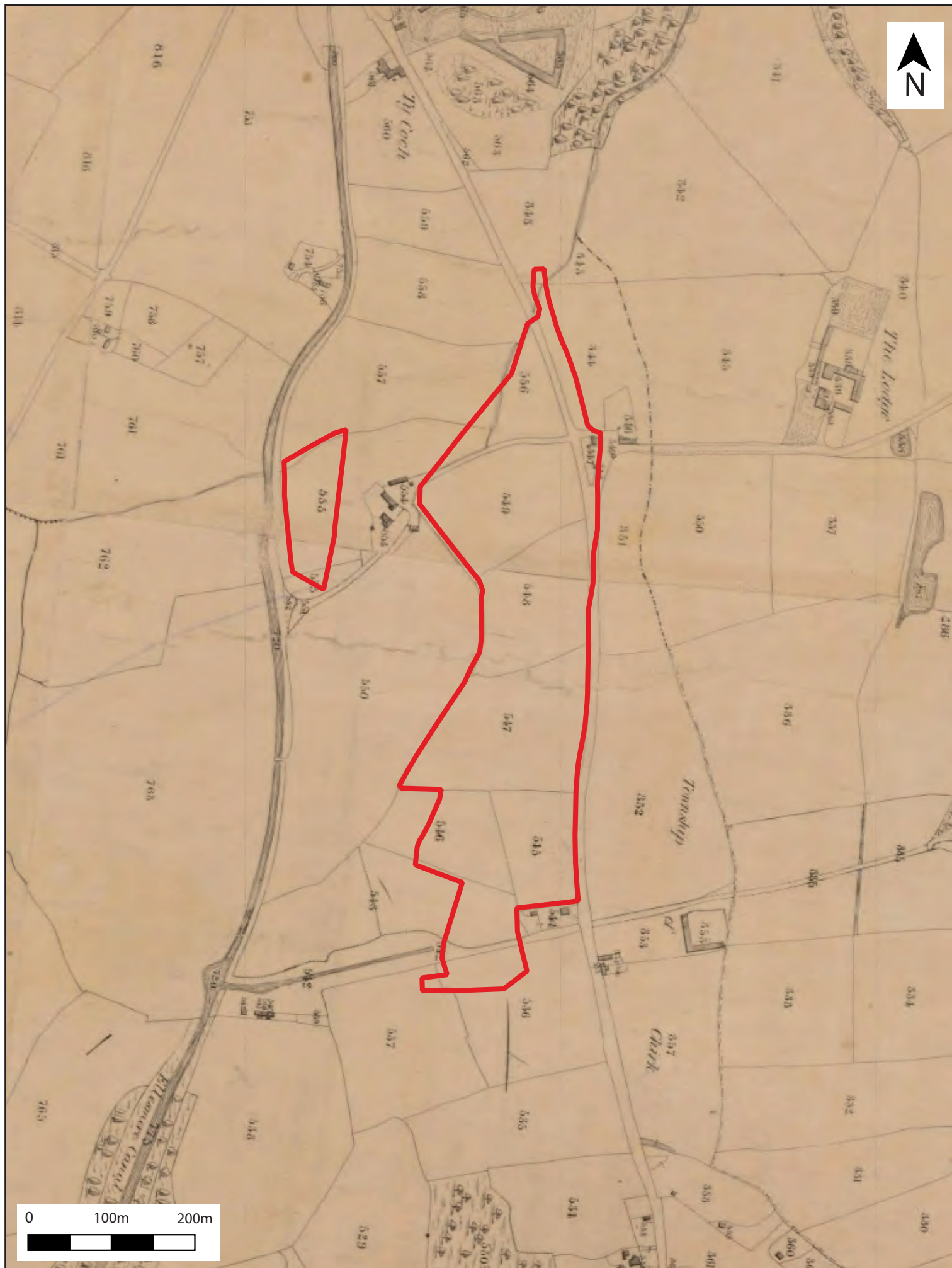


Figure 4. Tithe Plan of the parish of Chirk in the County of Denbigh (1839)

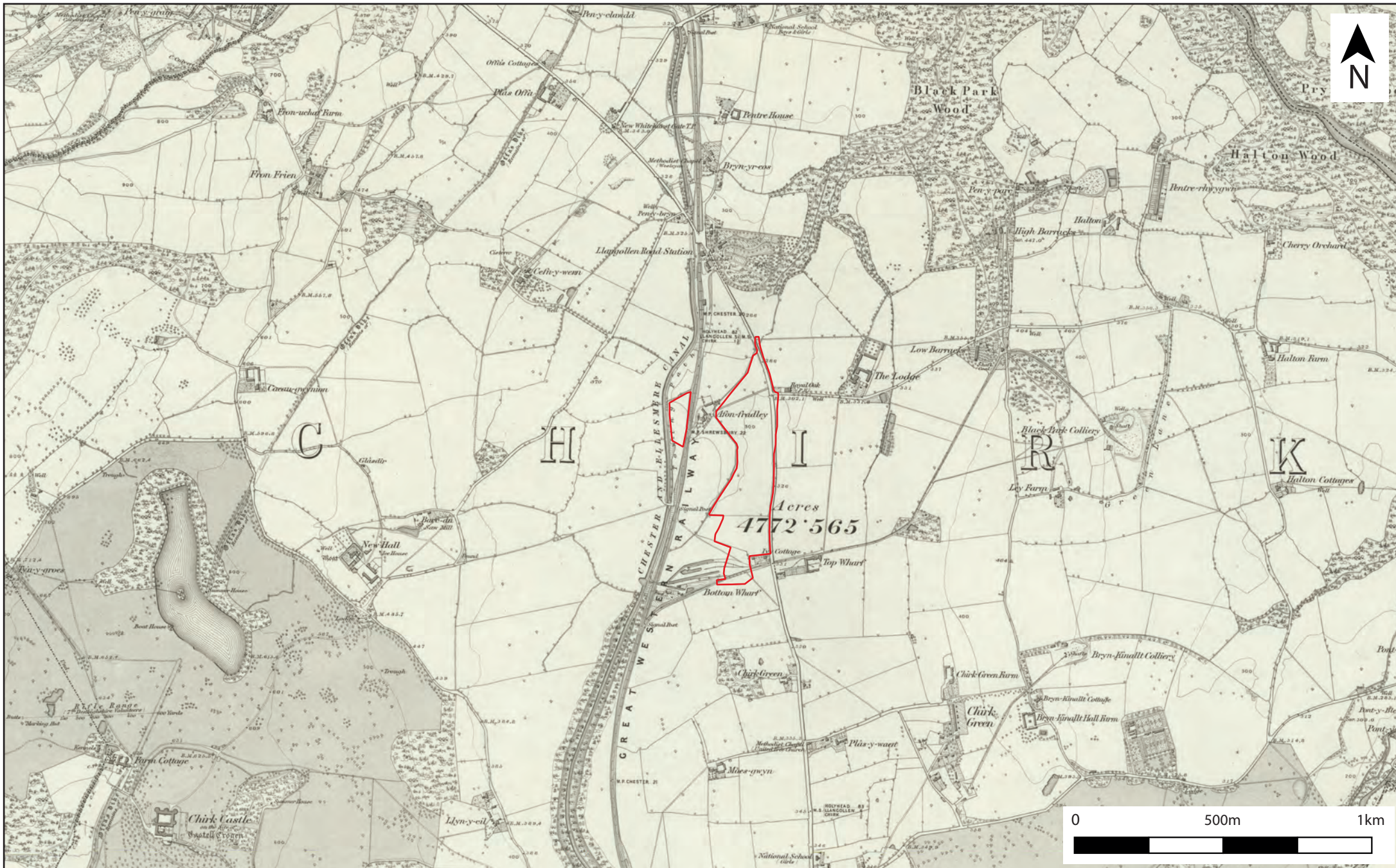


Figure 5. First Edition Ordnance Survey map of 1879 showing the development area (red)



Figure 7. Aerial Photograph of 1973 (Ref. 7370 OS 73_220 004). Approximate development area shown in red.



Figure 8. Aerial Photograph of 1985 (Ref. 8534 JAS 5484 067). Approximate development area shown in red.



Figure 9. Aerial Photograph of 2008 (© Infoterra Ltd & Bluesky). Approximate development area shown in red.



Figure 10. LiDAR 1m DTM Hillshade showing the development area (red)

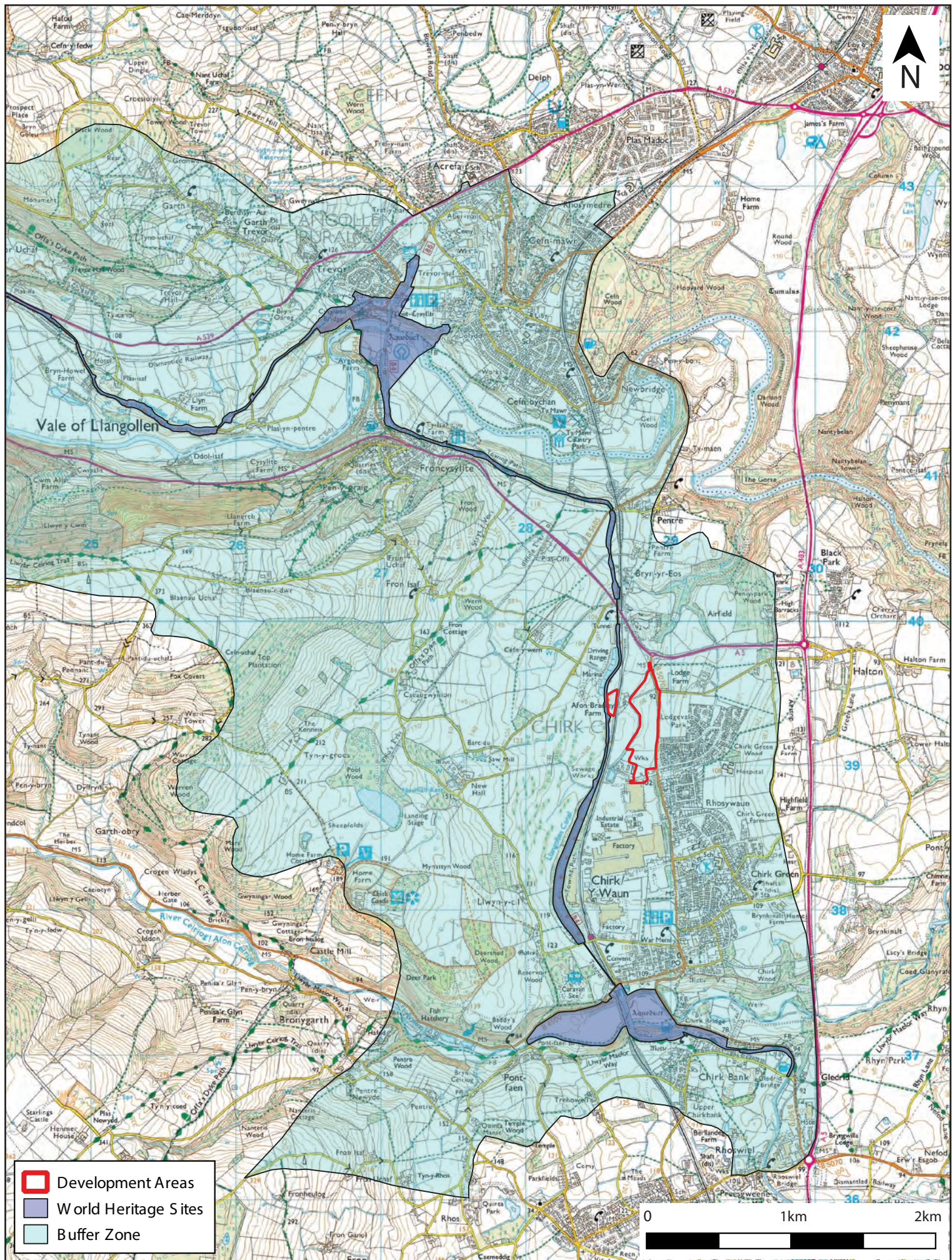


Figure 11. World Heritage Site and Buffer Zone

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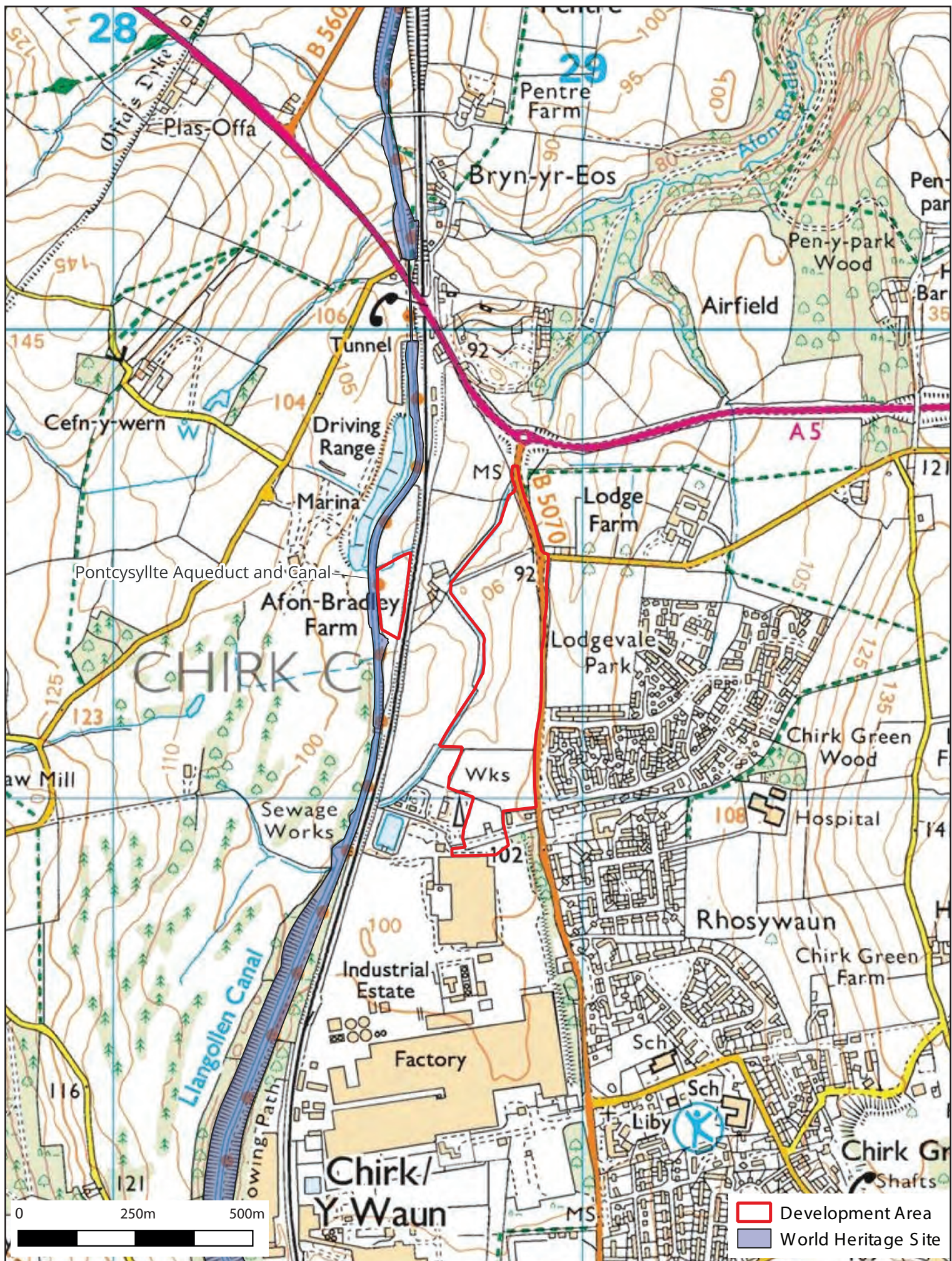


Figure 12. Map showing the World Heritage Site and the development area.

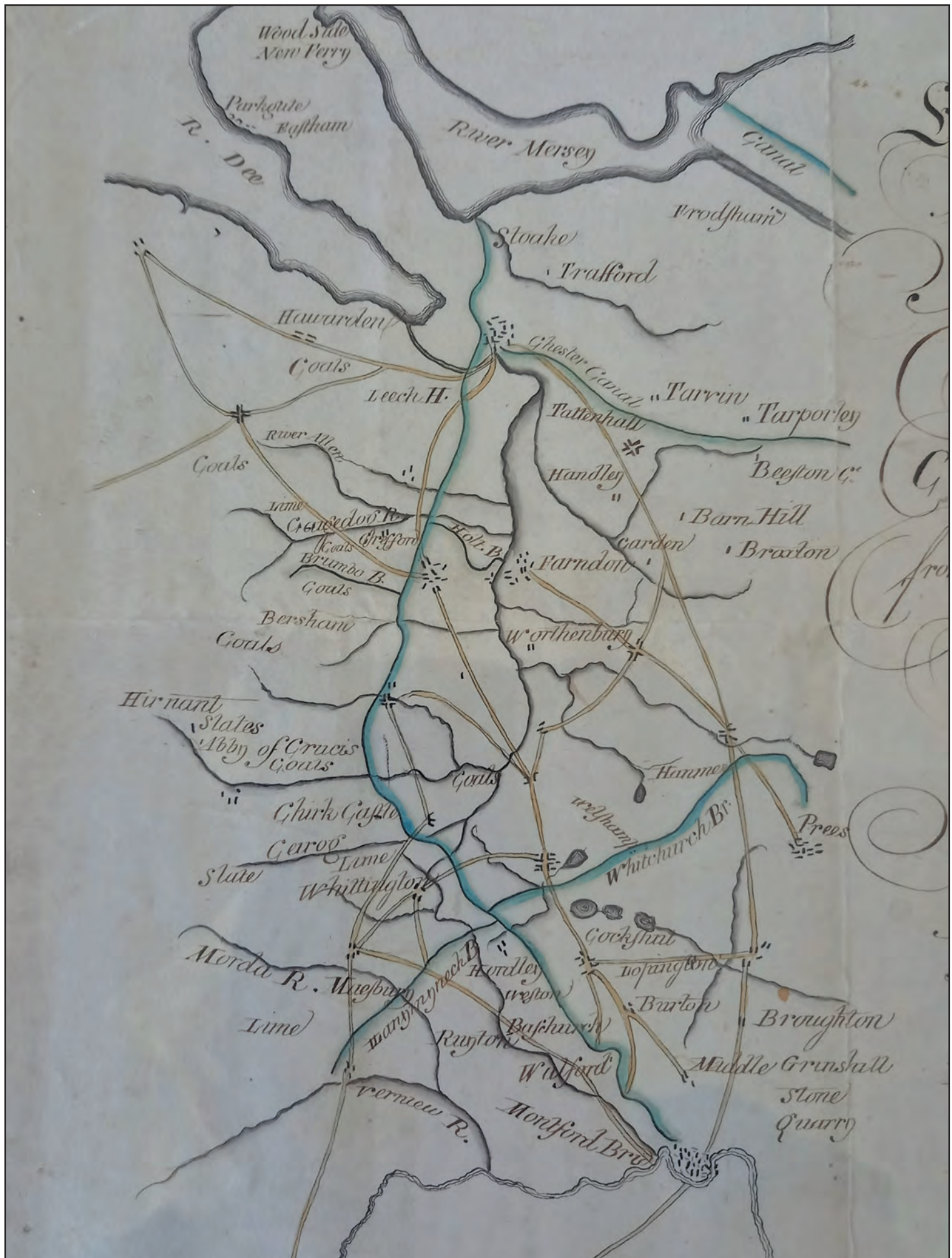


Figure 13. Undated plan of the proposed route of the Ellesmere Canal

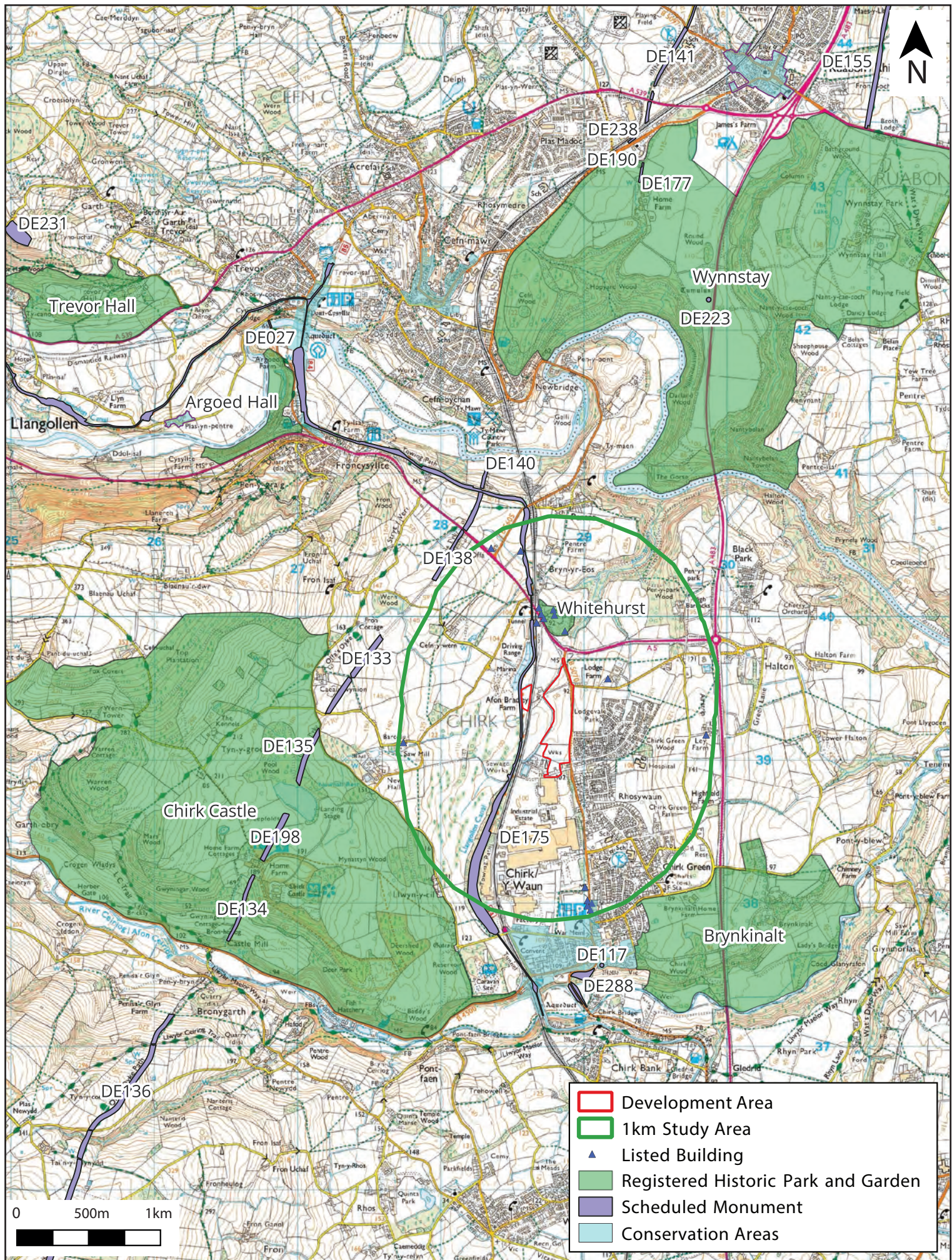


Figure 14. Registered Historic Parks, Conservations Areas, Listed Buildings and Scheduled Monuments

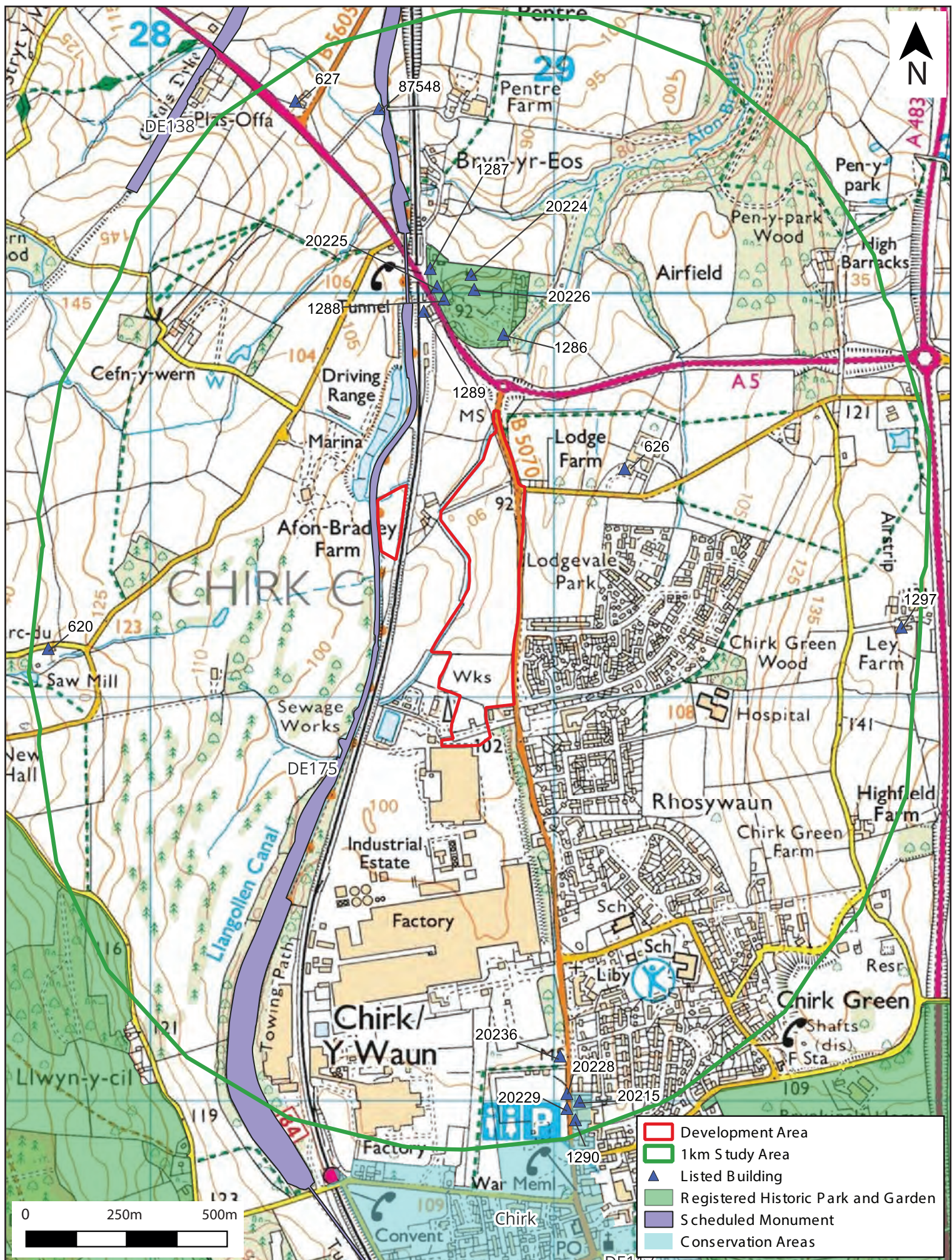


Figure 15. Detail of the Designated Assets within the 1km Study Area



Figure 16. Non-designated assets within the 500m Study Area

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Plate 1. Looking south across the Site from the entrance on Afon Bradley Farm access track



Plate 2. Looking south-west from the north-east corner of the Site, woodland in the south of Chirk Castle RPG visible in the background



Plate 3. From centre of development area looking south



Plate 4. Looking south-west towards Chirk Castle from southern area of the Site



Plate 5. Afon Bradley Farm from north-east of the Site, looking west

Annex 1:

Kronospan, Chirk, Wrexham - Settings Assessment

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1. Introduction

- 1.1.1. This Annex expands upon the baseline data presented in **Appendix 6.1**, describing in more detail the setting of the designated heritage assets and how their setting contributes to their heritage value.

1.2. Methodology

- 1.2.1. The production of this report follows the guidance set out in *Setting of Historic Assets in Wales* (Cadw 2017). This details a four-stage approach:
- 1.2.2. Stage 1: Identify the historic assets that might be affected by a proposed change or development.
- Stage 2: Define and analyse the settings to understand how they contribute to the significance of the historic assets and, in particular, the ways in which the assets are understood, appreciated and experienced.
 - Stage 3: Evaluate the potential impact of a proposed change or development on that significance.
 - Stage 4: If necessary, consider options to mitigate or improve the potential impact of a proposed change or development on that significance.
- 1.2.3. In this instance, Stages 3 and 4 are found in Environmental Statement (**ES**) **Chapter 6.0 (Historic Environment)**.
- 1.2.4. Assessing the significance of the asset in this way will allow any potential impacts of the Proposed Development, both beneficial and harmful, on the asset and its setting to be identified.

2. Stage 1: Identifying affected Historic Assets

- 2.1.1. Baseline data has been collected and presented in **Appendix 6.1**.
- 2.1.2. Scoping for inclusion of assets in this Settings Assessment (SA) has been based on the Zone of Theoretical Visibility (ZTV) mapping prepared in support of the Landscape and Visual Impact Assessment (LVIA) which forms Chapter 5.0 of the ES. Three ZTV maps have been produced, which independently model the visibility of the proposed substation, lorry park,

and weighbridge building. Although production of the ZTV maps takes into account existing structures and vegetation, based on 2m photogrammetric Digital Surface Model (DSM) data, it should not be considered as definitive, but rather as a worst-case scenario of the likely extent of visibility. Where potential visibility has been indicated this has been followed up by a site visit to verify the results on the ground.

2.1.3. The inclusion or exclusion of heritage assets in this SA is detailed in Table 1 below.

Table 1. Scoping of heritage assets for inclusion in this SA

Asset ID	Site name	Designation	Heritage Value	Inclusion in SA
Pontcysyllte Aqueduct and Canal WHS; DE175; PRN124694, NPRN 405725	Pontcysyllte Aqueduct and Canal	World Heritage Site; Scheduled Monument	Very High	Yes - Proximity to Proposed Development means there are potential visual, noise, and light impacts.
DE117; PRN101109; NPRN 30701	Castell y Waun Castle Mound	Scheduled Monument	High	No - the asset is situated on the far side of Chirk and there is no visibility.
DE288	London to Holyhead Road - Chirk embankment and earlier trackways	Scheduled Monument	High	No - the asset is situated on the far side of Chirk and there is no visibility.
DE223	Darland Wood Round Barrows	Scheduled Monument	High	No - the asset lies over 2.5km to the north of the Site and there is no visibility.
DE134	Offa's Dyke: Chirk Castle Section extending NE from Castle Mill	Scheduled Monument	High	No - ZTVs demonstrate no visual impacts.
DE198	Offa's Dyke: Chirk Park Section extending 340m NE of Home Farm	Scheduled Monument	High	Yes - ZTV indicates possible visual impacts from substation.
DE135	Offa's Dyke: Chirk Park Section extending NE from the Lake	Scheduled Monument	High	Yes - ZTVs indicate possible visual impacts.

Asset ID	Site name	Designation	Heritage Value	Inclusion in SA
DE133	Offa's Dyke: Caeau-Gwynion Section	Scheduled Monument	High	Yes - ZTVs indicate possible visual impacts.
DE138	Offa's Dyke: Section N & S of Plas-Offa	Scheduled Monument	High	Yes - ZTVs indicate possible visual impacts.
DE140	Offa's Dyke: Section N & S of Tan-y-Cut	Scheduled Monument	High	No - ZTVs indicate no visual impacts.
LB1286; PRN25803	Chirk Castle, Whitehurst Gardens, walls, gatepiers and gates	Grade II LB	High	No - the asset is largely screened from views by established trees and landscaping relating to the construction of the A5 to the north of the Site. As a walled garden the asset was designed to be inward-facing and the Site does not contribute to the understanding of its heritage value. .
LB1288; PRN25805; NPRN23052	Chirk, Queen Anne Cottage	Grade II* LB	High	No - the asset is screened from views by established trees and landscaping relating to the construction of the A5 to the north of the Site.
LB1287; PRN25804; NPRN35592	Whitehurst House	Grade II LB	High	No - the asset is screened from views by established trees and landscaping relating to the construction of the A5 to the north of the Site.
LB20224; PRN42883; NPRN35591	Chirk Castle, Whitehurst Gardens, upper terrace wall	Grade II LB	High	No - the asset is screened from views by established trees and landscaping relating to the construction of the A5 to the north of the Site.
LB20225; PRN42869; NPRN35591	Chirk Castle, Whitehurst Gardens, second terrace wall	Grade II LB	High	No - the asset is screened from views by established trees and landscaping relating to the construction of the A5 to the north of the Site.
LB20226; PRN42856; NPRN35591	Chirk Castle, Whitehurst Gardens, lowest terrace wall	Grade II LB	High	No - the asset is screened from views by established trees and landscaping relating to the construction of the A5 to the north of the Site.

Asset ID	Site name	Designation	Heritage Value	Inclusion in SA
LB1289; PRN25806; NPRN27120	Chirk, Drumore	Grade II LB	High	No – the asset is screened from views by established trees and landscaping relating to the construction of the A5 to the north of the Site.
LB626; PRN25631; NPRN26965	Chirk, The Lodge	Grade II LB	High	No – ZTVs indicate no visual impacts.
LB1297	Ley Farmhouse	Grade II LB	High	No – ZTVs indicate no visual impacts. The farm lies to the east of the modern residential developments of Chirk Green.
LB20236	Milestone	Grade II LB	High	No – ZTVs indicate no visual impacts.
LB20215	Chirk Town Council Offices	Grade II LB	High	No – ZTVs indicate no visual impacts.
LB20228	North Gate Piers to Chirk Town Council Offices	Grade II LB	High	No – ZTVs indicate no visual impacts.
LB20229	North Gate Piers to Chirk Town Council Offices	Grade II LB	High	No – ZTVs indicate no visual impacts.
LB1290	Chirk Furniture and Carpet Centre and Dwelling	Grade II LB	High	No – ZTVs indicate no visual impacts.
LB620	Barc-du, also known as Sawmill Cottage	Grade II LB	High	No – ZTVs indicate no visual impacts.
LB627	Smithy at Whitehurst and House attached	Grade II LB	High	No – ZTVs indicate no visual impacts.
LB87548	Whitehouse Bridge	Grade II LB	High	No – ZTVs indicate no visual impacts.
LB598	Chirk Castle	Grade I LB	Very High	Yes – ZTVs indicate possible visual impacts.
PGW(C)11(W RE); PRN22993; NPRN266506	Whitehurst	Grade II* P&G	High	No – ZTVs indicate no visual impacts.
PGW(C)63(W RE); NPRN70048;	Chirk Castle	Grade I P&G	Very High	Yes – ZTVs indicate visual impacts to eastern and northern areas of the park.
PGW(C)15(W	Brynkinalt Park	Grade II* P&G	High	No – ZTVs indicate no visual

Asset ID	Site name	Designation	Heritage Value	Inclusion in SA
RE)				impacts.
PGW(C)42(W RE)	Argoed Hall	Grade II P&G	High	No – ZTVs indicate no visual impacts.
PGW(C)64(W RE)	Wynnstay	Grade I P&G	High	No – ZTVs indicate no visual impacts.

3. Stage 2: The Setting

3.1. Pontcysyllte Aqueduct and Canal WHS

3.1.1. Pontcysyllte Aqueduct and Canal is designated as a World Heritage Site, which recognises it as a site of international significance (see **Appendix 6.1, Section 4.1**). Its heritage value is Very High.

Original setting

3.1.2. Key aspects of the WHS's significance are the innovative engineering solutions and monumental architecture that were involved in building a canal over a challenging landscape. In this respect, the landscape setting of the canal is integral to its heritage value.

3.1.3. In a broad sense, the location of the canal is a result of economic factors. It was initially proposed by a group of industrialists in the Ruabon area who wanted to be able to transport their coal, lime, slate and metal products to the existing canal network and the River Mersey estuary, thereby opening up national and, via the Atlantic port of Liverpool, international trade opportunities. The Ellesmere Canal Company chose to progress the western of the two possible routes for the canal, as it went via Ruabon, thus passing directly through the mining areas, despite it being the more challenging terrain.

3.1.4. The canal's final route and form was determined by landscape and topography. The proposed route was surveyed by the engineer John Duncombe and agreed with the project engineer William Jessop. It required two high level crossings of the Ceiriog and Dee valleys and two

tunnels at Chirk and Whitehouse. Between the two tunnels the canal runs across a largely flat spur between the Dee and Ceiriog valleys with the lower slopes of the Clwydian Range rising to the west. From proposal plans as early as 1791 the canal is shown following this route, between Chirk Castle on the slopes and Chirk on the northern edge of the Ceiriog valley (Figure 2). The Proposed Development area lies to the east of this section.

- 3.1.5. At the time of the canal's construction, the landscape through which it was built was primarily agricultural. Mapping and reference books relating to the planning of the route and purchase of land from 1793 demonstrate this, although it shows only the fields the proposed route was to pass directly through (Figure 3). The 1820 Chirk Castle Estate plan and the 1839 tithe map provide a better picture of the area's historic field systems, which suggest it had been farmed since the medieval period, with sections of the irregular medieval strip fields having been fossilised in the post-medieval field boundaries. This is most clearly evident in the in the southern part of Afon Bradley Farm on the 1820 plan, where the boundary included a number of steps indicating former strip fields had been enclosed into larger fields.
- 3.1.6. The canal was innovative and ground-breaking and part of a mindset in the Industrial Revolution that prioritised progress. It had no relationship with or consideration of earlier features or routeways; instead, it cut a swathe through the existing historic fieldscapes.
- 3.1.7. There was no consideration in the construction of the canal for the experience of the user and no designed views. In that regard it was an entirely practical endeavour. Even the elegant appearance of the two aqueducts is derived from practical considerations, with tall piers necessary to raise the canal to the correct height and round arches to distribute weight. The designs include very little in the way of aesthetic elaboration.
- 3.1.8. Despite this, the aqueducts soon started being featured in Romantic images. These emphasised the importance of the aqueducts' landscape settings, with the structures generally depicted from distance and

encompassing the surrounding valley, and often including rural scenes in the foreground (for example, Davis' 1822 *Vale of Llangollen and aqueduct near Chirk*; Jackson after Hulbert, 1827, *Chirk Aqueduct, Denbighshire*). John Ingleby's *Chirk Church, aqueduct and castle, Denbighshire* is an idealised depiction that exaggerates the height of the surrounding mountains and manages to fit three important structures in one view.

Changes to function

- 3.1.9. Despite canals being superseded by railways as a method of efficient transportation from the mid-19th century, the Ellesmere Canal continued to function for goods traffic until the First World War. The reasons for its decline were less to do with competition from the railways and more to do with the decline in heavy industry in the area it has been constructed to serve (Cadw Full Report World Heritage Site).
- 3.1.10. The rural and attractive setting of the canal, particularly the Llangollen branch along the Dee valley, drew tourists to the canal as early as 1884. After the canal stopped receiving goods traffic, organised tourism continued, including short cruises (Cadw Full Report World Heritage Site). This was brought to an end by the Second World War, and in 1944 the Ellesmere Canal was decommissioned. The Llangollen branch was retained due to its importance to the local water supply, but it was unnavigable.
- 3.1.11. There was a renewal of interest in the canal in the 1950s, arising from an increase in pleasure cruising and industrial heritage (Cadw Full Report World Heritage Site). From 1954 the canal was managed by British Waterways, which was replaced by Canal & River Trust in 2012 (<http://www.britishwaterways.co.uk>). Tourism received a significant boost from the 2009 World Heritage Site designation as Pontcysyllte Aqueduct and Canal, with visitor numbers quadrupling over ten years to nearly 500,000 in 2019 (<http://www.shropshirestar.com>, 2019). This increase has occurred despite the existence of the existing Kronospan Facility, which is visible from parts of the Canal around Chirk.

Changes to setting

- 3.1.12. Perhaps the most significant single change to the canal's setting came with the construction of the Shrewsbury and Chester Railway, which opened in 1848. The railway crossed the Dee farther to the east than the canal, on the Cefn Viaduct. It was 1.7km south-east of Pontcysyllte Aqueduct and is visible in the distance from the canal. Several images from the period show how interest in the aqueduct had moved to the more modern railway, with the aqueduct appearing in the hazy background behind the new viaduct (Figure 4).
- 3.1.13. South of the viaduct the railway followed the same route as the canal until south of the Ceiriog, in places they were within 20m of each other. The visual impact on the canal along this stretch would have varied according to whether the canal was in a cutting, as to the south, or more open, such as around Chirk Marina. The railway would also have brought new noises and smells. Today, the railway embankment is visible from parts of the canal towpath between the section adjacent to the Proposed Development and Whitehouse Tunnel. The railway crosses the Ceiriog on a viaduct c. 30m to the west of the Chirk Aqueduct, and 9m higher, meaning the previous long-distance views along the Ceiriog valley from the aqueduct would have been partially blocked by the new structure. As with the Pontcysyllte Aqueduct, images quickly appeared showing the railway viaduct in front of the aqueduct, with the proximity of the two allowing an obvious comparison of the plain, smaller older bridge with the newer and more elaborate structure (Figure 5).
- 3.1.14. Despite the area the canal travelled through being heavily industrial in the 19th century, industry did not impact the landscape in the dramatic way seen in, for example, some of the South Wales valleys. The rural nature of the area has largely survived. Some of the nearby settlement, including Chirk Green and Llangollen, expanded in the later 20th century, but these new residential areas have not significantly impacted the character of the immediate setting of the WHS.

- 3.1.15. The modern industrial area to the north-west of Chirk, which includes the existing Kronospan Facility, developed over the last three decades of the 20th century (see **Appendix 6.1, Section 3.3**), and will be considered as part of the modern setting of the asset.

Modern setting

- 3.1.16. The WHS includes a stretch of the main Ellesmere canal, including both aqueducts and tunnels, as well as the Llangollen branch west to Horseshoe Falls, which visitors can travel by boat or on foot along the towpath. For the most part, the modern setting of the WHS retains the rural character that existed when the canal was built. This SA will focus on the setting of the canal in the section between Whitehouse tunnel and Chirk tunnel as it is here that there is potential for impact by the Proposed Development.
- 3.1.17. The canal can be traversed either by boat or on foot along the towpath on east side of the canal. The path itself is a modern compacted gravel path with occasional benches placed along it for visitors. Clearly, this represents a much more sanitised experience than would have been had when the canal was first in use.
- 3.1.18. Developments to the west of Chirk represent the most significant impact to setting along the canal. Between c. 1970 and 2000, the industrial complex that includes the Kronospan Facility replaced the former agricultural land in an area north of Chirk, west of Chirk Green, between 20m and 750m to the east of the canal. The closest part of the area to the canal is the strip between the canal and railway, which is occupied by smaller industrial units. To the east of the railway is the much larger Kronospan Facility and the Mondelez factory to the south. At the western side of the Kronospan Facility is a 70m high emissions stack, while a second, lower cluster of stacks is to the north-east of this. Both are frequently emitting plumes of white-coloured emissions.
- 3.1.19. The section of canal adjacent to the industrial area is mostly located in a deep cutting emerging north from the Chirk Tunnel. This blocks any visual impact on the canal from the existing industrial complex for an

approximately 1km long stretch. It also reduces noise impacts, particularly in the deeper southern section. The smell of chocolate is noticeable at times from the Mondelez factory.

- 3.1.20. The canal emerges from the cutting alongside the former sewage works to the north-west of the existing Kronospan Facility. At this location the railway embankment is immediately adjacent to the canal, as it would have been since its construction in 1848. Although the embankment does limit some views towards the east from the canal, some of the larger structures at the existing Kronospan Facility are visible from this section of the WHS.
- 3.1.21. Other modern impacts on the canal's setting include Chirk Marina, the former golf course, Jewson's building merchant site, and the A5 road. The marina lies along the western side of the canal with only a low embankment separating the two. Both it and the golf course were built in the early 1990s on former pasture fields. The Marina is a base for trips along the canal. The golf course closed in 2012 and now appears to have been returned to pasture. The mix of grassland and tree planting means the area is superficially similar to the original landscape around the canal, but the historic field system has been lost.
- 3.1.22. The Jewson site is a small industrial area to the east of the canal south of Whitehouse Tunnel, in the location of the former Llangollen Road Station. During the winter there are visual impacts on the WHS but in the summer vegetation along the railway blocks views. The former station was originally for both passengers and goods, and a merchant's yard is not out of keeping with the site's use during the early history of the canal after the construction of the railway.
- 3.1.23. The A5 existed as an important road route prior to the construction of the canal. Views between the road and canal are limited, but engine noise from the busy road can be heard along the nearby stretch of the canal.
- 3.1.24. The value of the canal to modern visitors will often lie not only in its historic and engineering significance, but also as a way to experience the rural

landscape along a quiet route away from modern interruptions. However, while the intrusion of industry along the route may be unappealing, the canal's original purpose was for the transportation of materials and goods reflecting quite a difference to its current character.

Contribution made by setting to the asset's heritage value

- 3.1.25. The setting of the WHS is integral to its heritage value, as it was the challenging terrain the canal needed to cross which resulted in innovative civil engineering solutions, particularly in the use of iron in construction.
- 3.1.26. The Site is situated in an area of historic field systems, which are within the WHS Buffer Zone, which seem to have had their origins in medieval strip farming. The post-medieval agricultural landscape was carved through by the canal, which formed a new, linear feature that largely disregarded earlier assets or anthropogenic landscape features. Instead, the location of the canal depended on practical civil engineering considerations and the local topography. Modern understanding of the canal as a linear feature in this section is reduced by adjacent areas of woodland planting which obscures the line of the canal.
- 3.1.27. The southern section of the canal that passes closest to the Site lies within a deep cutting, which prevents both longer views to the wider landscape and appreciation of the canal from afar. The existing industrial developments, including the existing Kronospan Facility, are modern element that detract locally from the canal's acquired character as a place for recreation.

3.2. Chirk Castle

- 3.2.1. Chirk Castle is a Grade I listed building with a 700-year history of use. It is considered to have Very High heritage value (see **Appendix 6.1, Section 4.3**).

Original setting

- 3.2.2. Chirk Castle is a Marcher castle, which were constructed by the Marcher lords to defend their contested border territories, known as the Marches, against Welsh uprisings in the centuries following the Norman Conquest. It

was built at the end of the 13th century by Roger Mortimer, who had been awarded the Marcher Lordship of the Chirklands, established after the defeat of the former Welsh prince of the area, Llywelyn ap Gryffydd. It replaced an earlier motte and bailey castle, Castell y Waun, which was located on the eastern edge of Chirk, c. 2.3km to the east.

- 3.2.3. The new castle's location, on a spur of land between the Ceiriog and Dee valleys, was strategically important; militarily it guarded two major valleys into Wales, but it also enabled control of cross-border trade. It was built at the top of a scarp of the north side of the Ceiriog valley. The land also falls away to its east and west, and less steeply to the north, so that it sits atop a natural mound that provided views in all directions. Its prominent location would also have been visual demonstration of power over the region.
- 3.2.4. Offa's Dyke runs on a north-north-east to south-south-west alignment 150m to the west of the castle, up the Ceiriog valley side, along the western base of the scarp on which the castle sits, and onwards across the flatter area to the north of the castle. Although the dyke would undoubtedly have been visible at the time of the castle's construction their physical proximity is primarily coincidental, notwithstanding both assets ostensibly functioning as defences against the Welsh.

Changes to function

- 3.2.5. The Marcher lordships were abolished in the Second Act of Union in 1543, and the lands were either added to existing English counties, or, as in the case of Chirk, formed into new Welsh counties. Threats of Welsh rebellion had significantly diminished. However, the castle's defensive design was utilised during the Civil War, when it was damaged and partially demolished.
- 3.2.6. Following the Civil War, and the repair of the building, the castle's primary function became residential. Generations of the Myddelton family, who bought the castle in 1595, carried out alterations to both castle and grounds to make it a fashionable and impressive country residence.

Changes to setting

- 3.2.7. It is not known whether the castle sat within an associated park when it was initially constructed, but a 100-acre woodland enclosed by a timber fence was recorded in 1391-1392. It was recorded as 100 acres of woodland enclosed by a wooden fence. How this related to the castle itself, or to the layout of the post-medieval c. 770-acre park is unclear. By the time of the Civil War the Myddeltons had cleared the woods, and it was not until the Restoration that replanting occurred again. In 1675, the park was extended and was recorded as holding 500 deer (Cadw Registered Historic Park and Garden Report).
- 3.2.8. An etching of the park from between 1733 and 1742, held by the National Library of Wales, shows the Baroque formal gardens that preceded the extensive landscaping in the later 18th century (Figure 6). The date of creation of these gardens is unknown, but the style became popular in Britain from the early 17th century (theenglishgarden.co.uk). It shows that the castle was located within an extensive area of formal gardens and linear walks. These extend mainly to the east, but formal areas are also shown to the north and south. An etching of the north-east prospect of the castle by the same artist, c.1735, provides greater detail of the main entrance to the castle, which is shown as being walled with elaborately decorative iron gates (Figure 7). A landscape painting by Pieter Tillemans (c. 1684 – 1734) shows the same from a viewpoint by the lake to the north, in which the formality of the approach to the castle contrasts with the natural surroundings (Figure 8).
- 3.2.9. On Figure 6, the area to the west of the castle is woodland, which also extends to the south along the top of the Ceiriog valley. The woodland is shown with deer and a hunting scene in the foreground. To the left of the image is the lake, and Offa's Dyke is depicted in the bottom left. The image also shows the castle's wider landscape setting from an imagined bird's-eye view. This includes other parts of the Chirk Castle estate, including Cefn-y-Wern, a 16th century building 2km to the north, the terraces and (possibly

slightly exaggerated) viewing mound of Whitehurst Gardens, and Black Park “stock’d with red deer.” The Ceiriog valley is shown running to the south of the castle and continuing eastwards, with St. Mary Church in Chirk on its north side in the middle distance. In the far distance the landscape is shown as rolling fields with scattered settlements.

- 3.2.10. Most of this layout was superseded by a new landscape design, created by the English landscape designer William Emes for Richard Myddelton in the late 18th century. The formal and elaborate Baroque style started going out of fashion in the early 18th century, to be replaced with a more naturalistic approach, most commonly associated with the work of Lancelot ‘Capability’ Brown. Emes’ design swept away the formal approach to the castle with walls and gates, replacing it with rolling grassland. Several engravings from the early 19th century show cattle grazing in front of the castle (Figure 9). The gardens to the east of the castle were retained but largely redesigned, with formal terraces closest to the castle, informal planting to the south-east, and a pleasure ground wood to the north-east. A ha-ha around the gardens provided uninterrupted views across the rest of the park and beyond. Additional areas of woodland were planted in the park and the winding driveway to the New Hall entrance in the north was established. Emes retained the lake to the north of the castle and the southern driveway.
- 3.2.11. This landscaping had a significant impact on the setting of the castle, with the previously very formal and controlled areas adjacent to the castle, particularly to the north and east, changed to have a natural and serene appearance. Views north and north-east from the castle entrance looked across an uninterrupted landscape, as the park merged with the rural landscape in the middle and far distance.
- 3.2.12. The park and gardens have been subject to only minor changes since their creation, such as the planting of the formal gardens, which dates to the late 19th and early 20th centuries (Cadw Full Report).

Modern setting

- 3.2.13. Chirk Castle sits within the Grade I Registered Park and Garden of the same

name. Today, the castle is owned and operated by The National Trust as a visitor attraction, alongside the castle gardens and parts of the estate park. Welsh Government figures show the castle received 102,263 visitors in 2021.

- 3.2.14. The formal and informal gardens and pleasure ground woods are maintained to the east, while the grassland to the north and east is used as grazing. The western and southern slopes approaching the castle are wooded. The main views from the castle are to the north and east. To the east they overlook the gardens, while to the north and north-east there are long-range views over the park and across the Dee valley.
- 3.2.15. There is relatively little modern intrusion to the setting of the castle. The car park, located to the north-west, is blocked by a row of trees. To the north-east there are views of modern housing in Chirk Green. Views of the existing Kronospan Facility are blocked by the trees of the pleasure ground woods. The castle's setting largely retains the appearance established by the landscaping of the park in the late 18th century.

Contribution made by setting to the asset's heritage value

- 3.2.16. The setting of Chirk Castle is primarily formed by its surrounding park and garden. The Proposed Development lies within historic agricultural land adjacent to the existing Kronospan Facility to the north-east of the park. This aspect of the asset's setting does make a positive contribution to appreciating the wider views available from the Castle, which help to convey its strategically significant location and its symbolic visual prominence over the land it controlled. However, the Proposed Development Site forms only a very small portion of this wider landscape setting. There are very few locations on the castle from which views including the Proposed Development Site can be gained, and these constitute only glimpses. Views of the Castle from the surrounding park that contribute to appreciating its historic value, mainly those from the west and north, may be negatively affected. However, the existing industrial facility already detracts slightly from these views.

3.3. Chirk Castle Registered Park and Garden

- 3.3.1. Chirk Castle is a Grade I Registered Park and Garden with preserves elements of a medieval deer park and post-medieval landscaping and ornamental gardens. It has a Very High heritage value (see **Appendix 6.1, Section 4.5**).

Original setting

- 3.3.2. The location of the park was determined by its relationship with Chirk Castle, of which it forms the grounds. As detailed above (Section 3.2.7), the park started as a smaller area of woodland, which is known to have existed at the end of the 14th century, but which may have been earlier. It was extended in 1675, which may also have been when the Baroque layout of the park was established. Images from the time (Figure 6), show the park was enclosed by paling. It occupied the spur of higher ground to the north of the Ceiriog valley, sitting slightly lower than the castle, and included woodland along the north side of the valley. The park drops down from the castle on all sides, steeply to the south and west and more gradually to the north and east.
- 3.3.3. During the early history of the park the surrounding area would have been dominated by agricultural land with the occasional larger settlement. The closest settlement, Chirk, was probably visible from higher areas of the park, although it is now blocked by post-medieval woodland planting.

Changes to use

- 3.3.4. Significant changes to the layout of the park took place in the 1760s and 1770s under the design of William Emes, who created a park with a more natural landscape feel. This included creating uninterrupted landscape views by use of a ha-ha (LB20247) around the gardens rather than the previous ornate iron fencing. The gardens themselves were terraced, stepping down towards the east, providing changing views in that direction. A small, Venetian-style open fronted building, initially called a "retreat seat" but now listed as the Gazebo (LB20244) was built at the eastern end of the gardens looking south along the ha-ha and across the Ceiriog valley.

Changes to setting

- 3.3.5. The first major change to the landscape around Chirk Castle was the construction of the Ellesmere Canal in the early 1800s, which at its closest was under 150m from the eastern park boundary. The canal at that location was in a deep cutting prior to entering Chirk Tunnel. The Chirk Castle estate plan of 1820 shows that the embankment had been planted with woodland. To the north, where the canal emerges from the cutting, visibility would have been largely restricted by the local topography. Overall, the canal probably had a limited impact on the setting of Chirk Castle park.
- 3.3.6. The construction of the canal was soon followed by the construction of the railway immediately to its east in 1848. The railway was built on a low embankment, and its slightly elevated position, as well as the exhaust steam from the train, means it was more likely to have impacted the park than the canal.
- 3.3.7. Both the canal and railway were linked to an increased industrialisation of the area. While this industrialisation was more concentrated farther north, around Froncysyllte and Ruabon, it also occurred around Chirk. Black Park Colliery, for example, was located c. 2km to the north-east of Chirk Castle park. Black Park was a part of the Chirk Castle estate and was depicted on Badeslade's 1735 image (Figure 6). Limekilns were located adjacent to the wharf at Afon Bradley Farm, and one was also discovered within the Site (Garcia Rovira, 2022). The previously rural landscape would have been dotted with industrial activity, most prominently visible in the form of smokestacks.

Modern setting

- 3.3.8. The area included in the designation for Chirk Castle Register Park and Garden covers the 18th century gardens and park, as well as additional land on the hillslope to the north-west. The majority of the park is owned by The National Trust, but the area on the south-western edge, on the Ceiriog valley slopes, and the area on the south-east facing hillslope to the north-west are in private ownership. Access for visitors is via the New Hall gate in the north-

east, driving along the sinuous drive created by Emes, with views of the castle in front. The car park, accessed by crossing the remains of Offa's Dyke, is to the north-east of the castle, by Home Farm. The exit passes south of the castle through Deer Park wood to the gates in the south-east by Llwyn-y-Cil Lodge. The gates, a Grade I Listed Building (LB1315), were originally part of the forecourt screen to the castle, seen in Figures 6 and 7, then moved to the New Hall entrance as part of Emes' redesign, before being moved to their current site in 1888 (Cadw Listed Building Full Report).

- 3.3.9. There are four significant views noted in the listing report: from the north front of the castle north across park and lake; from the ha-ha at the east end of the garden across the grassland and woodland of the park, from the north-eastern approach looking towards the castle and gardens; and, from Tyn-y-Groes south across the parkland to the castle. Additionally, there are three notable designed views: from the lime tree avenue to the east of the castle looking west to the formal garden and castle; from the same location east over the parkland towards Chirk; and, from the Gazebo (LB1315) on the easternmost garden terrace southwards.
- 3.3.10. The park's setting remains primarily agricultural, with developments in Chirk being the main modern intrusion. Views of structures at the existing Kronospan Facility are available from locations within the eastern and northern parts of the park, and emission plumes from stacks at Kronospan are also visible. The significant view from the castle to the lake is unaffected due to screening by the pleasure ground wood, but the structures and emission plumes are visible to the east on much of the approach to the castle from the New Hall Farm gate (it should however be recognised that this is the visitor entrance to the Castle only, and hence the Kronospan Facility is in the opposite direction to the direction of travel – i.e. it is only visible if someone looks behind them). Views from the ha-ha at the eastern end of the gardens are also impacted by the emission plumes, and glimpses of the associated stacks, as well as modern housing in Chirk Green.

Contribution made by setting to the asset's heritage value

- 3.3.11. The main elements of Chirk Castle Park and Garden's setting that contribute to understanding its heritage value are its relationship with Chirk Castle itself and its prominent location within a wider picturesque landscape. The Site forms a small part of the surrounding rural landscape and makes a positive contribution to its heritage value. The existing Kronospan Facility is prominent in some significant views, particularly from the park entrance and from the eastern end of the formal gardens. It is also visible from large parts of the eastern, northern, and north-western areas, sometimes as the full factory buildings and sometimes only the top of the stacks and emission plumes. Both the industrial area including Kronospan and the 20th century housing estates of Chirk Green have a negative impact on the contribution to heritage value provided by the wider landscape.

3.4. Offa's Dyke: DE198, DE135, DE133, DE138

- 3.4.1. Offa's Dyke is an early medieval linear monument stretching around 220km from Treuddyn in north-east Wales to Sedbury Cliffs in south Gloucestershire. The monument is scheduled in sections, four of which are included in this SA. All are of High heritage value (see **Appendix 6.1, Section 4.2**).

Original setting

- 3.4.2. Not much is known about the origins of Offa's Dyke. Even the attribution of its construction to King Offa and its 8th century date is largely supposition. However, it does seem clear that the rationale behind its construction was mark the division between Saxon Mercia and Wales. The scale of the monument, with a large ditch, excavated in places to a depth of 1.7m and width of 3.5m, and a counterscarp bank that still survives up to 3.5m in places, was a significant undertaking and would have made a clear political point about power. The placement of the bank on the east of the ditch, so that the scarp faces west into Wales, indicates it also had a defensive purpose.
- 3.4.3. The Dyke occupies a narrow east - west range and runs broadly north -

south, with deviations to negotiate the crossing of uneven terrain including rivers, valleys, and hillsides. The Dyke was usually sited on highpoints or western-facing slopes, providing views into Welsh territory. It crossed the Ceiriog at a perpendicular angle, ascended the northern valley side in short, straight stretches, and passed along the western base of the scarp that the castle was later built on. From there it ran across a relatively flat area which provided views of the hillslopes to the north-west. Between the modern Caeaugwynion Farm and Wern Wood it was located on a gentle east-facing slope before descending to the north to cross the Dee.

- 3.4.4. There is little available evidence to build a picture of what the landscape the Dyke was built through looked like. Pollen analysis from Crose Mere in Shropshire, 14km east of Oswestry, indicates a period of post-Roman woodland regeneration followed by an intensification of landscape use from the 8th century (Ray and Bapty, 2016). Across England there is evidence for a general trend towards an intensification of land-use in the 8th and 9th centuries which may have expanded to the border area.

Changes to function

- 3.4.5. The exact purpose of Offa's Dyke, whether it was intended to be militarily functional or a statement of power, is still debated and there is little understanding of how the Dyke functioned. While some have suggested it was an uncrossed line, others have suggested there may have been gateways through it (Ray and Bapty, 2016). Likewise, the role the Dyke played in the landscape in the centuries following its construction is unknown. The presence of English placenames to the west of the Dyke indicates that if it did originally mark the extent of English westward expansion, it did not hinder its continuation.
- 3.4.6. There are references to Offa's Dyke in medieval documents from around the 12th century onwards (Ray and Bapty, 2016). These references generally refer to the dyke as a subjugation of or barrier against the Welsh by Offa and have an almost mythic quality to them. It is not until the works of early antiquarians, such as John Leland in the 16th century, that accounts

concerning the Dyke's structure and appearance, as well as its historic significance, appear. By the 18th century, the Dyke would have been relatively well known by those with an interest in history (Ray and Bapty, 2016).

Changes to setting

- 3.4.7. As mentioned above, the intensity of settlement in the landscape around Offa's Dyke at the time of its construction is unclear, but evidence points to increasingly agricultural clearance in the following centuries. This would have intensified following the establishment of the Marcher lordships and border towns, such as Chirk. The irregular shape of some field boundaries depicted in historic mapping indicates they were enclosed medieval strip fields. In other places, regular, straight boundaries indicate that some of the landscape was not under cultivation until the post-medieval period. In places the Dyke itself has influenced the development of field systems, so that the Dyke has been used as a field boundary itself. In others, the Dyke appears to have had no influence on the organisation of field boundaries.
- 3.4.8. The construction of Chirk Castle and the subsequent phases of landscaping of the associated park had a major impact on the setting of the Dyke near Chirk equating to the Scheduled Monuments DE134, DE198, DE135 and DE133. DE198 in particular was significantly reduced by Emes' landscaping in the late 18th century, to the extent that, although visible it is no longer a significant feature in the landscape. The construction of Home Farm and their access has obscured a section of the Dyke, between DE134 and DE198, while the lake to the north of the castle interrupts it between DE198 and DE135. These affect the understanding of the Dyke as a linear monument.

Modern setting

- 3.4.9. While it no longer forms the frontier between England and Wales, Offa's Dyke still has a symbolic role in the definition of national identities. The monument's degree of survival and changes to its setting vary along its length, and that is seen in the four sections included in this assessment.

While the setting remains a predominantly rural landscape there have been some significant changes.

- 3.4.10. The scheduled sections DE198 and DE135 lie within Chirk Castle Registered Historic Park and Garden. DE198 runs between the car park entrance track to the north-east of Home Farm and the lake. It was significantly reduced by Emes' landscaping of the park and visitors to the castle would be forgiven for not noticing they cross it as they enter the car park. The area DE198 crosses is a relatively flat plateau between the hillslope to the north-west of the park and the slope down towards Chirk to the east. Its location on the centre of this plateau limits views to the north and east. There are views of the emissions from the tallest Kronospan stack, but Home Farm and the castle car park have a greater impact on its setting.
- 3.4.11. Section DE135 lies between the lake and the minor road to the north-east boundary of the park. It did not suffer so much from the 18th century landscaping, but it is largely covered by Pool Wood and trees extending along it to the road. The woodland obscures views, particularly to the north-west, the direction the scarp is facing at this point.
- 3.4.12. Section DE133 runs between a hedge-lined trackway to a field boundary to the north-east, across Caeaugwynion Farm. Between DE133 and DE135 the route crossed the corner of a field where the Dyke has been reduced to the point that it is indistinguishable. Section DE133 is relatively well-preserved, with the bank surviving up to 1.5m high, although a farm track has been cut through the centre. It traverses an east-facing slope, which would have provided views of the hillslope to the north-west as well as the valley to the east. Modern views to the north-west are restricted by the buildings of Caeaugwynion Farm and the hedgerow along the road to the north-west. Views to the east are largely open, and the existing Kronospan Facility and residential areas of Chirk are prominent in the middle distance. This is also the case when viewing the Dyke from the road to the north-east, which at this point forms the route of the Offa's Dyke Path.
- 3.4.13. Section DE138 is located on the north-east facing slope of the Dee Valley. It

lies to the north-west of Plas Offa farm and is cut by the A5 in the centre and the Llangollen Canal to the north. To the south-west of the A5 it is planted with large trees. The post-medieval buildings of Plas Offa farm lie immediately to the south-east. To the north-east it has also been planted with trees, although less densely. At its north-eastern end it has been destroyed by the cutting for the Ellesmere Canal. Although much of the section's immediate surrounding are rural, understanding of the monument as a linear earthwork is affected by being cut by two modern routes.

Contribution made by setting to the asset's heritage value

- 3.4.14. The landscape setting of Offa's Dyke makes a significant contribution to understanding its heritage value as a linear earthwork constructed to provide views westwards into Wales. In the designed sections of the Dyke included in this assessment there has been some reduction of these views caused by elements such as hedgerows, but wider views to the west generally survive. The importance of views to the east, which includes the Site, in understanding heritage value is not as high but they do contribute to its wider setting in a rural landscape. The existing Kronospan Facility makes a negative contribution to the heritage value of the asset, particularly to section DE138, where it dominates views across the lowland areas to the east. The contribution of setting to the heritage value of DE198 has already been significantly diminished by 18th century landscaping of the park and the presence of the modern car park.

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Figures

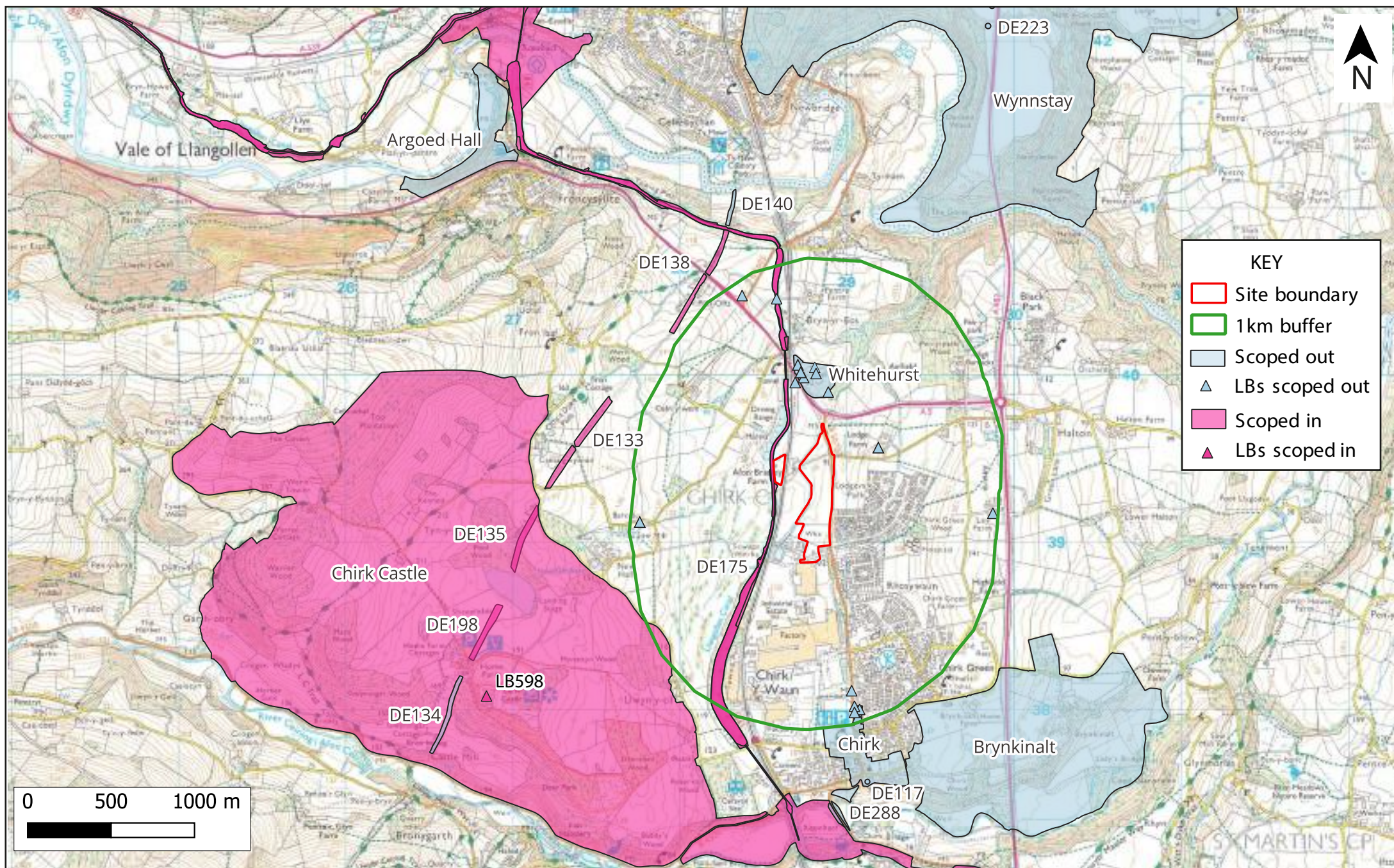


Figure 1. Plan showing the designated assets scoped out (grey) and scoped in (pink) to the Settings Assessment

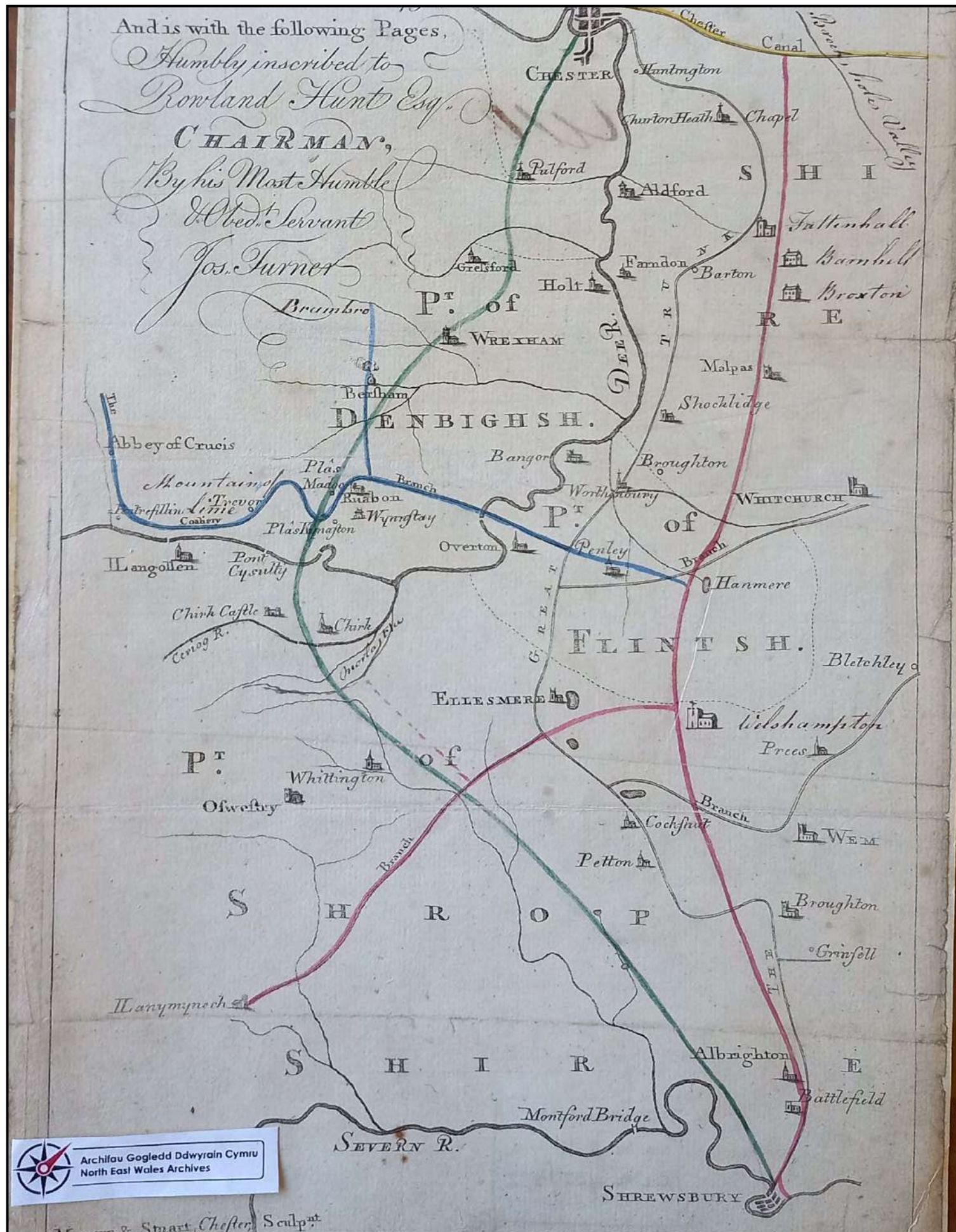


Figure 2. Sketch proposals for the route of Ellesmere Canal, 1971.



Figure 3. Excerpt of a proposed plan of Ellesmere Canal from the Book of Reference, 1975, showing the land parcels it would pass through at Chirk.

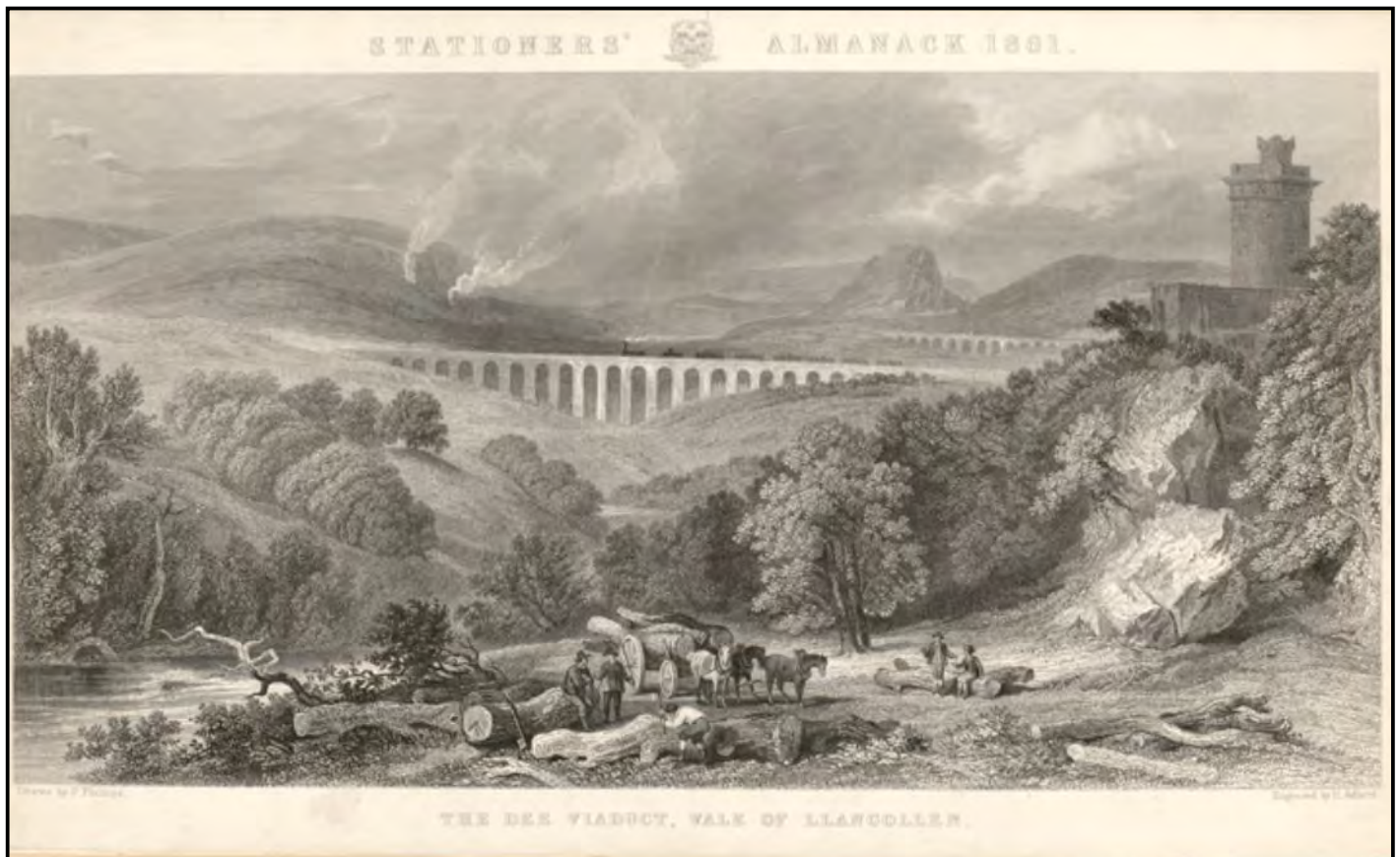


Figure 4 (top). The Dee Viaduct, Vale of Llangollen, 1861. Drawn by P. Phillips, engraved by H. Adlard.
© Llyfrgell Genedlaethol Cymru - National Library of Wales

Figure 5 (bottom). Chirk Viaduct - Shrewsbury and Chester Railway. 1848.
Coloured lithograph by G. Hawkins after G. Pickering.
© The Board of Trustees of the Science Museum

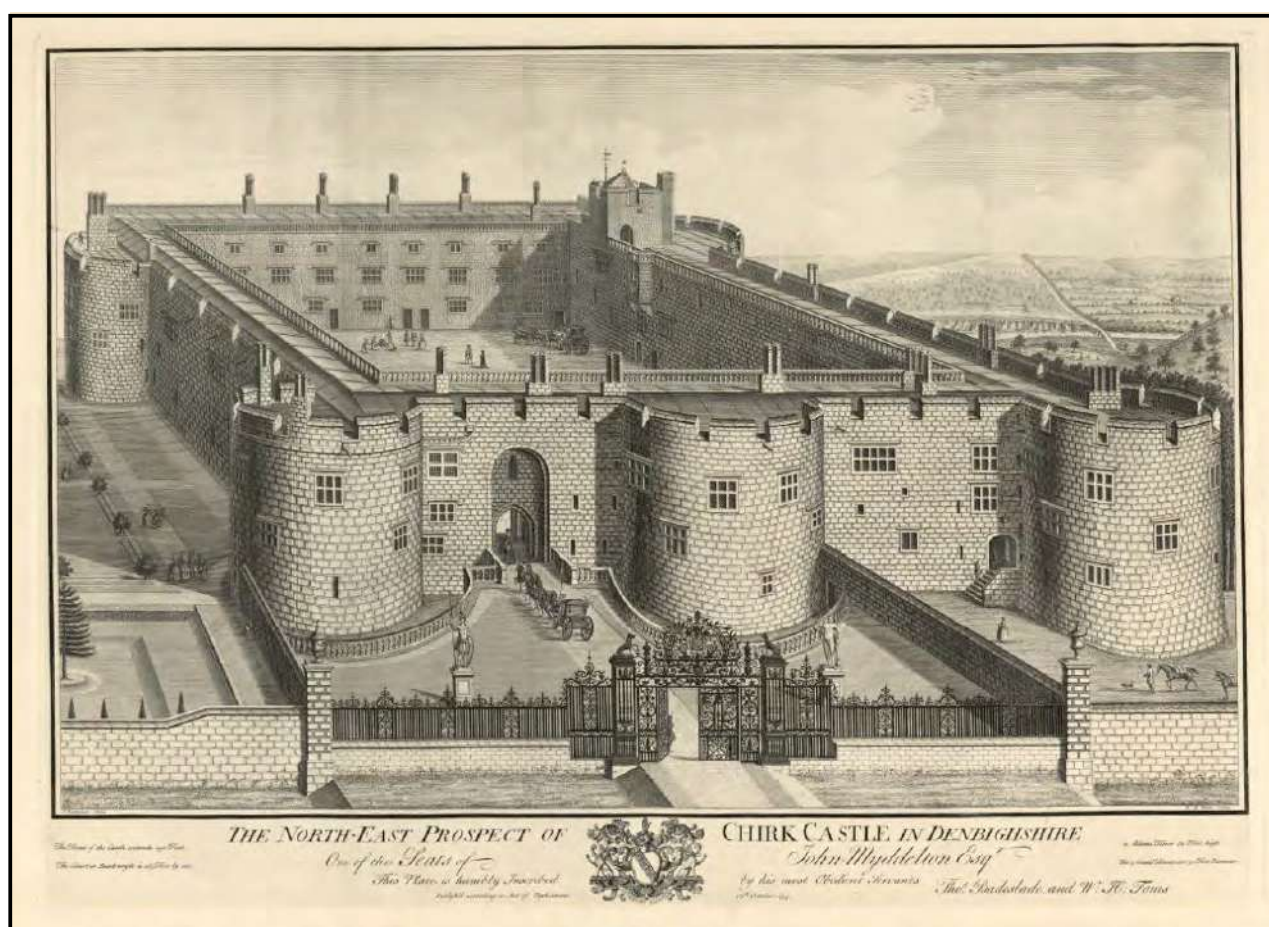


Figure 6 (top). The West Prospect of Chirk Castle in Denbighshire. Between 1733 and 1747, Thomas Badeslade.
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Figure 7 (bottom). The North-East Prospect of Chirk Castle in Denbighshire.
1735, Thomas Badeslade.
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Figure 8 (top). Chirk Castle from the North. Pieter Tillemans (c. 1684-1734).
© Amgueddfa Cymru - National Museum Wales

Figure 9 (bottom). Chirk Castle, Denbighshire. 1828. Engraved by H. Bond after J.P. Neale.
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Annex 2:

Kronospan, Chirk, Wrexham - Heritage Impact Assessment

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1. Introduction

- 1.1.1. This Annex expands on the baseline data presented in **Appendix 6.1** by assessing the contribution made by the assets to the Outstanding Universal Value (OUV) of Pontcysyllte Aqueduct and Canal World Heritage Site (hereafter 'the WHS'). This assessment is used to assess the impact of the Proposed Development on the OUV of the WHS, as presented in Environment Statement **(ES) Chapter 6.0 (Historic Environment)**.

1.2. Planning policy and best practice guidance

- 1.2.1. The Site of the Proposed Development is not in the WHS but does lie within its buffer zone. The following policy context is relevant to this annex:
- 1.2.2. The UK government is a signatory of the World Heritage Convention (1972), established by UNESCO. World Heritage Sites are inscribed by UNESCO and included in the World Heritage List. The protection of properties inscribed on the World Heritage List is the responsibility of the relevant national government. In Wales, this protection is provided largely by policies in Planning Policy Wales (Ed. 11) which states at paragraph 6.1.22 that *"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"*.
- 1.2.3. TAN-24 at section 3 provides further guidance, including in relation to the buffer zone, stating (paragraph 3.3) that *"Some World Heritage Sites have a buffer zone defined around or attached to their boundaries which is used as a management tool to help protect the World Heritage Site. The buffer zone itself is not of Outstanding Universal Value but can be used to highlight areas where potential impacts need to be given careful consideration by developers and decision makers."*

- 1.2.4. Further guidance is provided in “Managing Change in World Heritage Sites in Wales, Cadw 2017”. Section 4.4 states that *“The buffer zone is not part of the World Heritage Site. It is a management tool. It can be used to highlight areas where potential impacts need to be given careful consideration by developers and decision makers, and where planning restrictions may be appropriate”*. Section 5.7 sets out that in relation to Environmental Impact Assessment *“When an EIA is required for development that impacts upon the Outstanding Universal Value and attributes of a World Heritage Site, it should include an assessment of the significant impacts. These impacts could be considered through a heritage impact assessment”*.
- 1.2.5. Further supplementary planning guidance is provided as part of the Wrexham Borough Council Local Planning Guidance; Local Planning Guidance Note 33, Pontcysyllte Aqueduct and Canal World Heritage Site. This sets out further guidance on the buffer zone and its purpose noting (at 4.3) that *“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”*. The supplementary planning guidance references the objectives of the World Heritage Site Management Plan (2007 - 2012), which has recently been superseded by the Pontcysyllte Aqueduct and Canal World Heritage Site Management Plan 2019-2029 (ARCADIS 2019).
- 1.2.6. In addition to the above, this assessment has been informed by the following guidance documents:
- Guidance and Toolkit for Impact Assessments in a World Heritage Context (UNESCO/ICCROM/ICOMOS/IUCN 2022);
 - Guidance on Heritage Impact Assessments for Cultural World Heritage Properties (ICOMOS, 2011) (a Historic England briefing note identifies that the 2022 toolkit incorporates and replaces this

guidance);

- Heritage Impact Assessment in Wales (Cadw, 2017).
- Principles of Cultural Heritage Impact Assessment in the UK (ClfA, 2021);
- Setting of Historic Assets in Wales (Cadw 2017); and,
- Sustainable Management of the Historic Environment in Wales (Conservation Principles) (Cadw 2011).

1.3. Methodology

1.3.1. This report has utilised the assessment process outlined in the *Guidance and Toolkit for Impact Assessments in a World Heritage Context* (UNESCO/ICCROM/ICOMOS/IUCN 2022). This process contains four stages:

- Stage One – Baseline: Describes the existing condition of the WHS and identify the values and attributes of the WHS that contribute to the site’s OUV.
- Stage Two – The Development Proposals: Describes the development proposals including potential alternatives to achieve the project’s objectives.
- Stage Three – Identifying Impacts: Identifies the potential impacts of the proposed development and evaluates their significance.
- Stage Four – Mitigation and Enhancement: Explores alternatives and mitigation measures to reduce or remove negative impacts and enhance positive impacts.

1.3.2. For clarity and rationalisation, Stages Two, Three and Four are presented in the **ES Chapter 6.0 (Historic Environment)**.

2. Pontcysyllte Aqueduct and Canal WHS

- 2.1.1. Pontcysyllte Aqueduct and Canal was inscribed as a World Heritage Site in 2009. The WHS is c. 18km long and can be divided into two distinct sections: (1) from Gledrid Bridge to Trevor Basin and (2) the Llangollen arm from Trevor Basin to the Horseshoe Falls (**Appendix 6.1, Figure 12**). It was first envisioned as an ambitious route linking the Welsh mining areas around Ruabon to the River Mersey in the north and the River Severn in the south, connecting the area to both national and, via Liverpool, international trade links. The costs associated with the major works of engineering required meant that only the northern and central Welsh sections were ever built.
- 2.1.2. The Canal is an early example of the advances in civil engineering that occurred during Britain's Industrial Revolution. The Welsh section, between Gledrid Bridge to Trevor Basin, crossed challenging terrain, including the Ceiriog and Dee River valleys, which required major works of engineering in the form of aqueducts, tunnels and deep cuttings. The route was designed by the engineers William Jessop and Thomas Telford, who devised innovative and novel architectural solutions to the problems the route presented. In particular, the Pontcysyllte Aqueduct represented a pioneering use of cast iron in construction, with tall masonry piers supporting iron arches.
- 2.1.3. The WHS boundary includes not just the Pontcysyllte Aqueduct and Canal, but also all those associated assets which convey its OUV, such as embankments, bridges, cuttings, aqueducts, and all other associated features which demonstrate the improvement of civil engineering and transport during the Industrial Revolution (Figure 6; Wrexham County Borough Council and RCAHMW 2008).
- 2.1.4. The Statement of Outstanding Universal Value (OUV) for the site is provided below:
- 2.1.5. *The Pontcysyllte Canal is a remarkable example of the construction of a human-engineered waterway in a difficult geographical environment, at the*

end of the 18th century and the start of the 19th century. It required extensive and boldly conceived civil engineering works. The Pontcysyllte Aqueduct is a pioneering masterpiece of engineering and monumental architecture by the famous civil engineer Thomas Telford. It was constructed using metal arches supported by tall, slender masonry piers. The Pontcysyllte Aqueduct and Canal are early and outstanding examples of the innovations brought about by the Industrial Revolution in Britain, where they made decisive development in transport capacities possible. They bear witness to very substantial international interchanges and influences in the fields of inland waterways, civil engineering, land-use planning, and the application of iron in structural design.

- 2.1.6. *Criterion (i): The Pontcysyllte Aqueduct is a highly innovative monumental civil engineering structure, made using metal arches supported by high, slender masonry piers. It is the first great masterpiece of the civil engineer Thomas Telford and formed the basis of his outstanding international reputation. It bears witness to the production capacities of the British ironmaking industry, which were unique at that time.*
- 2.1.7. *Criterion (ii): The intensive construction of canals in Great Britain, from the second half of the 18th century onwards, and that of the Pontcysyllte Canal in particular in a difficult region, bear witness to considerable technical interchanges and decisive progress in the design and construction of artificial waterways.*
- 2.1.8. *Criterion (iv): The Pontcysyllte Canal and its civil engineering structures bear witness to a crucial stage in the development of heavy cargo transport in order to further the Industrial Revolution. They are outstanding representatives of its new technical and monumental possibilities.*
- 2.1.9. The WHS is surrounded by a Buffer Zone that covers an area of 4,145 ha in total. The aim of the Buffer Zone is to provide an extra layer of protection to the wider setting of the WHS. The landscape and setting of the canal contribute to its character and sense of place, and other designated and non-designated assets within the Buffer Zone may contribute to the OUV.

3. Assets within the WHS

- 3.1.1. Eleven assets that lie within the WHS were identified by the baseline data collection (**Appendix 6.1**). One is a Listed Building and ten are non-designated assets on the National Monument Record (NMR). All of them are structures or features that were part of the Ellesmere Canal.
- 3.1.2. Analysis of the ZTV mapping produced as part of the LVIA (**ES Chapter 5.0**) indicates that three of these assets are not predicted to be impacted by the Proposed Development and therefore they will not be considered as part of this assessment. They are:
- LB87548, Whitehouse Bridge;
 - NPRN87008, Whitehouse Tunnel North Portal, Llangollen Canal; Ellesmere Canal; Shropshire Union Canal; and,
 - NPRN406666, Glyn Ceiriog Tramway Wharf, Llangollen Canal; Ellesmere Canal; Shropshire Union Canal.
- 3.1.3. It is considered that there is a potential for the remaining eight assets to be impacted by the Proposed Development. These assets and their contributions to the OUV of the WHS are presented in the table below (Table 1).

Table 1. Assets that lie within the WHS boundary and their contribution to OUV.

Asset ID	Site name	Description	Value
NPRN405792	Afon-Bradley Overflow Weir, Culvert 91 and Black Park Sluice 10, Llangollen Canal; Ellesmere Canal; Shropshire Union Canal	A wide spillway and apron on the west side of the canal leading to a culvert under the canal. Part of the original canal, the overflow weir is an attribute which relates to the design and engineering OUV of the canal, specifically the water management.	Very High
NPRN405793	Red Bridge Number 42, Abutments, Llangollen Canal; Ellesmere Canal; Shropshire Union Canal	A narrowing of the canal with a masonry revetment in the location of a former bridge. An attribute of the WHS conveying how the canal was engineered to accommodate existing routes in the landscape.	Very High
NPRN405795	Afon-Bradley Limekilns, Llangollen Canal; Ellesmere Canal; Shropshire Union Canal	Two limekilns that were built into the canal towpath. The stone superstructure and brick lining survive, although large trees now grow on top of the kilns. The exact date of the kilns is unknown. It was common for lime kilns to be built along canals during the canal construction to allow for onsite lime production. The asset may therefore be an attribute that represents the material and construction of the WHS. Even if they were not a part of the construction process, they contribute to the OUV as an example of the canal's function in the transportation of raw materials such as lime.	Very High
NPRN405986	Black Park Collieries Railway Dock Turning Basin, Llangollen Canal; Ellesmere Canal; Shropshire Union Canal	An oval widening on the west side of the canal that was designed to allow boats to turn at right-angles to enter the Black Park Collieries Dock. The asset is an attribute that conveys several aspects of the canal's OUV, including design, function, boating heritage, and integrated transport provided by the link between the canal and the Black Park Collieries Railway/Glyn Valley Tramway.	Very High
NPRN405987	Blocked Entrance to Bottom Wharf	Now sealed entrance to former canal spur under the towpath to Black Park Collieries Railway Dock (later Glyn Valley Tramway Dock). It is sealed with brick where the spur joined the main channel.	Very High

Asset ID	Site name	Description	Value
		The asset conveys the canal's OUV as an integrated transport route, linking with local railways bringing raw materials for transportation on the canal. It also represents the design and engineering of the canal.	
NPRN406667	Afon Bradley Stream Feeder, Llangollen Canal; Ellesmere Canal; Shropshire Union Canal	A substantial stream diverted to become a feeder for the Ellesmere Canal in the 19 th century. The stream is a part of the canal's engineering and water management system.	Very High
NPRN406695	Red Bridge Cutting Nos.29-30, Llangollen Canal; Ellesmere Canal; Shropshire Union Canal	A shallow cutting dug to facilitate the straight course of the canal through this area. The asset demonstrates the civil engineering employed in the construction of the canal through the landscape.	Very High
NPRN406721	Afon-Bradley Culvert No. 92, Llangollen Canal; Ellesmere Canal; Shropshire Union Canal	The culvert, which is constructed from brick and dressed stone, carries a small stream under the canal and links with a brick-lined field drain. The culvert is an attribute of the WHS demonstrating elements of form and design.	Very High

4. Assets within the Buffer Zone

4.1.1. Collection of the baseline data identified 73 assets that lie within the WHS Buffer Zone (**Appendix 6.1**). Analysis of the ZTV mapping produced as part of the LVIA (**ES Chapter 5.0**) indicates that 54 of these assets are not predicted to be impacted by the Proposed Development and therefore they will not be considered as part of this assessment. They are listed in Table 2 below.

Table 2. Assets within WHS Buffer Zone scoped out of assessment.

Asset ID	Asset name
DE117; PRN 101109; NPRN 30701	Castell y Waun Castle Mound
DE288	London to Holyhead Road – Chirk embankment and earlier trackways
DE134	Offa's Dyke: Chirk Castle Section extending NE from Castle Mill
DE140	Offa's Dyke: Section N & S of Tan-y-Cut
DE223	Darland Wood Round Barrows
LB1286; PRN25803	Chirk Castle, Whitehurst Gardens, walls, gatepiers and gates
LB1288; PRN25805; NPRN23052	Chirk, Queen Anne Cottage
LB1287; PRN25804; NPRN35592	Whitehurst House
LB20224; PRN42883; NPRN35591	Chirk Castle, Whitehurst Gardens, upper terrace wall
LB20225; PRN42869; NPRN35591	Chirk Castle, Whitehurst Gardens, second terrace wall
LB20226; PRN42856; NPRN35591	Chirk Castle, Whitehurst Gardens, lowest terrace wall
LB1289; PRN25806; NPRN27120	Chirk, Drumore
LB626; PRN25631; NPRN26965	Chirk, The Lodge
LB1297	Ley Farmhouse
LB20236	Milestone
LB20215	Chirk Town Council Offices

Asset ID	Asset name
LB20228	North Gate Piers to Chirk Town Council Offices
LB20229	North Gate Piers to Chirk Town Council Offices
LB1290	Chirk Furniture and Carpet Centre and Dwelling
LB620	Barc-du, also known as Sawmill Cottage
LB627	Smithy at Whitehurst and House attached
PGW(C)15(WRE)	Brynkinalt Park
PGW(C)42(WRE)	Argoed Hall
PGW(C)64(WRE)	Wynnstay
PRN132631	The Stable, Lodge Farm
PRNs147261 to PRN147277	Lodge Farm
PRN13341; NPRN408100	Pen y Clawdd coal mine
PRN126304 - PRN126308; NPRN27487	Maes-gwyn, buildings I – V
NPRN87007	Llangollen Road Station, near Chirk
NPRN87009	Whitehurst Railway Halt, near Chirk
NPRN406591	Whitehouse Tunnel Southern Approach Cutting, Llangollen Canal; Ellesmere Canal; Shropshire Union Canal
NPRN405791	Black Park Collieries Railway Bottom Wharf Dock, Llangollen Canal; Glyn Valley Tramway Dock; Ellesmere Canal; Shropshire Union Canal

4.1.2. Nineteen assets within the Buffer Zone are considered to have the potential to be impacted by the Proposed Development. These assets and their contributions to the OUV of the WHS are presented in Table 3 below.

Table 3. Assets that lie within the WHS Buffer Zone and their contribution to OUV.

Asset ID	Site name	Designation	Description	Value
DE133, DE135, DE138 and DE198	Offa's Dyke	Scheduled Monument	Offa's Dyke is an 8th century linear earthwork that runs nearly 220km north-south along the border of England and Wales. It consists of an earth and stone bank with a ditch on the western side. The dyke runs on a roughly north-east – south-west alignment on the east-facing hillslope to the west of the canal. The dyke does not contribute to the OUV of the WHS, but it is a nationally important designated asset situated in the landscape setting of the canal.	High
LB598	Chirk Castle	Grade I LB	Chirk Castle is a 13th century Marcher castle, built in 1295 by Roger Mortimer. It changed hands through a series of Marcher lords through the medieval period before being purchased by the merchant Thomas Myddelton in 1595. It remained in the Myddelton family until it was transferred to The National Trust in 1981. The building's 13th century core, a rectangular restructure with four corner turrets and two turrets to the long sides, survives well, although windows and crenelations were added in the 19th century. The interior has been significantly altered by various remodelling, most notably in the late 18th century. The castle does not contribute to the OUV of the canal except that it forms part of the canal's picturesque landscape setting. Artworks that depict the castle on the hillside overlooking the canal were first produced soon after the canal's construction.	Very High
PGW(C)63(WRE); NPRN70048	Chirk Castle	Grade I P&G	Chirk Castle Registered Park and Garden originated as a small, wooded park around the castle, but it was expanded and landscaped by the Myddelton family. It largely retains the appearance of the large-scale landscaping carried out by the landscape designer William Emes in the late 18th century. It does not convey any elements of the OUV of the WHS, but it is an important designated asset within the Buffer Zone which contributes to the canal's picturesque landscape setting.	Very High
PRN47504 and	Rhyn Park to Rhug	-	The projected line of a Roman Road presumed to be on the line of Telford's	Negligible

Asset ID	Site name	Designation	Description	Value
PRN47505			1815-1820 London to Holyhead Road, the modern B5070/A5. It makes no contribution to the OUV of the WHS.	
PRN140789	Turnpike	-	Presumed route of turnpike road pre-construction of Telford's Holyhead Road. It makes no contribution to the OUV of the WHS.	Negligible
PRN145627 - PRN145631	Afon Bradley Farm	-	Afon Bradley Farm is a post-medieval farmstead located 100m to the east of the WHS. It makes no contribution to the OUV of the WHS.	Moderate
PRN165023	Chirk, milestone, DEN_HH82	-	Former original milestone on Telford's London to Holyhead Road, now the A5. It makes no contribution to the OUV of the WHS.	Negligible
PRN213739	Chirk, replacement milestone, DEN_HH82	-	A 20 th century replica of the original milestone, located on the modern A5. It makes no contribution to the OUV of the WHS.	Negligible
NPRN300005	Woodchip factory, Chirk	-	This designation refers to the existing Kronospan Facility, a mid-late 20 th century factory complex. It makes no contribution to the OUV of the WHS.	Low
NPRN402945	Housing estate, Chirk Green	-	Mid 20 th century housing estate. It makes no contribution to the OUV of the WHS.	Low
NPRN405794	Chirk Marina, Llangollen Canal; Ellesmere Canal; Shropshire Union Canal	-	Late 20 th marina constructed along the western side of the canal for pleasure boats making trips along the WHS. Although not an original element of the WHS it contributes to the OUV as part of its landscape setting and the continued use of the canal for boating activity and tourism.	Low
NPRN420610	Cilcoed, Chirk	-	Mid 20 th century housing estate. It makes no contribution to the OUV of the WHS.	Low
NPRN420611	Crogen, Chirk	-	Mid 20 th century housing estate.	Low

Asset ID	Site name	Designation	Description	Value
			It makes no contribution to the OUV of the WHS.	
KHR001	Limekiln	-	Remains of a former limekiln located within the Site during archaeological evaluation. Only the heat-affected of a large circular pit survives, with no dating evidence. There is no clear evidence to connect this feature to the WHS. It is possible the lime produced was utilised in the construction of the WHS or equally it may have been for agricultural use on Afon Bradley Farm. The feature is not considered to contribute to the OUV.	Low

5. Assets within the WHS Wider Setting

5.1.1. The following assets located outside the Buffer Zone but within the wider setting of the WHS have been established as not being impacted by the Proposed Development:

- DE134, Offa's Dyke: Chirk Castle Section extending NE from Castle Mill, Scheduled Monument. This section lies to the north of the A5 and views to the Site are blocked by existing vegetation along the A5;
- LB1297, Ley Farmhouse, Grade II Listed Building. Views of the Site are blocked by the 20th century housing estates of Chirk Green; and,
- PGW(C)64(WRE), Wynnstay, Grade I Registered Historic Park and Garden. The topography of the landscape and existing vegetation prevent views of the Site.

5.1.2. No assets within the wider landscape setting of the WHS have been identified as being impacted by the Proposed Development.

6. Sources

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