

Archaeology Wales

Kronospan, Holyhead Road, Chirk Silos, extension to the chip preparation building, additional two silos and inclined high-level conveyor and bucket elevator

Desk Based Assessment and Site Visit



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Archaeology Wales

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Contents

Summary	3
Crynodeb.....	3
1. Introduction	4
2. Site Description	4
3. Methodology	5
4. Archaeological and Historical Background	8
5. Map Regression	15
6. Aerial Photographs and Lidar	16
7. Site Visit (Plates 1-5; Figures 11-12)	17
8. Impact Assessment.....	17
9. Mitigation and conclusion	20
10. Sources.....	21

Tables

Table 1 Listed Buildings within search area	12
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Figures

Figure 1. Site Location	23
Figure 2. Site location within assessment areas	24
Figure 3. HER within assessment area	25
Figure 4. Scheduled Monuments within assessment area.....	26
Figure 5. Listed Buildings within assessment area.....	27
Figure 6. Registered Parks and Gardens within assessment area.....	28
Figure 7. LiDAR.....	29
Figure 8. WHS and Essential Setting.....	30
Figure 9. Proposed development details.....	31
Figure 10. Proposed development plans.....	32
Figure 11 ZTV model	33
Figure 12 ZTV model	34

Plates

Plate 1- 6 Site visit - images	
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Appendices

Appendix I Gazetteer of sites recorded on the Regional HER

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Summary

In March 2022, Archaeology Wales was commissioned by Axis to carry out an archaeological Desk Based Assessment to determine the archaeological potential land at Kronospan, Maesgwyn Farm, Wrexham LL14 5NT - NGR SJ 328524 338513. The work is associated with the proposed development of three silos to the north of the extension to the chip preparation building and an additional two silos to the northeast including an inclined high-level conveyor and bucket elevator.

The proposed development is located within Pontcysyllte Canal and Aqueduct World Heritage Site (WHS) Essential Setting. The latter includes Chirk Conservation Area as well as Chirk Castle Registered Park and Garden - all located in close proximity to the site.

While the proposed development is located within the WHS Essential Setting, it is situated within an industrial complex which already severely impacts the setting of the WHS and Chirk Conservation Area. Given the location of the proposed development it is likely that it will blend within the already existing industrial landscape suggesting there will be a Neutral Impact overall.

Crynodeb

Ym mis Mawrth 2022, comisiynwyd Archaeology Wales gan Axis i gynnal Asesiad Desg archeolegol i bennu potensial archeolegol y tir yn Kronospan, Fferm Maesgwyn, Wrecsam LL14 5NT - NGR SJ 328524 338513. Mae'r gwaith yn gysylltiedig â datblygiad arfaethedig tri seilo i'r gogledd o'r estyniad i'r adeilad paratoi naddion a dau seilo ychwanegol i'r gogledd-ddwyrain sy'n cynnwys cludydd lefel uchel a chodwr bwced.

Mae'r datblygiad arfaethedig wedi'i leoli o fewn Lleoliad Hanfodol Safle Treftadaeth y Byd Camlas a Dyfrbont Pontcysyllte. Mae'r safle yn cynnwys Ardal Gadwraeth y Waun yn ogystal â Pharc a Gardd Gofrestredig Castell y Waun - sydd oll wedi'u lleoli'n agos at y safle.

Er bod y datblygiad arfaethedig wedi'i leoli o fewn Lleoliad Hanfodol y Safle Treftadaeth y Byd, mae wedi'i leoli o fewn casgliad o adeiladau diwydiannol sydd eisoes yn effeithio'n ddifrifol ar leoliad y Safle Treftadaeth y Byd ac Ardal Gadwraeth y Waun. O gofio lleoliad y datblygiad arfaethedig, mae'n debygol y bydd yn asio â'r tirlun diwydiannol presennol sy'n awgrymu y bydd Effaith Niwtral yn gyffredinol.

1. Introduction

- 1.1 In March 2022 Archaeology Wales (henceforth – AW) was commissioned by Axis to carry out an archaeological Desk Based Assessment (DBA) and site visit at Kronospan, Maesgwyn Farm, Wrexham LL14 5NT – NGR SJ 328524 338513.
- 1.2 It is proposed that the development will include the construction of three silos to the north of the extension to the chip preparation building and an additional two silos to the northeast including an inclined high-level conveyor and bucket elevator. The present DBA assesses the impact that the proposals will have on the archaeological resource (Figure 1).
- 1.3 The purpose of the DBA, detailed in the following report, is to provide Clwyd Powys Archaeological Trust – Development Control (henceforth – CPAT-DC), advisors to the local planning authority, Wrexham County Borough Council (WCBC), with the information they are likely to request in respect of the proposed development, the requirements for which are set out in Planning Policy Wales (revised edition 11, 2021), Section 6.1 and Technical Advice Note (TAN) 24: The Historic Environment (2017).
- 1.4 The work is to highlight and assess the impact upon standing and buried remains of potential archaeological interest and to ensure that they are fully investigated and recorded if they are disturbed or revealed as a result of subsequent activities associated with the development.

2. Site Description

- 2.1 The proposed development is located within an industrial estate which occupies more than 70 hectares. The estate is adjacent to Llangollen Canal to the west, to Chirk to the east and south, and is bounded by agricultural fields to the north (Figure 2).
- 2.2 The industrial estate includes multiple structures. A large factory is located to the south of the complex. The proposed development is located immediately northeast from the main factory. It involves the construction of three silos north of the proposed extension to the chip preparation building and two larger chip silos to the northeast along with ancillary high-level conveyor and bucket

elevator (Figure 9-10).

- 2.3 The underlying geology is comprised of mudstone, siltstone sandstone, coal, ironstone and ferricrete from the Pennine Lower Coal Measures and the South Wales Lower Coal Measures, formed during the Carboniferous Period. This is overlain by superficial deposits of Till- Diamicton, formed during the Quaternary Period (BGS 2022).

3. Methodology

- 3.1 The primary objective of this Desk Based Assessment is to assess the impact of the development proposals on the historic environment. This will help inform future decision making, design solutions and potential mitigation strategies. The aim is to make full and effective use of existing information in establishing the archaeological significance of the site, to elucidate the presence or absence of archaeological material, its character, distribution, extent, condition and relative significance.
- 3.2 The work includes a comprehensive assessment of regional context within which the archaeological evidence rests and aims to highlight any relevant research issues within national and regional research frameworks.
- 3.3 This report provides information of sufficient detail to allow informed planning decisions to be made which can safeguard the archaeological resource. Preservation in situ has been advocated where at all possible, but where engineering or other factors could result in the loss of archaeological deposits, preservation by record has been recommended.
- 3.4 This assessment considers the following:
 - A. The nature, extent, and degree of survival of archaeological sites, structures, deposits and landscapes within the study area through assessment of various readily available primary sources:
 - Collation and assessment of all relevant information held in the regional HER at the Clwyd-Powys Archaeological Trust, within a 0.5km buffer zone around the proposed development area.
 - Collation and assessment of the impact on all Designated

archaeological sites (Scheduled Ancient Monuments, Listed Buildings, Historic Parks & Gardens, landscapes, Conservation Areas) within 1km buffer zone around the proposed development area.

- Assessment of all available excavation reports and archives including unpublished and unprocessed material affecting the site and its setting.
 - Assessment of aerial photographic and satellite imagery evidence.
 - Assessment of archive records held at the County Archive, the National Library of Wales (NLW) and the Royal Commission on Ancient and Historical Monuments in Wales (RCAHMW).
 - Records held by the developer e.g. bore-hole logs, geological/geomorphological information, aerial photographs, maps, plans, ztv data.
 - Map regression analysis using all relevant cartographic sources e.g. all editions of the Ordnance Survey County Series, Tithe and early estate maps (as available).
 - Place-name evidence.
 - Historic documents (e.g. charters, registers, estate papers).
- B. The significance of any remains in their context both regionally and nationally and in light of the findings of the desk-based study.
- C. The history of the site.
- D. The potential impact of any proposed development on the setting of known sites of archaeological importance.
- E. The potential for further archaeological remains to be present, which have not been identified in pre-existing archaeological records.
- F. The potential for further work, with recommendations where appropriate for a suitable investigative and/or mitigation methodology.

3.5 In assessing the value of archaeological assets, and the potential impacts upon

them by the proposed development, the terms and guidance used in the Design Manual for Roads and Bridges, Volume 11, Section 3 (Highways England 2007) has been utilised. Values are given as:

- Very High (World Heritage Sites and other sites of international importance).
- High (Scheduled Monuments, undesignated assets of schedulable quality, assets of National importance that can contribute significantly to acknowledged national research objectives).
- Medium (Designated or undesignated assets of Regional importance that contribute to regional research objectives).
- Low (assets of local importance, assets compromised by poor preservation or poor survival of contextual associations).
- Negligible (assets with little or no surviving archaeological interest).
- Unknown (the importance of the resource has not been ascertained).

3.6 The magnitude of the potential impact on the archaeological assets (which can be either positive or negative), is given as:

- Major (change to most or all key archaeological materials, such that the resource is totally altered; comprehensive changes to setting).
- Moderate (changes to many key archaeological materials, such that the resource is clearly modified; considerable changes to setting that affect the character of the asset).
- Minor (changes to key archaeological materials, such that the asset is slightly altered; slight changes to setting).
- Negligible (very minor changes to archaeological materials or setting).
- No Change.

3.7 This work conforms to the Standard and Guidance for Historic Desk-Based Assessment, as produced by the Chartered Institute for Archaeologists (CIfA 2020).

4. Archaeological and Historical Background

4.1 A HER search within a 500m radius of the proposed development has retrieved five records. No records are located within the area of the proposed silos; however, all HER entries are recorded in nearby locations and refer to the former Maes Gwyn farm complex. A brief history of development of Chirk (PRN 1425411) and its surroundings is presented below considering nearby HER records.

Prehistoric: Palaeolithic (c.450,000 - 10,000 BC), Mesolithic (c.10,000 - 4000 BC), Neolithic (4000 BC - 2300 BC), Bronze Age (2300 BC - 700 BC) & Iron Age (700 BC - AD 43)

4.2 No records of prehistoric date are documented in the HER within 500m and 1km) of the development area.

Roman (AD 43 - c. AD 410)

4.3 The history of Chirk and its surroundings can be traced back to Roman chronologies. A Roman Vexillation camp is recorded southeast of the village, and a Roman Marching Camp located some 13 miles southeast of Chirk.

4.4 A projected line for a Roman Road - Rhyn Park to Rhug PRN 47504- is documented in the HER running NNW/SSE following a stretch of the B5070 and crossing Chirk to the south toward Chirk Wood.

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

4.5 Chirk (PRN142411) originates from the Norman conquest of the 11th and 12th centuries¹. The latter saw the invasion of Norman lords into the Welsh territory. Following Roger Montgomery's son rebellion, his lands were returned to the crown and subsequently given to William Perceval of Dover who built a number of motte and bailey castles at Whittington, Ellesmere and Chirk (PRN

¹ PRN 142411 highlights the possible maedref predating the conquest based on toponyms (Silvester 2015)

101109; DE117; NPRN 307013)²

- 4.6 The Church of St Mary (PRN 101108; LB 615; NPRN 12599) appears to have also been built sometime during the 12th century³. It was originally dedicated to Tysilio.
- 4.7 During the 13th century King Edward I granted land at Chirkland to Roger Montgomery of Wigmore. The Montgomery's built a new castle between 1295 and 1310 (PRN 101107; LB 598; NPRN 145757).
- 4.8 By the 14th century however, Chirk was in hands of Edmond Fitzalan Earl of Arundel. It was during this time that the town was carefully planned. In 1234 Chirk obtained a market charter. However, the prosperity of Chirk ceased with the turmoil triggered by the campaigns of Owain Glyndwr and later by the War of the Roses.

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

- 4.9 The castle of Chirk was Thomas Myddleton property by the 17th century. He had a strong role during the Civil War. His sympathies with the Parliamentarians led to the castle being taken from him by Colonel Ellis of Wrexham. However, he recovered the stronghold some time after. At this point Myddleton changed alliances in favour of the crown. As result the castle of Chirk was badly damaged.
- 4.10 As it will be noted in the section below (Scheduled Monuments), the area changed substantially with the onset of the Industrial Revolution. During the 18th and 19th centuries, the landscape surrounding Chirk was exploited for coal, slate, limestone and clay. Furthermore, this period saw the development of infrastructures such as the Llangofen Canal (DE175) and Chirk aqueduct (PRN 102925; LB 618; DE175). Details regarding these developments are provided below as they have been granted a number of heritage designations.

² See Scheduled Monuments and World Heritage Sites for further details

³ See Listed Buildings and Conservation Areas for further details.

Scheduled Monuments and World Heritage Sites (Figure 4,8)

- 4.11 The industrial estate, within which development is proposed, is bounded to the west by the remains of the Glyn Valley Tramway, and by Llangofen Canal (DE175). The canal not only it is designated as a Scheduled Monument (DE175), but it is also a World Heritage Site (WHS). The latter is located some 200m to the west of the proposed location for the silos. Furthermore, it is worth noting that the industrial complex falls within the Essential Setting of the WHS.
- 4.12 The canal was proposed in 1771 by a group of industrialists, who owned coal and iron mines within the landscape surrounding Ruabon. They wanted to establish better routes to export goods whilst also being able 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 civil engineer William Jessop and Thomas Telford, acting as the General Agent, were involved in the construction of the canal.
- 4.13 Between 1795 and 1805 the Hurleston to Llangollen section was built. This section was particularly challenging due to the mountainous nature of the landscape. To resolve it, Jessop and Telford cut two tunnels (PRN79832; DE175) and constructed an aqueduct to carry the canal across the River Dee.
- 4.14 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 revisited to encompass the entire length of the Llangollen Branch (including the weir at the Horseshoe Falls and the Pentrefellin Aqueduct), Trevor Basin and the heavily engineered canal section south of Pontcysyllte (including the Froncysyllte Embankment; the Chirk Tunnel and Whitehouse Tunnel; the Canal Wood Cutting and Irish Bridge Cutting; and the Chirk Basin and Aqueduct).
- 4.15 In 2009, the UNESCO declared the monument a World Heritage Site. The decision document notes that:

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.

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.

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.

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.

Listed Buildings and Conservation Areas (Figure 5)

4.16 There are 21 listed buildings within the assessment area. No listed buildings are located within the boundary of the proposed location of the silos. 14 listed structures are located within Chirk Conservation Area:

Table 1 Listed Buildings within search area.

NUMBER	NAME	GRADE
1290	Chirk Furniture and Carpet Centre and Dwelling	II
1298	Hand Hotel	II
1315	Chirk Castle Gates, Screen and Piers	I
20202	War Memorial	II*
20211	Llwyn-y-cil Lodge	II
20215	Chirk Town Council Offices	II
20216	1, Hand Terrace, Chirk, Wrexham, LL14 5EU	II
20217	2, Hand Terrace, Chirk, Wrexham, LL14 5EU	II
20218	3, Hand Terrace, Chirk, Wrexham, LL14 5EU	II
20219	4, Hand Terrace, Chirk, Wrexham, LL14 5EU	II
20220	5, Hand Terrace, Chirk, Wrexham, LL14 5EU	II
20221	6, Hand Terrace, Chirk, Wrexham, LL14 5EU	II
20222	7, Hand Terrace, Chirk, Wrexham, LL14 5EU	II
20228	North Gate Piers to Chirk Town Council Offices	II
20229	South Gate Piers to Chirk Town Council Offices	II
20236	Milestone	II
20254	Town Reservoir	II
20259	Whitewalls	II
620	Barc-du, also known as Sawmill Cottage	II
623	Nos 6 & 7 Coed-derw	II
624	Llwyn-y-cil Cottage	II

4.17 Chirk Conservation Area was designated in 1975 although its boundaries have been altered in two occasions (1997 and 2014). The village sits in a shallow valley bounded to the west by the Clywdian Range and Dee Valley AOSB. This area is partly occupied by Chirk Estate and Castle. Brynkinalt Estate borders the valley to the east.

4.18 The protected area integrates the historic core and encompasses the medieval settlement around the Church of St Mary (PRN 101108; LB 615), extending west to Station Avenue and Castle Road, to include the WHS aqueduct and viaduct.

4.19 The character of the Conservation Area is diverse resulting from the many influences over its history of development. The area within and around Church Street is largely commercial and has respected to a large degree its historic pattern. Other regions of the Conservation Area such as Castle Road and

Trevor Road are dominated by a sense of peace and tranquillity. Overall, the Conservation Area still reflects its original medieval plan.

- 4.20 Construction within the Conservation Area is predominantly in brick and sandstone. The latter is more prominent for prestigious structures such as the Church of Saint Mary (PRN 101108; LB 615). Chirk viaduct and aqueduct (PRN 102925; LB 618; DE175) are also constructed in yellow sandstone.
- 4.21 The topography of Chirk is defined by a flat plain enclosed by two ridges which give the area a sense of enclosure and views over the landscape which are constitutive of the setting of the Conservation Area. The Clywdian Range and the Dee Valley are located to the west whilst the Ceiriog Valley is found immediately south of Chirk.
- 4.22 The listed buildings located within the Conservation Area give distinctiveness to the village. Many act as landmarks and therefore provide key views of the Conservation Area. The Hand Hotel (LB 1298) and The Mount (LB 617) are good examples of this.

The Historic Landscape (Figure 6, 8)

- 4.23 The proposed development site does not fall within any Registered Historic Landscape. However, it is within the Essential Setting of the Pontcysyllte Aqueduct and Canal WHS (Figure 8). The latter is an extensive Buffer Zone which ensures that the site is protected and appreciated within its landscape setting.
- 4.24 Within the stretch running N/S west of Chirk, the WHS designation focuses on the ten-span aqueduct; a project completed by 1801 and seen as a complement to the parkland at Chirk Estate which includes the visual setting of the water meadows of the Ceiriog.
- 4.25 The Essential Setting includes Telford's embankment, the viaduct for the railway, an area of worker houses, the canal tunnels as well as Chirk Castle and its estate grounds. It is therefore characterised by the imprint of post-medieval developments which blend into the more rural landscape to the west; one replete with historic elements echoing the historic development of the area

from medieval times. The industrial complex within which Kronospan is located also forms part of the Essential Setting of the WHS within this stretch, although perhaps providing a negative visual impact on its picturesque surroundings.

- 4.26 The Registered Park and Garden of Chirk Castle – PGW (C) 63 is located within the search area. Some details regarding the castle itself have been presented when outlining the history of development of Chirk.
- 4.27 Its origins date to the 14th century with the Mortimer family who built the castle and the associated deer park. It is known that by 1391 the park included 10 acres of woodland.
- 4.28 By the Civil War, the Myddelton's cleared the woods, and it was only during the Restoration Period when replanting occurred again. In 1675, the park was extended to hold a further 500 deer.
- 4.29 A depiction of the park exists and dates to 1742. The depiction documents a baroque formal garden. This layout was superseded by changes dating to 1760. The remnants of the baroque layout are still found on the park southern road (now a drive) and the lake.
- 4.30 A new scheme was carried out by William Emes for Richard Myddleton. His work includes the ha-ha around the garden, creating a large bank to obscure views of the park for passing travellers, and an icehouse among other elements. Subsequent developments such as oak planting during the 1800s and 1950s gave shape to the Registered Garden as seen today.
- 4.31 The eastern side of the registered park gently slopes down to the east from the castle, with its boundaries close to the canal. A number of wooded areas such as Deershed Wood protect views from the estate to the industrial complex. Yet the impact of the latter on the setting of the Registered Park is indisputable. It is significant to note that the eastern areas of the park are also included within the WHS Essential Setting.

5. Map Regression

Tithe map of the parish of Chirk in the County of Denbigh 1839 (Figure 6)

- 5.1 By 1839, the area currently occupied by Kronospan was defined by a series of medium size fields with some evidence for parliamentary enclosure as suggested by the combination of irregular and straight boundaries. These fields are largely associated with farms owned by Charlotte Myddleton, daughter of Richard Middleton of Chirk Castle.
- 5.2 Llangollen canal is already depicted to the west of the proposed site at this time – plot 775 – and defined as canal and slopes of plantations from Fradley Wharf above Chirk tunnel. The railway to the east of the canal was not yet constructed, however, Telford's Road is already depicted running N/S, east of the proposed development.

OS County Series 1874 1.2500

- 5.3 This map edition documents several notable changes. Within the area currently occupied by Kronospan, the fields, with a few exceptions, remain identical. The wooded area to the north of the proposed Warehouse Extension is at this point labelled as 'Chirk Green'. Furthermore, following the road that crosses the present A5 to the east, leads to a Methodist chapel adjacent to Plas y Waen.
- 5.4 This map edition depicts the route of the Great Western Railway following the eastern bank of the canal. Chirk Station was open in 1848. Initially horses hauled the trains on the narrow gauge of the Glyn Walley. By 1873, the tramway was used to move goods such as slate and granite from the nearby quarries. It however became a passenger train by 1874. The trams were exchanged for steam locomotives by 1888.

OS County Series 1892 1.2500

- 5.5 The most significant change observed on this map edition relates to Glyn Valley Tramway. A series of sidings offshoot from the railway running toward Chirk Green – at this point labelled Maes-Gwyn wood. The sidings then turn SE toward Brynkinalt colliery. The latter is surrounded by worker houses and other structures of industrial nature.

OS plan 1963

- 5.6 From the 1890 to the 1960, the only changes observed within the examined area correspond to the development of Chirk. By the 1960s, the tramways and sidings are labelled as disused and the area surrounding the former colliery has expanded substantially.

6. Aerial Photographs and Lidar

Aerial Photographs

- 6.1 Aerial photographs from 1970 to the present day have been examined, the full list of examined photographs is included in the bibliography.
- 6.2 1971 71127 OS71-478 431: this is a black and white vertical photograph centred in the area nowadays occupied by the factory complex. The picture documents the factory nowadays owned by Mendelez, Chirk, bounded by the former railway and Llangollen Canal. A series of woodland and other natural features belonging to Chirk Castle grounds are observed further west. Furthermore, the former sidings providing movement from and to the railway and the colliery are still visible on the ground to the north of the complex.
- 6.3 1973 7370 OS 73_220 004: this is a black and white vertical photograph taken at a high altitude. It therefore not only documents the setting of the factory but also its surroundings, including Chirk Castle and Chirk itself. This image documents the main building at Kronospan, established in 1972.
- 6.4 1985 8534 JAS 5484 067: this is a black and white vertical photograph also taken at a high altitude. No major changes are observed other than the expansion of the Kronospan main structure. A similar situation is observed in all other subsequent images of the site.

LiDAR (Figure 7)

- 6.5 LiDAR 1m DTM was processed (Hillshade) for this report (Figure 7). The position of the silos and extension overlaps the position of current spoil heaps. No features of archaeological significance were observed during the

examination of the processed image.

7. Site Visit (Plates 1-5; Figures 11-12)

- 7.1 A site visit was undertaken on the 30th of March 2022. Conditions were dry and visibility was good.
- 7.2 The area proposed for the development fits within the current location of existing silos which is defined within a patch surrounded by processing plants and compounds for wood storage. To the west lies the site boundary and beyond the railway and Llangollen Canal (Plates 1-5). From the location of the site, it is not possible to observe the canal as it is in a lower position. The canal is also protected by woodland at either side of it. Yet, both the ZTV model and the site visit establishes some views of the silos and the extension from Chirk Registered Park and Garden.
- 7.3 An examination of the possible impact that the proposed development may have over Chirk Conservation Area was also carried out. Overall, as noted within the Chirk Conservation Area Character Assessment and Management Plan (2014), the factories are dominant features within the landscape and detract from views into the Conservation Area when travelling to it from the north. It is worth noting however that the subsequent planting of green infrastructure has obstructed views of the factory with treelines and grassed bunds bounding the complex to the east along the B5070. It is anticipated that the proposed development will not trigger any new impact than that which already exists. Chirk Aqueduct and Viaduct were also visited. No clear views of the proposed development are available from this region.

8. Impact Assessment

Assessment of Archaeological Potential and Importance

- 8.1 The proposed development lies within a large industrial complex mainly occupied by the works at Kronospan. The latter dominates the landscape, one which is defined by a mix of rural and urban areas.
- 8.2 The proposed development site and its associated industrial complex is

surrounded by a landscape heavily imprinted by past human activity going back to at least medieval chronologies. These remains not only help record the history of development of Chirk and its surroundings but, given their integrity and significance, are key to the constitution of the landscape character of the area. This landscape and its attributes are protected with a number of designations which, at times overlap and act to protect the sense of place.

- 8.3 The proposed development is circumscribed by two Registered Parks and Gardens – PGW (C) 15 and 63 – by Chirk Conservation Area, and by the World Heritage Site canal and aqueduct. What is more significant, these designations are also contained within the WHS Essential Setting. The protection of the latter is of utmost importance as it ensures that the WHS is appreciated in its landscape setting. The proposed development falls within the buffer of the WHS.

Previous Impacts

- 8.4 The proposed development site is located adjacent to the main factory, and its development will add additional silos to those already present on site. The area selected for development is currently occupied by other large silos and has done so since 2018, according to Google Earth. Prior to this the area was in use as a storage area for wood products from at least 2006. Examination of cartographic sources note that these areas were associated to Maes Gwyn farm prior the 1970s. Notwithstanding, it is assumed that even the undeveloped regions of the plot may have been impacted by subsurface services associated with the main factory.
- 8.5 It is also significant to highlight the presence of previous indirect impacts associated with the arrival of the Kronospan and Mondelez factories. This is highlighted on the Chirk Conservation Area and Character Assessment Management Plan (2014) which states that ‘the continued investment and growth in both industries has helped support the town, however the huge height and scale of the factories has unfortunately detracted from the wider landscape setting of Chirk and impacts significantly on the approach into the

Conservation Area’.

Proposed Development

8.6 Figure 9-10 outlines details of the proposed development. The proposed development is located immediately northeast from the main factory. It involves the construction of three silos north of the proposed extension to the chip preparation building and two larger chip silos to the northeast along with ancillary high level conveyor and bucket elevator.

Possible Impacts on non-designated assets

8.7 No recorded sites fall within the proposed development area. As noted, a small portion of the site has remained undeveloped. However, the possibility of encountering subsurface remains during groundworks seems unlikely given its proximity to a large factory.

8.8 It is significant to note that the proposed development might impact on the former sidings running alongside the former railway and canal. The sidings are considered of local – therefore Medium – value and the magnitude of the impact, if physically impacted may be considered Minor.

Possible Impacts on scheduled monuments

8.9 One Scheduled Monument is located within the search area: Llangollen canal (DE175). The value of this asset is Very High. However, the proposed development will not directly or visually affect these assets. It is important however to consider the levels of noise that this infrastructure may trigger comparing them to the current acoustic pollution exerted by the complex on the canal. Overall, while falling within the Setting of a WHS, the proposed development only adds to an already large industrial complex.

Possible Impacts on listed buildings

8.10 21 listed buildings are located within the search area. Thirty-two listed structures lie within Chirk Conservation Area. The listed structures are largely protected from views toward the site by existing tree cover delimiting the factory area. Nevertheless, slight views may be gained when viewing the site from the SE edges of the development. The magnitude of the impact is lessened when considering that the proposed development is implanted

within a larger industrial complex.

Possible impacts on Historic Landscapes

- 8.11 Chirk Castle Registered Park and Garden is considered of High Value and both the site visit and the ZTV model prepared for this report indicate that the highest areas of the silos and the building extension will be seen from certain areas of the park.
- 8.12 Once again, given the position of the proposed development within an industrial complex, the development will be observed against an already heavily impacted landscape. Further understandings of the impacts that the proposed development may have over the asset may be considered with the production of a Setting Assessment. The latter may be able to quantify the impact that all proposed developments within the industrial complex will have on the Registered Park and Garden which is, in turn, part of the Setting of the WHS.

9. Mitigation and conclusion

- 9.1 The present DBA has assessed the impact that the proposed development may have on the archaeological /historic resource. During the production of the report, it has become clear that the industrial estate within which Kronospan is included is circumscribed by a cultural landscape of utmost importance which runs from medieval to post medieval chronologies.
- 9.2 This landscape helps to constitute the Essential Setting from which the WHS is experienced in and around Chirk, and therefore its integrity should be protected.
- 9.3 The proposed development will have a very slight to negligible impact on the Essential Setting of the WHS. This is because it is located within an area already heavily developed and also because its design will be in keeping with the pre-existing industrial character of the Kronospan site as a whole.

10. Sources

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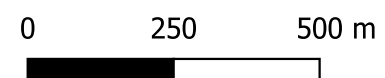
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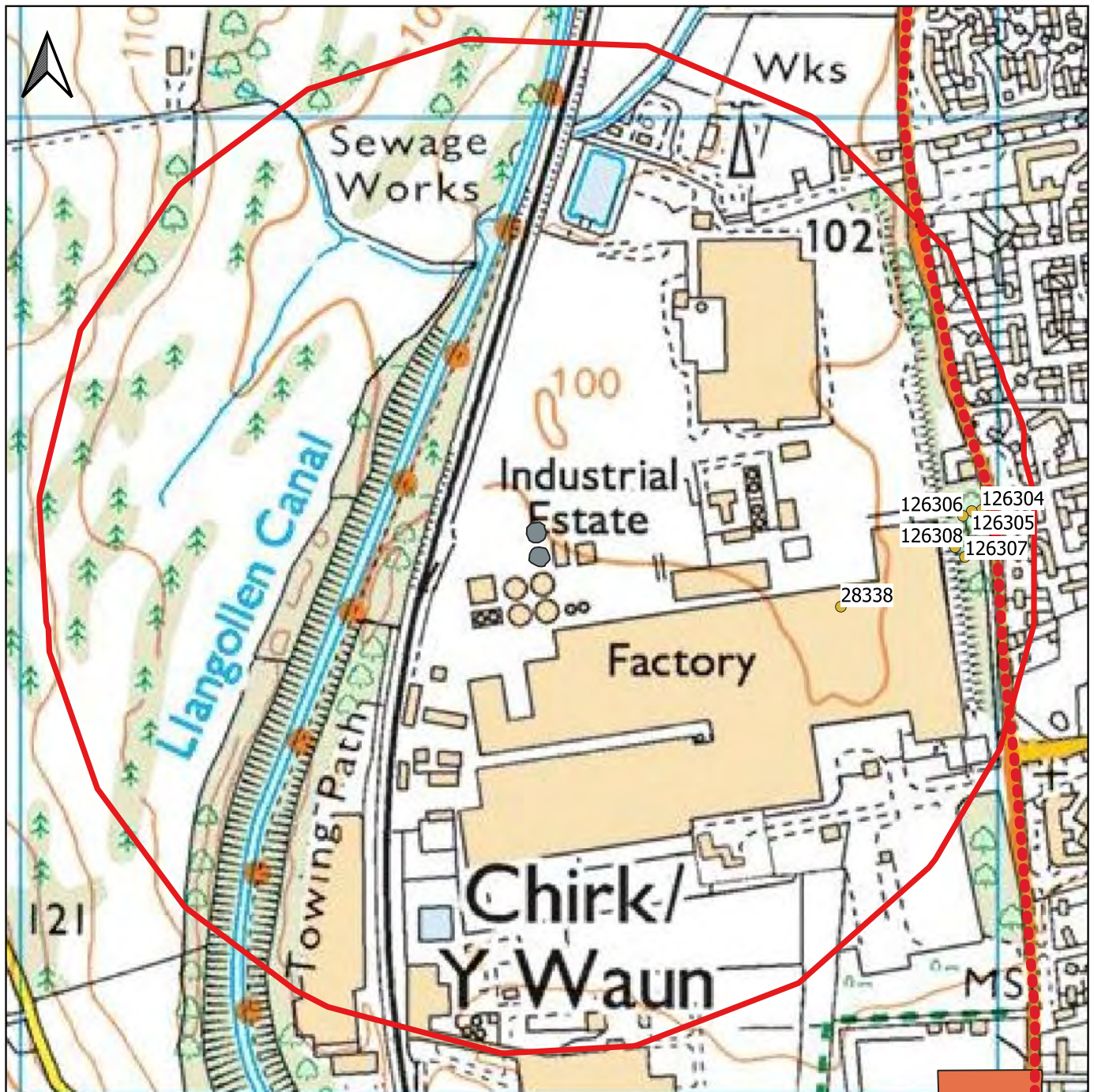




Figure 1. Site Location.



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0 500 m

Figure 3. HER within assessment area.

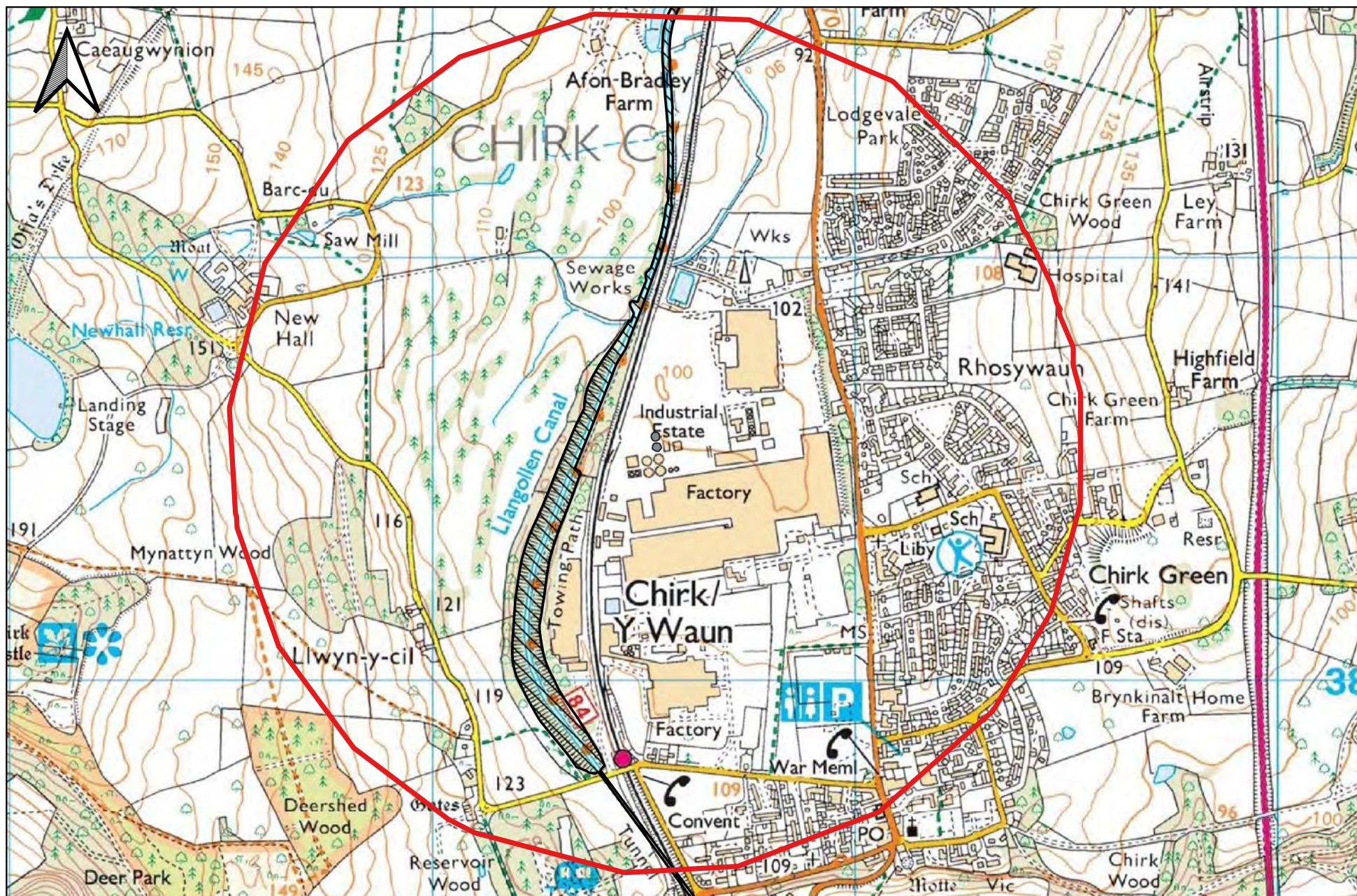
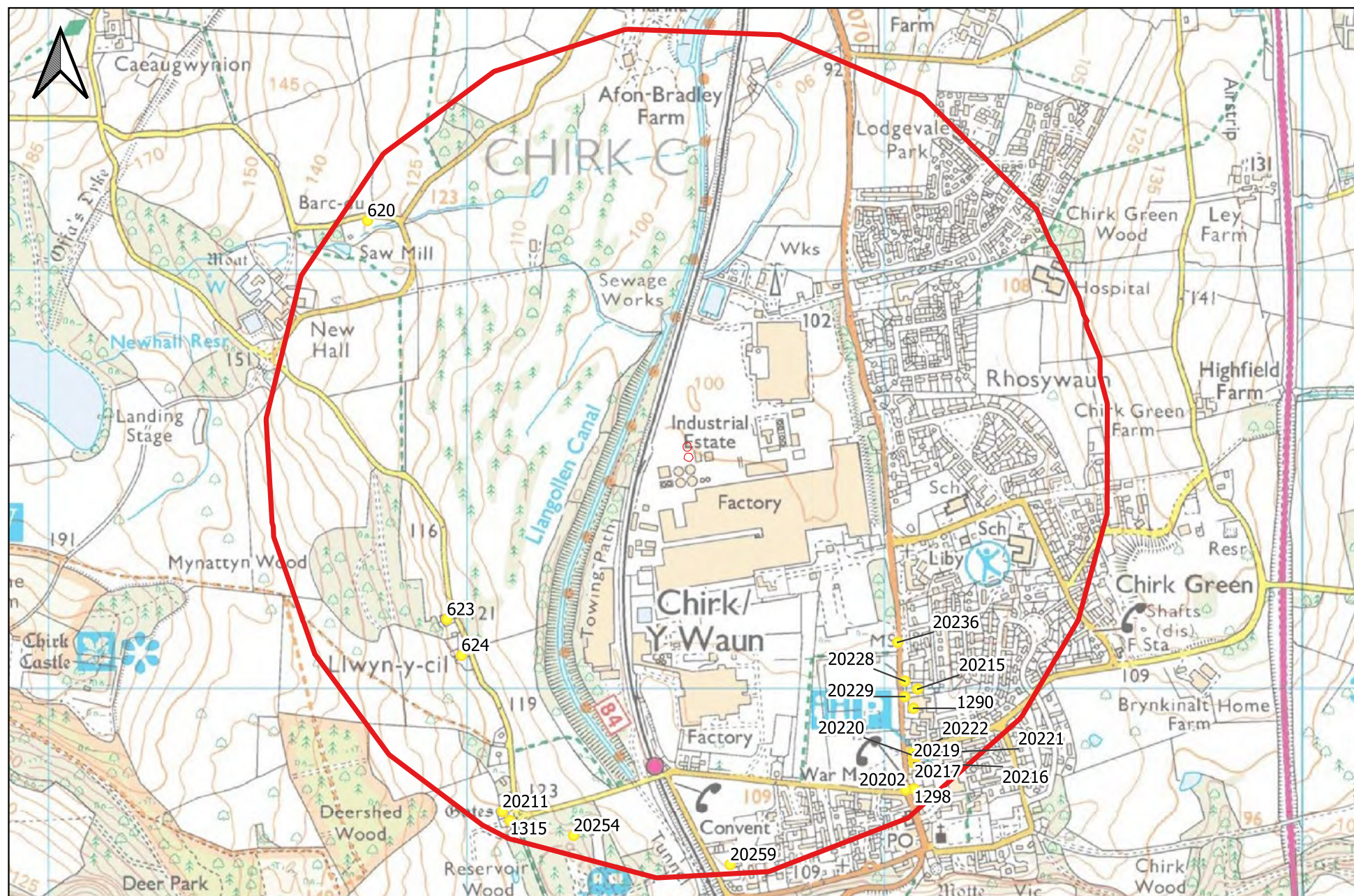
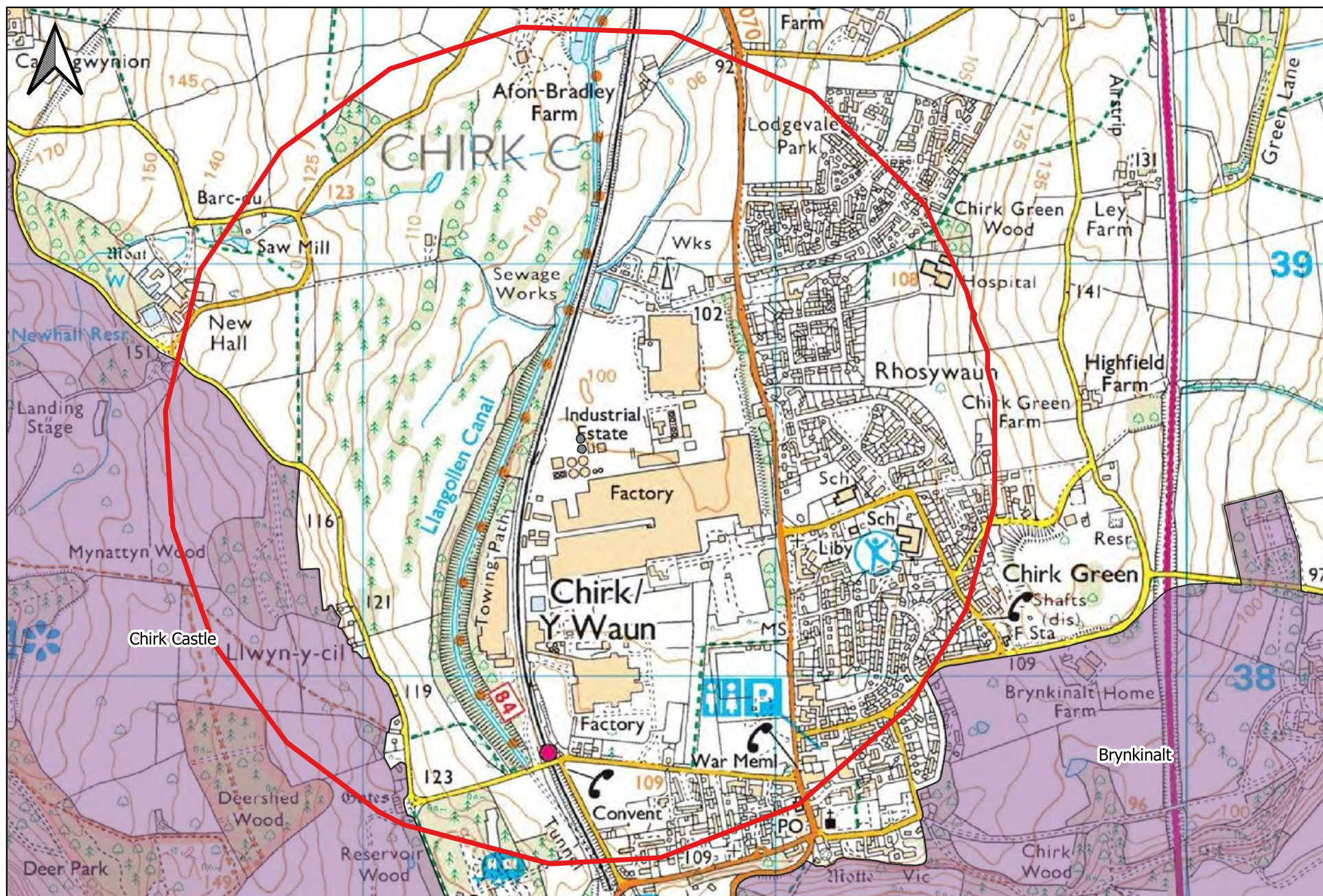


Figure 4. SM within assessment area.



0 250 500 m

Figure 5. Listed Buildings within assessment area.



0 250 500 m

Figure 6. Registered Parks and Gardens within assessment area.

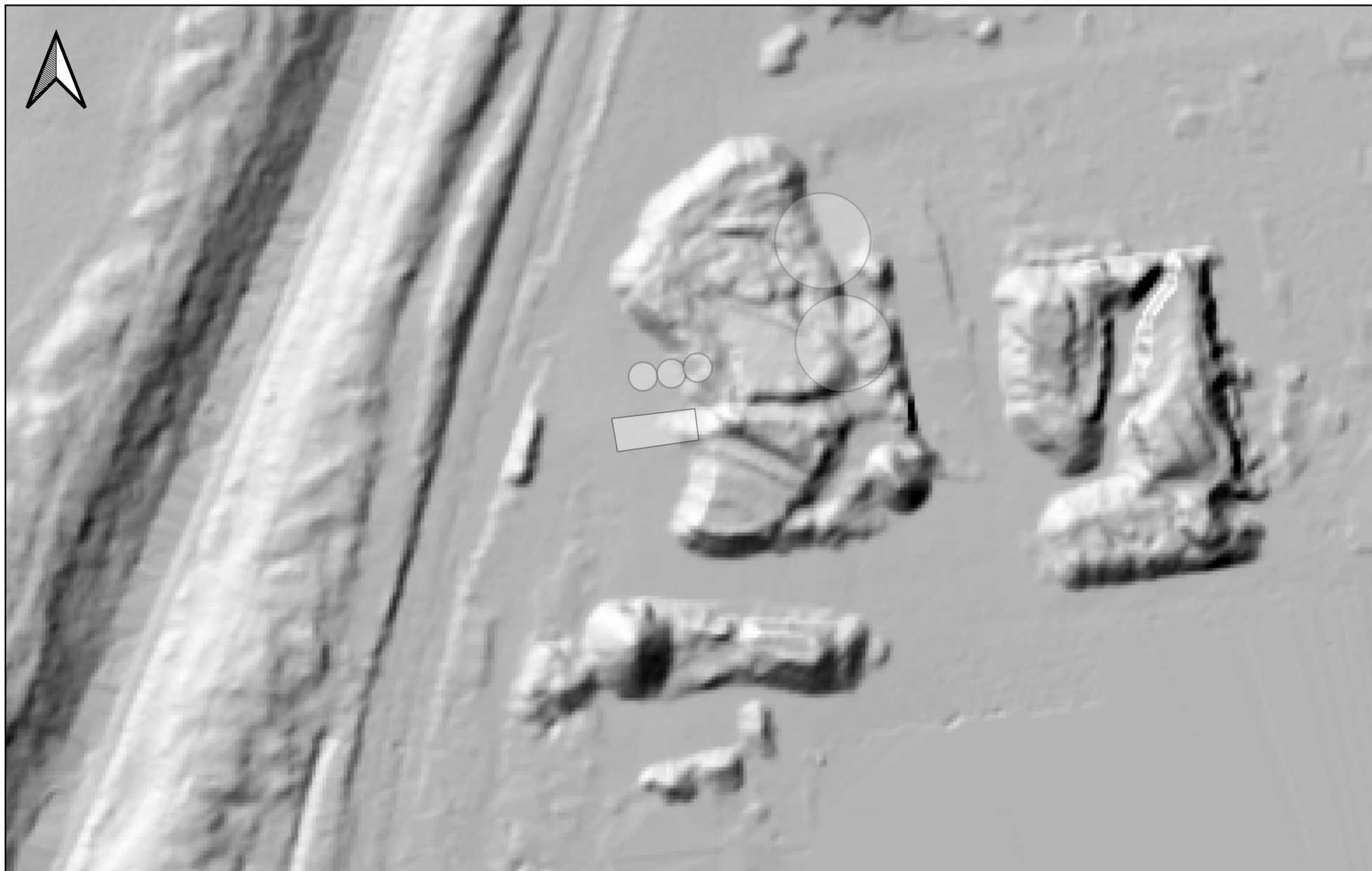


Figure 7. LiDAR 1m DSM Hillshade (development in grey).

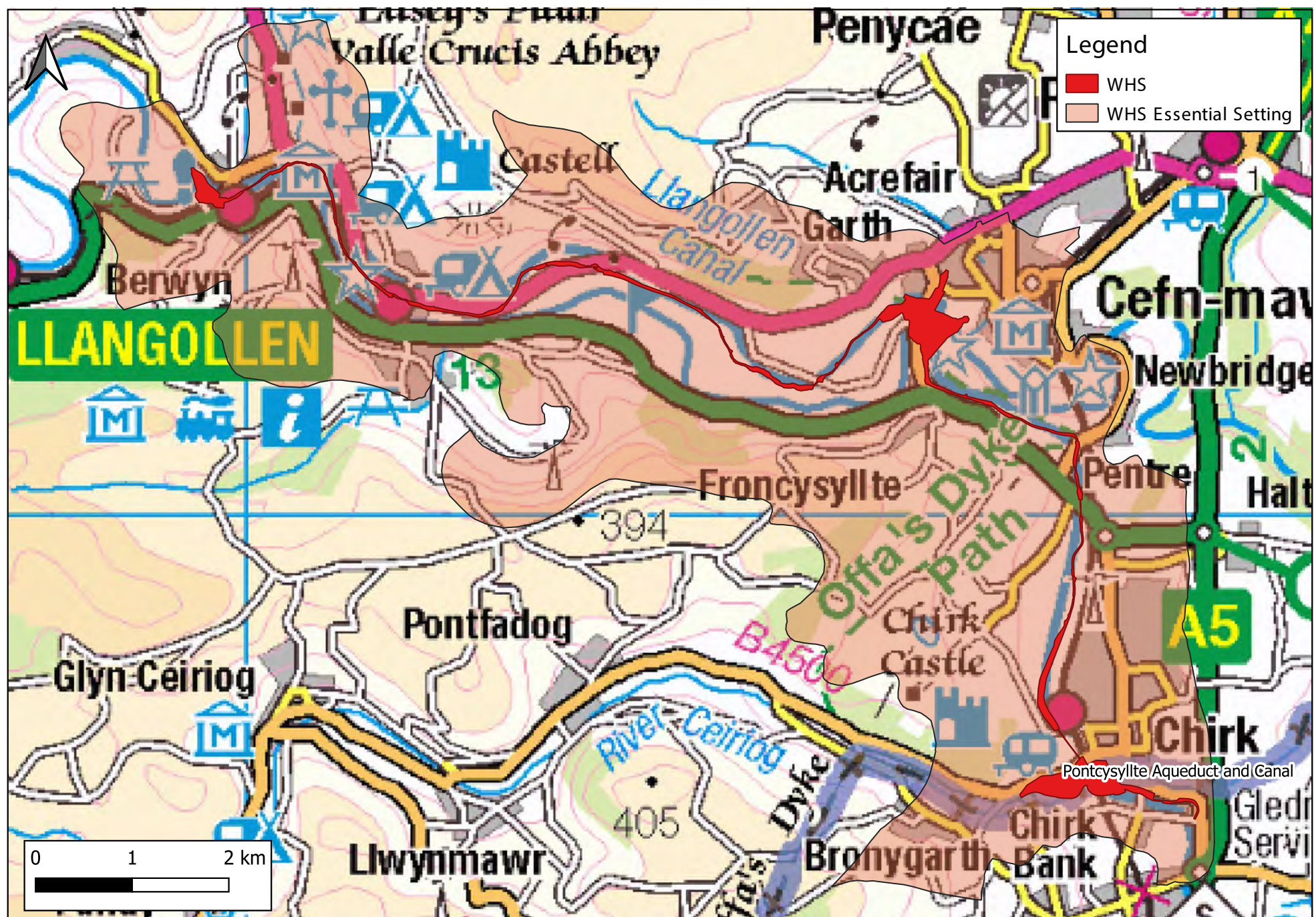


Figure 8. WHS and Essential Setting.