Archaeoleg Brython Archaeology

Desk Based Assessment
Hirael Flood Alleviation Scheme

Document Number B2004.DBA.01.01

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Hirael Flood Alleviation Scheme

Desk Based Assessment

Prepared for
Ymgynghoriaeth Gwynedd Consultancy

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March 2020 (edited May 2021)

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Contents

Crynodeb

Mae Ymgynghoriaeth Gwynedd Consultancy wedi comisiynu Archaeoleg Brython i gwblhau asesiad ben-desk ar gyfer cynllun arfaethedig lliniaru llifogydd yn ardal Hirael ym Mangor, Gwynedd. Mae sawl opsiwn ar gyfer y cynllun gyda phob un yn adeiladu wal arfordirol rhwng maes parcio Ffordd y Traeth a gorsaf bwmpio afon Adda a llecyn byr ger Teras Glyndŵr. Mae opsiynau hefyd i godi maes parcio Ffordd y Traeth neu adeiladu wal llifogydd ar ochr ddeheuol y maes parcio.

Er bod cynlluniau manwl heb gael eu creu mae'r asesiad yn dangos ni fydd y datblygiad yn cael effaith negyddol sylweddol ar asedau treftadaeth.

Mae'n bosib bod llecyn o'r wal arfordirol bresennol yn gysylltiedig ag Iard Goed a Gof sydd ar fapiau Arolwg Ordnans cynnar, dylai cofnodi'r wal cyn unrhyw ddatblygiad. Dylir hefyd gofnodi silindrau gwth-goresgyniad yn y wal cyn unrhyw ddatblygiad. Mae'n debyg i goeden ffigys ar y safle gael ei phlannu gan garcharorion rhyfel Eidaleg, dylir cadw neu ail leoli'r goeden, gellir hefyd ddefnyddio toriadau o'r goeden i blannu fel rhan o'r datblygiad.

Bu'r cynllun yn cael effaith negyddol cymedrol ar Rif 8 Ffordd y Traeth, Adeilad Rhestredig Gradd II, ac effaith negyddol bach (slight) ar Adeiladau Rhestredig Gradd II yn Ffordd Seiriol a'r Doc Newydd sy'n Adeilad Rhestredig Gradd II.*

Bu'r cynllun yn cael effaith bositif ar unrhyw Adeiladau Rhestredig mewn ardaloedd lle bu'r risg o lifogydd yn gostwng.

Ar y cyfan ni fysai'r datblygiad yn cael effaith negyddol sylweddol ar unrhyw asedau treftadaeth. Gellir defnyddio'r goeden ffigys a'r silindrau gwrth-goresgyniad i godi ymwybyddiaeth o hanes diweddar y safle.

Summary

Ymgynghoriaeth Gwynedd Consultancy have commissioned Brython Archaeology to undertake a desk-based assessment for a flood alleviation scheme for the Hirael area of Bangor, Gwynedd. Several options are being considered for the scheme all of which involve the construction of a new coastal wall between the Beach Road car park and the Afon Adda pumping station, and a short stretch near Glyndŵr Terrace. There are also options to raise the level of the Beach Road car park or build a flood defence wall to the south of the car park.

Although detailed designs have not been prepared the assessment shows that the development would not have a significant negative effect on any heritage assets.

It is possible that part of the current coastal wall is associated with a Smithy and Timber Yard shown on early Ordnance Survey maps and should be recorded in advance of development. Re-utilised WWII anti-invasion cylinders within the coastal wall should also be recorded in advance of development. A fig tree, likely to have been planted by Italian Prisoners of War, should be retained or relocated, alternatively cuttings could be used in planting associated with the scheme.

The development would have a moderate negative effect on No.8 Beach Road, a Grade II Listed Building, and a slight negative impact on Grade II Listed Buildings at Seiriol Road and New Dock which is listed at Grade II.*

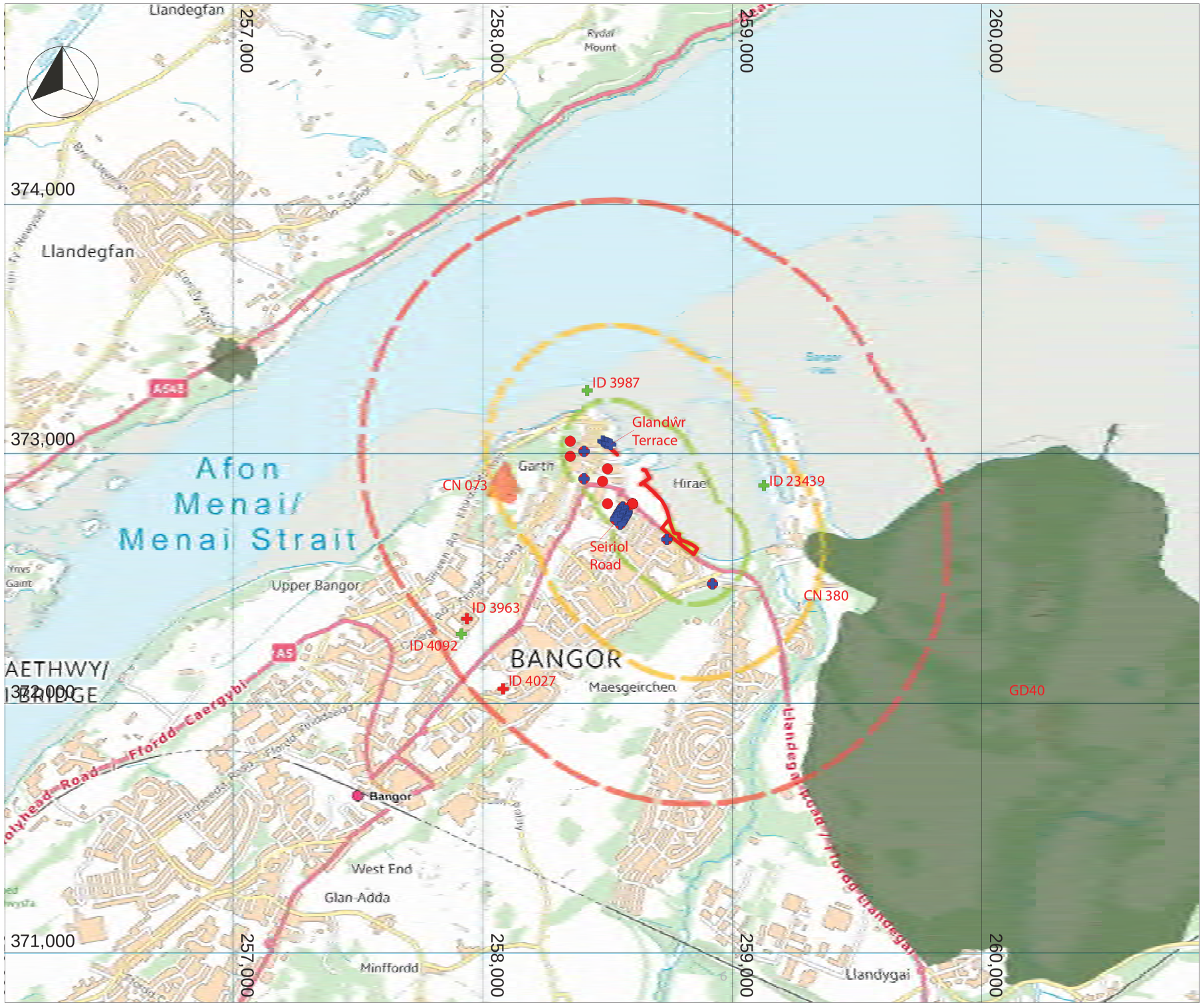
The development would have a positive impact on any Listed Buildings in areas where the risk of flooding was reduced.

On the whole the development would not have a significant negative impact on any heritage assets. Both the fig tree and anti-invasion cylinders could be utilised to increase awareness of the recent history of the area.

1 Introduction

Archaeoleg Brython Archaeolgy Cyf. (ABA) have been commissioned by Ymgynghoriaeth Gwynedd Consultancy (YGC) to undertake a Desk Based Assessment (DBA) to inform the development of a proposed flood alleviation scheme at Hirael, Bangor (See Figure 1). The development is currently at the design stage and multiple options are still under consideration, the scale of the current proposals mean that the likely impact to identified Heritage Assets would be similar with all options.

The assessment has been prepared to meet the relevant standards of the Chartered Institute for Archaeologists, the scope of the assessment was discussed with Gwynedd Archaeological Planning Service (GAPS), the archaeological curators for Gwynedd.



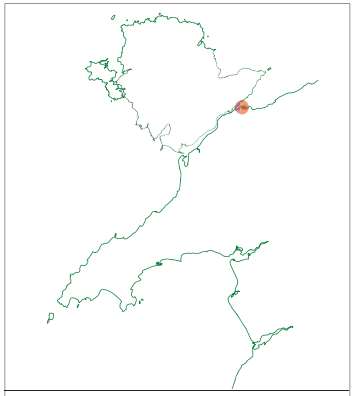


Figure 1
Location plan showing proposed development, 1km, 500m and 200m buffer zones and assessed assets.
Grid: 1000m

Key

- Proposed Development
- 200m Buffer Zone
- 500m Buffer Zone
- 1km Buffer Zone
- Scheduled Ancient Monument
- Registered Parks & Gardens
- Listed Building Grade I
- Listed Building Grade II*
- Listed Building Grade II
- HER Site

Drawn By:	IGP
Date:	18/02/2020
Location:	SH58687280
Project:	AB2004

Archaeoleg Brython Archaeology

2 Methodology

2.1 Desk Based Research

The purpose of this DBA is to trace the development of the area and determine the potential for unknown archaeology by assessing available sources. The repositories consulted for this assessment were:

- Gwynedd Historical Environment Record, Craig Beuno, Ffordd Garth, Bangor, Gwynedd LL57 2RT
- Coflein.gov.uk – Online database of the National Monuments Record of Wales (NMRW)
- Lle.gov.wales – Geo-portal for government data including Natural Resources Wales LiDAR data
- National Library of Wales, Aberystwyth

After an initial search of the recorded archaeology within 1km of the proposed development area it was decided that research should focus on three buffer zones:

- All recorded assets within a 200m buffer of the proposed development area were assessed for potential impact. Where necessary mitigation measures are suggested.
- A brief assessment was undertaken of all Grade II Listed Buildings and undesignated assets within a 500m buffer of the proposed development.
- High value designated assets within a 1km buffer of the proposed development boundary were assessed for potential impact. These include Scheduled Ancient Monuments, Listed Buildings at Grade I or II* and Registered Parks and Gardens. Where necessary mitigation measures are suggested.

2.2 Walkover Survey

The site was visited to determine whether any evidence of assets identified during the desk based research were present and to identify any previously unrecorded assets which may have been present. Photographs were taken as a record of the site and of individual features of interest.

2.3 Assessment of Value and Impact

The value and importance of each identified heritage asset has been determined by assessing against the criteria in Table 1.

Table 1: Criteria for assessing the value of heritage assets

Value	Definition
Very High *(International)*	• World Heritage Sites *(including nominated sites)* • Assets acknowledged of having international importance • Assets that can contribute significantly to acknowledged international research objectives
High *(National)*	• Scheduled Ancient Monuments (SAM) *(including proposed sites)* • Grade I and Grade II* Listed Buildings *(including proposed sites)* • Unscheduled sites which are of schedulable importance or quality • Unlisted buildings and some Grade II Listed Buildings which are of a standard or importance to warrant listing at Grade I or Grade II* • Historic Landscapes of outstanding interest *(including designated and undesignated)*
Medium *(Regional)*	• Grade II Listed Buildings *(including proposed sites)* • Archaeological sites which are not schedulable but are of regional importance • Buildings which fulfil the criteria for listing at Grade II • Designated special historic landscapes or those worthy of designation
Low *(Local)*	• Components of the historic environment which help define local distinctiveness and character *(including features such as walls, gateposts, tracks etc.)* • 'Locally Listed' buildings • Historic (unlisted) buildings of modest quality or historic association • Historic landscapes of local interest
Negligible	• Sites of minor importance • Sites which have been so badly damaged that not enough remains to justify their inclusion in a higher category • Buildings of no architectural or historical note or buildings of an intrusive character • Landscapes with little or no significant historic interest
Unknown	• Sites or features whose character, importance or location is undetermined • Includes unevaluated buried archaeology • Sites in this category will be allocated a value category from Very High to Negligible following evaluation

The likely impact of the proposed development on each identified heritage asset has been estimated using the assessment criteria for magnitude of impacts stated in Table 2.

Table 2: Criteria for the assessment of magnitude of impact

Magnitude	Definition
Major	• Change to most or all of the key archaeological materials or historical building elements such as the resource is totally altered • Comprehensive changes to setting
Moderate	• Changes to many key archaeological materials or historic building elements, such as the resource is clearly modified • Considerable changes to the setting that affect the character of the asset
Minor	• Changes to key archaeological materials or historic building elements, such as the asset is slightly altered • Slight changes to setting
Negligible	• Minor changes to archaeological materials, historic building elements or setting
No Change	• No change

The significance of effect is determined by considering the archaeological and historical importance of the asset and the magnitude of the impact upon it, this is done using the matrix in Table 3.

Table 3: Significance of Effect Matrix

	Cultural Asset Value				
Magnitude of Impact	**Negligible**	**Low (Local)**	**Medium (Regional)**	**High (National)**	**Very High (International)**
Major Change	*Slight*	*Slight/ Moderate*	*Moderate/ Large*	*Large/ Very Large*	*Very Large*
Moderate Change	*Neutral/ Slight*	*Slight*	*Moderate*	*Moderate/ Large*	*Large/ Very Large*
Minor Change	*Neutral/ Slight*	*Neutral/ Slight*	*Slight*	*Moderate/ Slight*	*Moderate/ Large*
Negligible Change	*Neutral*	*Neutral/ Slight*	*Neutral/ Slight*	*Slight*	*Slight*
No Change	*Neutral*	*Neutral*	*Neutral*	*Neutral*	*Neutral*

2.4 Recommended Mitigation

The most appropriate methods of mitigation for each identified asset will be determined to minimise adverse impact, where direct impact is unavoidable the mitigation will aim to gather the maximum amount of information. The offsetting of negative impacts with compensatory measures may also be considered suitable options in some circumstances.

3 Background

3.1 Project Background

The Hirael area of Bangor has historically been known to be prone to flooding. In 2008 a scheme to reduce the risk of flooding by increasing the capacity, repairing and replacing large sections of the Afon Adda culvert was completed. The current scheme would work alongside the culvert to reduce the risk of flooding from tidal and storm events.

Several options are currently under consideration. All options include the construction of a coastal wall around the pumping station to the south of the Afon Adda outfall, a short section of coastal wall south east of Glandŵr Terrace, and a retaining wall along the coastal edge of King George's (Beach Road) Playing Field.

Option 3 involves constructing an additional coastal wall from SH58737277, along the Beach Road car park and park to SH58857262.

Option 4 involves the construction of raised flood defence walls and flood gate south of the Beach Road car park.

Option 5 involves the raising of the Beach Road car park.

The information presented in this assessment will be reviewed once the final design of the scheme has been confirmed.

3.2 Topographic Description

The proposed development area is located at the coastal edge of Hirael between the mouths of Afon Adda to the west and Afon Cegin to the east. The ground raises towards Garth to the west and Penrhyn to the east, the low-lying residential area of Hirael is located immediately southwest beyond which is the historic centre of Bangor. The proposed development area is within the Bangor Historic Landscape Character area.

3.3 Geology

The British Geological Survey's Geology of Britain Viewer shows that the superficial deposits consist of unclassified coastal zone deposits of sand, silt and clay which formed up to 2 million years ago during the Quaternary Period. The underlying bedrock consists of sedimentary siltstone of the Nant Ffrancon Subgroup which formed in shallow seas approximately 449 to 478 million years ago during the Ordovician Period.

3.4 Historical and Archaeological

The information presented below has been compiled and summarised from the information gained during the desk-based research and walkover.

3.4.1 Palaeolithic (500,000BC – 10,000BC)

No sites of Palaeolithic date are recorded in the vicinity of the scheme, the nearest sites dating from this period are found on the Great Orme in Llandudno approximately 20km to the north east.

3.4.2 Mesolithic (10,000BC – 4,000BC)

No sites of Mesolithic date are recorded in the vicinity of the scheme but a scattering of sites from this period have been recorded in the wider area. Until fairly recently the majority of identified Mesolithic sites in Gwynedd and Anglesey were coastal, a number of inland sites have now been discovered. At Pentwmpath, Llandygai, 2km south east, a pit (PRN 70047) was found to date to the

later Mesolithic and pits containing charcoal (PRN 59788) found during an archaeological evaluation in Penrhosgarnedd, 4km south west, were also found to date from this period.

Evidence of activity from this period is often in the form of flint scatters which are identified in areas of coastal erosion, the nearest examples are from Llanfaes on Anglesey (PRN 24148) approximately 5km to the north east.

Although sites of this period haven't been recorded in the immediate vicinity of the proposed development it is likely that groups of hunter gatherers would have been active in the area during this period.

3.4.3 Neolithic (4,000BC – 2,300BC)

Within the 500m study area evidence of Neolithic activity is represented by the findspot of a stone axe from Siliwen (PRN 32812) which was recorded in 2013. In the wider area a wealth of Neolithic activity was recorded before the construction of the Llandygai industrial estate in the 1960s. Features initially identified on aerial photographs and subsequently excavated included two henges and cursus monument, during excavation a Neolithic timber building was also identified. Further features from this period, including a second timber building were identified during the construction of the Parc Bryn Cegin site in the mid-2000s.

There is little to suggest that Neolithic archaeology would be present within the proposed development area but it is clear that there is extensive activity in the wider area during this period.

3.4.4 Bronze Age (2,300BC – 700BC)

One site dating to the Bronze Age lies within 500m of the proposed development. A collared urn (PRN 1973), dating to the Early Bronze Age, was discovered in a garden in Upper Garth Road in 1994. No other finds or features associated with the discovery were found.

In the wider area a burnt mound (PRN 24814) was discovered at Nantporth, approximately 1.7km south east, which included a trough with timber plank lining of ash and oak.

A number of features dating to the Bronze Age were also discovered during works at Parc Bryn Cegin, Llandygai. These included eight burnt mounds (PRN 31766, 31769, 31770, 31771, 31773, 31774, 31778, 31779), four earth ovens (PRN 31759, 31761, 31762, 31764), and a pit cluster (PRN 31756).

Finds of bronze palstaves, one from Maesgeirchen (PRN 2812) and a second from Llandygai (PRN 2317) are further evidence of activity in the wider area during the Bronze Age.

There is little to suggest that Bronze Age archaeology would be present in the proposed development area but the recorded archaeology in the wider area demonstrates extensive activity during this period.

3.4.5 Iron Age (700BC – 43AD)

None of the assets recorded within the 1km study area are attributed to the Iron Age.

The nearest sites dating from the Iron Age are again at Parc Bryn Cegin, Llandygai. During excavations at the site a number of roundhouses and settlement features were identified (PRN 31781, 31782, 31783, 31784). These features show that communities were active in the area during this period but there is no recorded evidence of such activity within the proposed development area.

3.4.6 Roman and Romano-British (43AD – 450AD)

One site, Pier Camp Hillfort (also known as Roman Camp) which is a Scheduled Ancient Monument (CN 073, PRN 2299), is attributed to the Roman period and is located within the 1km buffer of the development. The site is located approximately 500m west of the proposed development in the

Garth area of Bangor which is on high ground overlooking Hirael Bay. It is likely that the monument was once a rectangular enclosure measuring 43m x 30m, much of it has been lost to cultivation and later disturbance. In its present state the monument can be seen as a shale bank which has been largely reduced. As the site has never been excavated relatively little is known about it, the Roman date which is assumed for the monument is due to its form and the discovery of a coin of Constantius in the 1950s.

Although the definite route has not been identified, a Roman road from Caer Llugwy to Bangor (PRN 17819) could be located within 500m of the proposed development area. The projected line which is recorded in the HER suggests a route which terminates at Porth Penrhyn after traversing the south eastern side of Bangor Mountain.

Excavations at Llandygai during the 1960s and 2000s identified Romano-British activity. One of the Neolithic henges identified in the 1960s had been re-used as an enclosure for a Romano-British settlement which included two roundhouses and a number of possible four post structures (PRN 2312).

A cache of 235 blue and white annular beads and 19 red cylindrical beads (PRN 31785) dating to the Roman period were found in a small pit during the Parc Bryn Cegin excavations in the 2000s.

There is little to suggest that Roman archaeology would be present in the proposed development area but the recorded archaeology in the wider area demonstrates extensive activity during this period.

3.4.7 Early Medieval & Medieval (450AD – 1547AD)

No early medieval sites are recorded within 500m of the proposed development.

The first recorded church at Bangor was a Celtic clas which was established in 525AD and dedicated to St. Deiniol around 546AD. No evidence of the earliest church has been identified but other sites dating to the early medieval period are recorded within in the HER.

A curving gully or beam slot (PRN 74549) identified at Waterloo Street provided a C14 radiocarbon date of 540-769AD.

A coin hoard (PRN 2310) was discovered on Bangor High Street in 1894. The hoard contained a total of 13 Saxon and Arabic silver coins along with a fragment of a silver bracelet and fragment of silver ingot. The date of the coins suggest that they were buried around 925-930AD.

Two Saxon coins (PRN 2302) were also found near the cathedral in the Vicarage house garden in 1845, contemporary reports suggest that other similar coins had been found previously at the same site. It is likely that the coins were buried around 970AD.

Excavations in the centre of Bangor prior to the construction of the Deiniol Centre identified an early medieval burial ground (PRN 2371) containing 76 graves. A ditch and other features which had truncated some of the graves were dated to the 10th century which means that the graves themselves were earlier. It is likely that the graves were within the early monastic enclosure of Bangor.

Approximately 120m south west of the proposed development is the location of the medieval Dominican friary (PRN 2300). The date which the friary was established is not known but it is first referenced in 1251, it is generally thought that it was founded around 1250 and destroyed by fire during the Edwardian conflict in 1282-3. The friary was re-built around 1290 at a new site to the south west, it has been suggested that flooding may have been one of the reasons for relocation (GAT, 1991). In 1898-9 walls and graves were identified in sewer trenches being excavated at the north end of Seiriol Road.

The later friary (PRN 3181) was built approximately 350m south west of the first and is within 500m of the proposed development.

Within 500m of the proposed development is the alleged site of a castle (PRN 2301). It is said that Hugh d'Avarches, Earl of Chester built a castle at Bangor in the 11th century but the exact location is not known, a castle built at this time would have been a motte. The site recorded on the HER is on Bangor Mountain at a location which Pennant recorded in the late 18th century, the site was later described as 'entirely imaginary' by W. J. Hemp. It is possible that such a castle may have been located at Roman Camp (PRN 2299) but no evidence of a castle has been identified at the site.

Bangor Cathedral, which is a Grade I Listed Building (PRN 2305, ID 4027), is located approximately 900m south west of the proposed development. The cathedral has some of the oldest surviving cathedral foundations in Britain. The earliest part of the building, a fragmentary apse, is no longer visible but belongs to the church built by Bishop David (1120 – 1139). Bangor was burnt in 1211 and the cathedral was almost entirely rebuilt in the 13th and 14th centuries (Coflein, 2020). The building was extensively restored between 1870 and 1880 by Sir G. G. Scott.

Given the proximity of the Dominican Friary it is possible that associated features could be present within the development area. It is also possible that other previously unrecorded medieval archaeology could be present.

3.4.8 Post-Medieval and Modern (1547 AD – Present)

A number of post-medieval sites are recorded within 500m of the proposed development, many of which are Listed Buildings.

Glandŵr terrace, immediately north west of the proposed development, is a terrace of seven mid-19th century 3 storey brick-built houses which are all listed at Grade II. They are listed as they reflect the rise in middle class housing in Bangor during the mid-19th century, much of it due to the increase in maritime trade.

Seiriol Road, which lies approximately 120m to the south, comprises two rows of terraced houses which resulted from the work of the Bangor branch of the Christian Order in Politics, Economics and Citizenship (COPEC). The houses were designed by architect Herbert L North and built in 1927 by Richard Owen, all 20 houses in the terraces are listed at Grade II.

The portico of the former Penrhyn Arms, which is a Grade II Listed Building (PRN 12123, ID 4095), is located approximately 140m south east of the development. The Penrhyn Arms was a hotel built in 1799 but demolished in the late 1920s, it was the first home of the University College of North Wales between 1884 and 1926. It was demolished to allow the A5 to be re-routed.

Approximately 470m to the south west is the Cegin Viadauct, which is a Scheduled Ancient Monument (PRN 12143, CN 380). It is the believed to be the earliest example of a multi-arched railway bridge in the world. It was built between 1798 and 1800 to carry the Penrhyn quarry railroad.

The former Dickies boatyard site which is now home to 'Y Bae' residential development was the location of a ship building yard and slate works. Both were established in the mid-19th century and the slate works continued to operate until 1935 and Dickie's boatyard continued to operate on the shipyard until 2011.

Map regression shows the presence of a smithy and timber yard in the area which is now the Beach Road car park, although not marked by name on all editions of the maps the buildings are present from 1889 to 1953.

King George's field (or St. George's Field) which lies immediately south west of the proposed development was dedicated, like others all over the UK, to the memory of King George V following

his death in 1936. During the second World War the site was used as a military camp for both British and American troops before being converted to a camp for Italian prisoners of war. The layout of the camp can be seen on the 1953 Ordnance Survey map.

It is possible that archaeological features associated with the post-medieval activity at the site could be encountered during the works.

4 Results

4.1 Map Regression

The proposed development area is not included on the Bangor Tithe map.

A Penrhyn Estate Map of 1867 shows a timber yard at the current location of the Beach Road car park but no buildings are shown on the site.

The following editions of the Ordnance Survey Anglesey XIX.NE 6 inch maps were consulted to assess the development of the site from the late 19th century:

- 1st Edition, Surveyed 1887-1888, Published 1889 *(Figure 3)*
- 2nd Edition, Surveyed 1899, Published 1901
- 3rd Edition, Surveyed 1913, Published 1920 *(Figure 4)*
- 4th Edition, Surveyed 1949, Published 1953

Lewis's Pier, which is associated with the ship building yard, is not present on the 1st edition map of 1889 but is shown on all subsequent editions.

The following editions of the Ordnance Survey Anglesey XIX.SE 6 inch maps were consulted to assess the development of the site from the late 19th century:

- 1st Edition, Surveyed 1887-1888, Published 1889 *(Figure 3)*
- 2nd Edition, Surveyed 1899, Published 1901
- 3rd Edition, Surveyed 1913, Published 1920 *(Figure 4)*
- 4th Edition, Surveyed 1938, Published 1948
- 5th Edition, Surveyed 1949, Published 1953

Smithy and timber yard are shown at the current location of the Beach Road car park from 1887 to 1948 but do not appear on the 1953 edition.

There is a notable difference in the location of the shoreline between 1887 and 1920 suggesting that land reclamation was taking place. There is no dramatic change in the shoreline between 1920 and 1953, it is clear that further land reclamation has occurred since 1953.

The current street layout of Hirael, including Orme Road and Seiriol Road can be seen on the 2nd edition map of 1901. Development of the buildings can be seen on subsequent editions.

A slipway appears to the west of the Beach Road car park area on the 3rd edition map of 1920 and remains on all subsequent editions, it is not included on current maps.

The wartime layout of the military and prisoner of war cam can be seen on the 5th edition of 1953.

Figure 2
Plan of proposed development showing location of HER sites and Grade II Listed buildings within 200m. High Value assets also shown. Grid: 250m

Key

- Proposed Development
- 200m Buffer Zone
- 500m Buffer Zone
- Scheduled Ancient Monument
- Registered Parks & Gardens
- Listed Building Grade II*
- Listed Building Grade II
- HER Site
- Unrecorded Site
- Approximate location of anti-invasion cylinders

Drawn By: IGP

Date: 18/02/2020 (edit 31/05/2021)

Location: SH58687280

Project: AB2004

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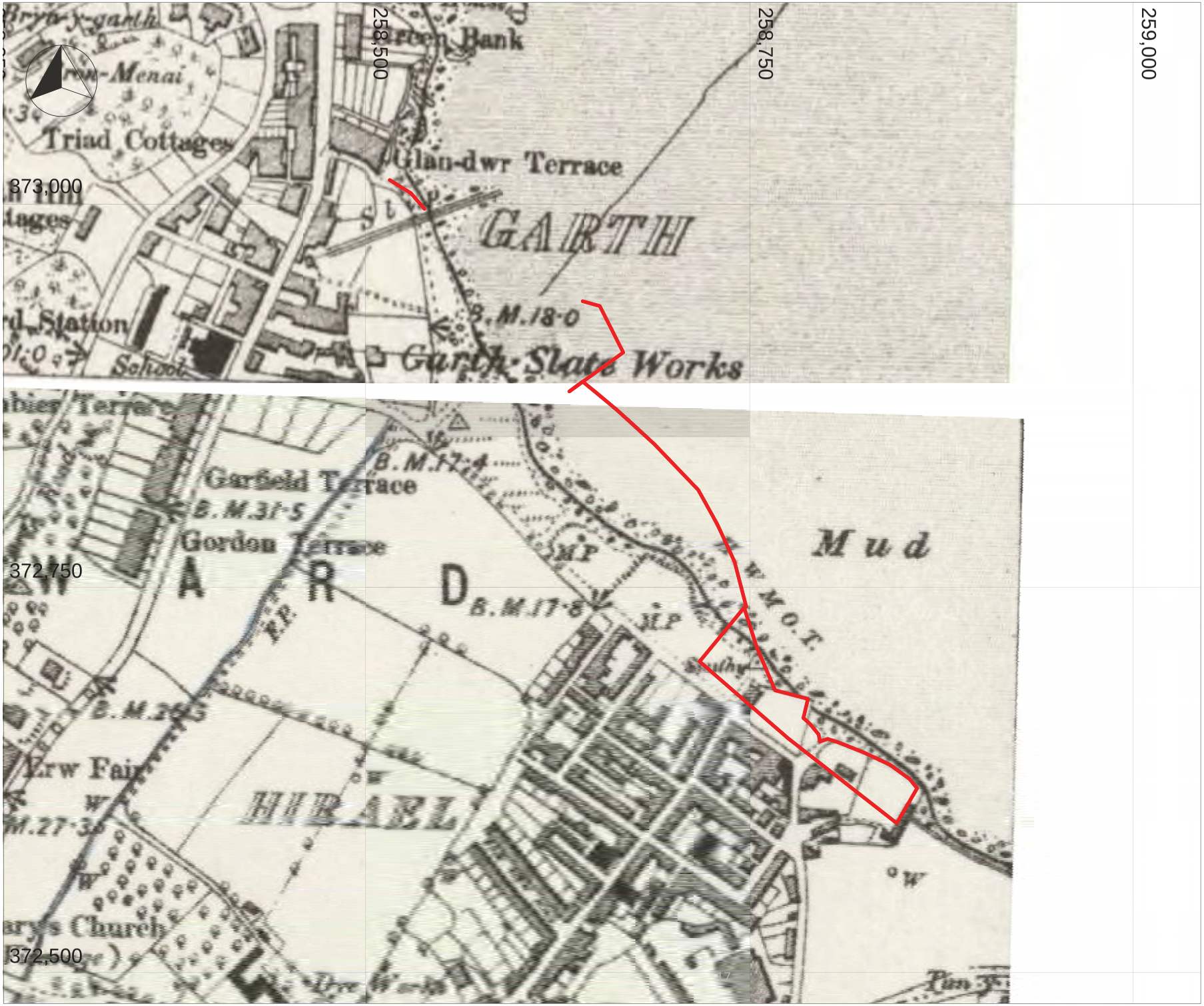

Figure 3
Development area shown against 1st Edition 6"Ordnanace Survey map of 1889.

Grid: 250m

Key

Proposed Development

Drawn By:	IGP
Date:	18/02/2020
Location:	SH58687280
Project:	AB2004

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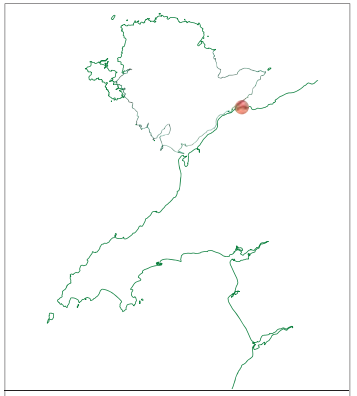

Figure 4
Development area shown against 3rd Edition 6" Ordnanace Survey map of 1920.

Grid: 250m

Key

Proposed Development

Drawn By:	IGP
Date:	18/02/2020
Location:	SH58687280
Project:	AB2004

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4.2 LiDAR

Both the 1m Digital Surface Model (DSM) and 1m Digital Terrain Model (DTM) were analysed to identify possible features within the proposed development area and in the surrounding area. The data was analysed in ASCII format, geographically registered in GIS software and manipulated to effectively alter the elevation and direction of the light source to highlight undulations in the terrain which may indicate the location of buried archaeology. Analysis of DTM data also allows possible features to be identified in wooded areas and undergrowth.

No features were identified on LiDAR within the proposed development area.

The LiDAR data was also utilised to assess intervisibility between the proposed development area and identified assets.

4.3 High Value Designated Assets

See Figure 1

All high value designated assets within a 1km buffer of the proposed development boundary were identified and assessed

4.3.1 Scheduled Ancient Monuments

There are no Scheduled Ancient Monuments within 1km of the proposed development area.

PRN 2299 **ID** CN073 **NGR** SH58082787
Site Name
Pier Camp
Description
Pier Camp is located on high ground approximately 500m west of the proposed development.

The Cadw Scheduled Ancient Monument record states the following:

The remains of this site are as a low bank forming a scarp 2.5 m high, facing SSW, runs for 85 m in a WNW-ESE direction. It then turns and runs for some 37 m in a NNW direction. A possible entrance exists in the S side, but it may equally be the result of modern disturbance. The monument is of national importance for its potential to enhance our knowledge of earthwork remains . It retains significant archaeological potential, with a strong probability of the presence of associated archaeological features and deposits. The scheduled area comprises the remains described and areas around them within which related evidence may be expected to survive.

The HER record for the site states the following:

Pier Camp hillfort is located in a ridge above the city of Bangor with extensive views in all directions but to the south. The remaining defences consist of a bank of broken shale, reduced in places to a scarp c.1m high. Although largely removed by cultivation, it is likely that the bank once formed part of a rectangular enclosure some some 43m by 30m. The site has never been excavated but a coin of Constantius was found there which is now in the Museum of Welsh Antiquities, Bangor.

LiDAR data and the field visit confirms that the development would be visible from parts of Pier Camp including the top and eastern side of the eastern bank but would not be visible from the interior.

The proposed development would be visible from the asset but the scale of the development is unlikely to have a negative impact on the monument or it's setting.

Plate 1: View of proposed development area from Pier Camp, view from west.

PRN 12143 **ID** CN380 **NGR** SH59267239

Site Name

Cegin Viaduct

Description

Cegin Viaduct is located approximately 470m east of the proposed development.

The Cadw Scheduled Ancient Monument record states the following:

The monument is a well-preserved example of an early railroad bridge, built between 1798 and 1800 to carry the Penrhyn railroad over the lower reaches of the Afon Cegin. It is likely that the Cegin Viaduct is the oldest known multi-arched railway bridge to survive above ground in Wales and possibly the world. It comprises a stone-built three arched bridge measuring about 26m in length between each abutment and 5m in width and 3.2m in height. Each arch has a span of between 5m and 6m and height of about 1.8m. The arches are well constructed, with each voussoir being of similar size and shape and with even soffits. There is a slate-roofed sluice at the N end (measuring 1.2m in width and 2m in height) and an artificial pitched stone surface to the riverbed beneath the bridge and extending E, immediately upstream. The earliest known record of the bridge is found in an estate map of 1803, which shows the Penrhyn railroad crossing the Afon Cegin on the site of the present bridge. Work had begun on the railroad in 1800 and comprised laying a then very ambitious length of cast iron rails (designed for use with double-flanged wheels). This edge railway was a longer construction than those already in existence in the South Wales valleys and, as such, marks an important stage in the evolution of the modern railway system. The bridge was almost certainly constructed sometime between 1798 and 1800 and it has been suggested as typical of the work of a local architect and builder, John Foulkes (c. 1765 - 1850). The new Penrhyn Quarry Railway (with a new bridge, the pillars of which still stand immediately to the E, carrying a timber footbridge) superceded the Penrhyn railroad in 1879. The monument is of national importance as a rare and well-preserved example of an early railroad viaduct. The structure may be expected to contain archaeological information in regard to chronology and building techniques. The area to be scheduled comprises the remains described

and an area around them within which related evidence may be expected to survive. It is irregular and measures 34m from N to S by 5m transversely.

The HER record for the site states the following:

This monument is a well-preserved example of an early railroad bridge, built between 1798 and 1800 to carry the Penrhyn railroad over the lower reaches of the Afon Cegin. It is likely that the Cegin Viaduct is the oldest known multi-arched railway bridge to survive above ground in Wales and possibly the world. It is a stone-built three-arched railway bridge measuring about 26m in length between each abutment and 5m in width and 3.2m in height. Each arch has a span of between 5m and 6m and a height of about 1.8m. The arches are well-constructed, with each voussoir of similar size and shape and with even soffits. There is a slate-roofed sluice at the north end (measuring 1.2m in width and 2m in height) and an artificial pitched stone surface to the riverbed beneath the bridge and extending east, immediately upstream. The earliest known record of the bridge is found in an estate map of 1803, which shows the Penrhyn railroad crossing the Afon Cegin on the site of the present bridge. Work had begun on the railroad in 1800 and comprised laying a then very ambitious length of cast iron rails (designed for use with double-flanged wheel). This edge railway was a longer construction than those already in existence in the South Wales valleys and, as such, marks an important stage in the evolution of the modern railway system. The bridge was almost certainly constructed sometime between 1798 and 1800 and it has been suggested as typical of the work of the local architect and builder, John Foulkes (c.1765 - 1850). The new Penrhyn Quarry Railway (with a new bridge, the pillars of which still stand immediately to the west, carrying a timber footbridge) superseded the Penrhyn railroad in 1879. <2> The Cegin Viaduct is a stone-built. three-arch viaduct with :1 slate-roofed slu ice at the northern end. The Viaduct spans the A fon Cegin at the point where the waterway formerly widened into Cegin Pool which was in 1790 ' a commodious harbour capable of admitting vessels of 300 tons bw-den' (Boyd 1985). Cegin pool was superseded by Port Penrhyn and silted up after the construction of the bridge at the mouth of the pool. The river still widens from 11 m to 27m at the point where the viaduct crosses. The three arches have a span of between 5.0m and 5 5m and a rise of about 1.8m. The rectangular sluice at the north of the structure is 1.2111 wide and almost 2m high. The level of the river bed drops by up to 0.5m as it passes through the arches. At normal levels the river currently passes through arches 2 and 3 along with the sluice (see Appendix 3, fig. 1). Initial impressions suggest that a 3.0m wide pitched stone ford crosses the river just to the south of the viaduct but closer examination shows that the sloping river bed between the arches is similarly constructed. It seems likely that this carefully constructed stonework was laid at the time of the construction of the bridge in order to prevent erosion of the river bed and the undermining of the piers. The pitched stone does not continue across and through the sluice. It could not. however, be determined if the pitched stone originally continued through this feature and had subsequently been lost as a result of erosion or other factors. It is possible that the sluice was inserted at some time during the history of the viaduct and that the pitched stone was removed at this time. There is, however, no definite structural evidence to suggest this. The lack of protection for the river bed has resulted in the undermining of the base of the sluice walls resulting in the collapse of a large part of the western end. The northern side has collapsed as far as a straight joint in the masonry leaving a 2.5m wide exit for the sluice. The resulting erosion of the soil and stones infilling the abutment has created a substantial void (2m deep and 3m x 2m wide) beneath the bed of the railroad. The roof of the void has broken through to lhe surface at one point leaving a hazardous 3m drop into the river. The continuing erosion of this part of the viaduct clearly threatens the stability of the northern end of the structure and will presumably lead to its collapse if allowed to go unchecked. The rest of the structure is in reasonably good condition but is showing signs of ongoing deterioration. This is mainly due to the growth of several mature and semi-mature trees on the top of the viaduct. The roots have penetrated much of the masonry and can be seen to have reached the river in arch 2, causing the formation of a small mud bank. Several

stones have also been lost from the facing of the western side of the viaduct just above the top of arch 2, probably as a result of root action. The continued growth of the trees and other vegetation clearly present a threat to the overall stability of the viaduct both as a result of root action and the threat posed by wind-blown trees. (Gwyn and Hopewell, 2002). A low coursed rubble viaduct (multi-arched bridge), 4m wide for a single track narrow gauge railway? it comprises three segmental arches with voussoirs and arch rings, and a small square-headed opening at its N end, spanning the River Cegin, at a splayed angle to the later railway bridge with which it converges at the N end. It may predate the Penrhyn quarry railroad if the suggestion that a railroad to Llandygai (Penlan) flint mill was constructed as early as 1798-1799 can be accepted, but there is no particular reason to suggest an earlier date still. Disused since the closing of the railroad in October 1879, listed grade II (42/A/142[8]) in 1988 and conserved in 2013. Misnamed ?Pont Marchogion? or ?Pont Marchogian? by many sources. (Barker and Gwyn, 2017)

LiDAR data and the field visit confirms that there would be no intervisibility between the development and the asset.

The proposed development would have no impact on the asset.

4.3.2 Listed Buildings at Grade I & II*

PRN 2305 **ID** 4027 **NGR** SH58077205

Site Name

Bangor Cathedral

Grade

I

Description

Bangor Cathedral is located approximately 900m south west of the proposed development.

The Cadw Listed Building record states the following:

History

This is the oldest cathedral foundation in Britain; founded c525 on the site of a Celtic clas and dedicated to St Deiniol c546. The present structure can be dated back to early C12 when the church had an eastern apse and probably aisles nave. Early in C13 it was given an EE type square ended chancel; Bishop Anian (1267-1305) started the rebuilding of the crossing, central tower and Lady Chapel - the tower was burn down in 1309. Following various rebuildings including work by Bishop Dean and Dean Kyffin in C14 and C15, major reconstruction was carried out by Bishop Skevington (1509-34) who built the existing nave and western bell tower. The Chapter House and Vestry to NE were raised before 1721 with the addition of a Library; this was then remodelled after 1778 by a "Mr Wyatt" with the creation of a Registry. In 1824 a full restoration was begun by John Hall of Bangor along with a somewhat conflicting reordering of the interior by John Foster, a leading Liverpool architect. In 1857 the choir was re-roofed by Henry Kennedy. Gilbert Scott restored the Cathedral from 1868 to 1880 especially the eastern half, including rebuilding of the crossing. The contractors were Beauland of Bradford and later Thompson of Peterborough. The foundations were found to be insufficient to support the tall central tower that Scott designed, nor were there the funds to built it; finally in 1966/7 A D R Caroe created the existing structure.

Exterior

Rubble masonry with some dressed stone; mainly lead roofs and crenellated parapets to nave and tower. Diagonal buttresses to bell tower and stepped buttresses to nave with niches to N side; Scott's gabled buttresses with detached shafts to chancel. 2-bay chancel, transepts, crossing tower, 7-bay nave and west tower. 5-light mullion and transom E window. One 5-light ogee

traceried window to S side and 2 smaller C16 windows over the buttress and blocked window remains of the Romanesque church; on the E wall of the S transept beside this is the blocked former chapel opening. The N side has paired and single lancets to vestry with Gothic chimney stacks. The central tower has 2 carved roundels to each face, at W over 4 lancets. The transept gable ends have plate tracery windows, with dog tooth ornament to N. 3-light nave windows with reticulated tracery to aisles; only 6-bays of the clerestory are glazed. Rainwater heads are dated 1791. Blind ogee headed niche over the low SW entrance with 4-order roll and sunk chamfer mouldings, boarded doors and strapwork hinges; similar to N side entrance. 4-stage W tower with stringcourse set offs, crenellated parapet and crocketed finials; clock faces to N & S sides over 3-light belfry openings. 3-light W window with ogee and tear drop tracery; the inscription below reads "Thomas Skevington Episcopus Bangorie Hoc Campaniele et Ecclesiamfieri fecit Ao Partus Virginei - 1532". Square headed W entrance with label and similar boarded doors.

Interior

The nave has a 6-bay, 2-order arcade carried on octagonal piers and square bases; linked hoodmoulds. Above this the stone walls are rendered. Oak roof with bosses, crenellated tie beams and stone corbels. Modern inner porches to N and S; slightly off centre 3-order tower arch with steps leading up to a further modern inner porch. Square pulpit with chamfered corners and panelled reliefs; C15 octagonal font on modern platform and with modern canopy. Heavily moulded crossing arches with half-round responds to W; choir screen of 1908 by Oldrid Scott and rood of 1950 by Alban Caroe. The chancel has encaustic tile floor and canopied choir stalls; 5-bay timber lierne roof by Scott. Low blocked doorway to N beside a Netherlandish C17 wood carved statue in blocked window opening; reredos of 1881 by Oldrid Scott. 3-bay hammerbeam roofs to Transepts; S transept serves as the Lady Chapel and has painting (1934) by Brian Thomas set into the former arched opening to the medieval Lady Chapel; a tomb recess in the S wall traditionally contains the body of Owain Gwynedd but it is later than that and seems to relate to the resiting of the body. Two broken medieval stone crucifixes, one to the tomb recess and one to the reredos. Collection of medieval stone carved pieces gathered at the NW end including the well detailed C14 monument to Eva. The Mostyn Christ hangs at the W end of the N arcade, a Bound Rood said to be dated 1518 and possibly from Rhuddlan Priory. Many C19 wall monuments. Three windows have glass by David Evans of Shrewsbury originally made in 1838 for the E window; moved in 1873. S Transept window made in 1885 by Mayer of Munich and present E window by Clayton and Bell (1873).

LiDAR data and the field visit confirms that there would be no intervisibility between the development and the asset.

The proposed development would have no impact on the asset.

PRN 11661 **ID** 3963 **NGR** SH57957235
Site Name
Bangor University Main Building
Grade
I
Description
Bangor University is located on raised ground overlooking the city approximately 900m south west of the proposed development.

The Cadw Listed Building record states the following:

The University was founded in 1884 after the city of Bangor was chosen as the University's North Wales site. First established of the former Penrhyn Arms Hotel; the present Penrallt site was

donated in 1902. Built 1907-11 by Henry T Hare, architect of London; chosen following a competition assessed by Sir Aston Webb and with other entrants including W D Caroe. The designs were modified by the University (Isambard Owen in particular) to take full advantage of the site. Contractors were Messrs Thornton and Sons of Liverpool; cost ca £175,000. Foundation stone laid by Edward VII on 9 July 1907; opened 14 June 1911. "Collegiate Tudor" style with Arts and Crafts influences; Hare also carried it "generally of late Renaissance character". Designed around two courtyards, the larger of which was never completed (later enclosed with ranges by Sir Percy Thomas 1966-1970). The entire scheme is linked and focused upon the cathedral like central tower. Buff coloured Cefn stone in snecked courses with freestone dressings and flat buttresses; slate roofs with parapet and stone chimney stacks. Mullioned and transomed windows with leaded lights. Tudor style down-pipes etc dated 1909. Metalwork by William Bainbridge Reynolds of London. The building was described in his obituary as Hare's finest work.

Architecturally, one of the most significant public buildings of the period in Britain and historically, the foremost institution in Wales to pioneer the academic development of the Welsh language.

LiDAR data confirms that there would be little to no intervisibility between the development and the asset.

PRN 64296 **ID** 23439 **NGR** SH59127288
Site Name
New Dock (quay)
Grade
II*
Description
New Dock is located approximately 400m north east of the proposed development.

The Cadw Listed Building record states the following:

History

Although shipments of slate were being sent to Ireland from Abercegin (the original name for the area) as early as 1713, it was not until 1790 that Benjamin Wyatt, agent to the Penrhyn Estate since 1786, supervised the building of a stone wharf here, activity on which rapidly increased after the opening of the horse-drawn tramway from the Penrhyn Slate Quarry in 1801. The wharf was further extended in 1829-30 with a final extension in 1855 when the breakwater was added on the eastern side, forming an inner basin.

Exterior

Wharf constructed of finely jointed large Anglesey limestone blocks with iron cramps, the inner basin curved to its southern end and with a breakwater at the north-eastern end curving inwards to protect the entrance to the harbour. There are 2 C19 cranes on the dock, one at the southern end of the inner basin, the other on the western side of the main quay. There are also a large number of bollards, both of stone (the earlier type) and cast-iron, to secure vessels along the western side of the main quay and around the inner basin.

Listed at II as a remarkably well-preserved late C18 dock associated with the rapid expansion of the slate industry and for its importance as the main centre for the export of its products until well into the C20.*

The proposed development would be visible from the asset but the scale of the development is unlikely to have a negative impact on the monument or it's setting.

Plate 2: View of proposed development area from New Dock, view from east.

PRN 12706 **ID** 3987 **NGR** SH58377335
Site Name
Bangor Pier
Grade
II*
Description
Bangor Pier is located approximately 250m north west of the proposed development.

The Cadw Listed Building record states the following:

Built 1896 by Mr J J Webster of London, contractors Mr Alfred Thorne of London; cost £17,000. It is considered to be the best in Britain of the older type of pier without a large pavilion at the landward end. Damaged by a ship in 1914; closed in 1971 and currently undergoing restoration (Autumn 1987).

1550ft long; the longest surviving in Wales. Largely original steel girders and cast iron columns carrying an extensively rebuilt 24ft wide timber planked deck, kiosks, and pavilions. The pier is entered through ornate wrought iron gates enriched with fleurons and barley twist uprights; square openwork gate piers carrying lanterns. These are flanked by octagonal kiosks with onion domed roofs and Indian style trefoil headed openings; beyond these are similar smaller gates. Cast iron lampstandards and full length seating to each side of deck. The pier projects at various intervals beyond with polygonal timber kiosks with mostly tent-like roofs. Splayed out at NW end containing 14 sided timber pavilion with 2-stage pyramidal roof. The iron staircase at the end with 6 levels of platforms led to the former floating pontoon.

LiDAR data and the field visit confirms that there would be no intervisibility between the development and the asset.

The proposed development would have no impact on the asset.

PRN 24865 **ID** 4092 **NGR** SH57907227
Site Name
Terraced Walls and Gated Entrance to the University College of North Wales Main Building
Grade
II*
Description
Bangor Pier is located approximately 250m north west of the proposed development.

The Cadw Listed Building record states the following:

Designed by H T Hare architect for the whole site. The ornamental gates and mental work are by W Bainbridge Reynolds of London.

Rubble terrace walls to stone flagged terrace. High battered base, freestone piers and banding to middle and wave moulded coping with cast iron lamp standards. Rounded 'bastions; to either end and round arched entrances beyond flanked by buttresses, piers and tapered finials; iron gates with UCNW monogram. Stone steps lead down at either end turning at right angles with 3 further isolated lampstandards along the path to Deiniol Road. Rubble wall continues NW up to the splendid gated entrance. Ashlar gate piers with ball finials and classical cast iron gates with implied Ionic pilasters; scrolled overthrow with G V R coat of arms and the date 1910. Short section of wall extends N to another gate pier with finial. Wall steps up along Penrallt Road at the SE side of the Library range and terminates at the projecting end bay.

Group value with the University College of North Wales main building.

LiDAR data confirms that there would be little to no intervisibility between the development and the asset.

The development would have no impact on the asset.

4.3.3 Registered Parks and Gardens

PRN 4469 **ID** GD40 **NGR** SH60297199
Site Name
Penrhyn Castle Park & Garden
Grade
II*
Description
The western edge of Penrhyn Park is located approximately 430m east of the proposed development.

The Coflein (RCAHMW/Royal Commission on Ancient and Historical Monuments of Wales) entry for the site states:

The nineteenth century landscape park at Penrhyn Castle with terraced garden, walled kitchen gardens, and lawns, retains much of its nineteenth century character. The gardens have an exceptional collection of woody well preserved plants. The setting and relationship of the house to the park and landscape is outstanding. The structure and layout of the kitchen gardens, although they are disused, is interesting and remain in reasonable condition.

The garden is depicted on the Second Edition Ordnance Survey 25-inch map of Caernarvonshire VII, sheet 9 (1900). Its main elements on that map include kennel, river, woodland, walled garden,

laundry, walk, kitchen garden, greenhouse, pheasantry, bath, isolated geometric copses and fountain.

The development would have no impact on the asset.

4.4 Other Identified Assets

All historic assets within 500m of the proposed development were identified and assessed for potential impact. Following initial assessment and giving consideration to the scale of the development the assessment focussed on Grade II Listed Buildings and undesignated assets within 200m

4.4.1 Grade II Listed Buildings

See Figure 2

PRN 24818 **ID** 3943 **NGR** SH58737265

Site Name

No. 8 Beach Road (including 80 Ambrose Street)

Description

No. 8 Beach Road is located approximately 20m south west of the development, immediately opposite the Beach Road car park.

The Cadw Listed Building record states the following:

Shown on John Wood's 1834 map.

Late Georgian 2-storey structure with 3-window rubble elevations, symmetrical to main front. Slate roof and brick chimney stacks; 12-pane sash windows, some horned. Modern shop front canopies to main elevation and central 6-panel door with voussoir lintel below slate plaque. This states that John Richards, composer, lived in this house (1834-1901); the plaque was unveiled on August 5 1943. 6-panel door to Ambrose Street with diamond panelled fanlight.

The development would be clearly visible from the asset and the raising of the Beach Road car park may affect views towards Porth Penrhyn from street level. The positive impact of the reduction of risk of damage from flooding is likely to outweigh any visual impact.

Plate 3: View of Beach Road car park, No.8 Beach Road to left of shot. View from west.

PRN 24808, 68835-68853 **ID** 4102-4121 **NGR** SH58557275c
Site Name
No.1-20 Seiriol Road
Description
Seiriol Road is located approximately 125m south west of the development.

The Cadw Listed Building record states the following:

Together with Nos 2 to 20 this group of houses resulted from the work of the Bangor branch of "Christian Order in Politics Economics and Citizenship" (COPEC). They campaigned for a nation-wide improvement in housing conditions believing that poor housing equalled moral decline. A regional conference was held in Bangor in 1924, a survey carried out in 1926 and in March 1927 as a result of inaction by the local authority this site was acquired. Each house had brick cavity walls, 2 ground floor rooms, 3 bedrooms, a bath, lavatory and remained a model for social housing as Copec's work was not matched by the local council. Built 1927, architect Herbert L North of Llanfairfechan; builder Richard Owen.*

Single storey and attic terrace with asymmetrical gables to the reflected pairs. Pebbledash elevations, local slate roofs and pebbledash chimney stacks. Small pane steel frame casement windows with bell dripmoulds; No 11 has replacement windows. Broader windows to ground floor beside lean-to porches with mainly boarded doors - some replaced. Small stairwell windows. Similar details to gable ends and swept roof dormers to pebbledash rear. Restoration in progress at time of inspection (October 1987).

*Cadw record states Nos 2 – 20 (even numbers) however all houses in both terraces are Grade II Listed Buildings.

The proposed development would probably be visible from parts of these assets, however, any minor visual impact would be counteracted by the positive impact of the reduction of risk from flooding.

PRN N/A **ID** 87664 **NGR** SH58497304

Site Name

1 – 7 Glandŵr Terrace

Description

The terrace is located immediately north west of the development area.

The Cadw Listed Building record states the following:

Constructed 1859 to 1866 and shown on the 1st Edition Ordnance Survey of 1890. A similar range of buildings is shown in the same location on the map of 1854 but these buildings probably predate Glandwr Terrace. The area has been relatively undeveloped up until the beginning of the 19th Century, a ferry crossing had been in existence from the 16th Century but Garth Road was not laid out until 1834 when it linked the ferry terminus with the town. In the following years, plots of land were sold off from the Penrallt estate with some scattered housing being developed, such as Plas Isaf on Upper garth Road abd some commercial buildings connected to the ferry operations (The Union Hotel), Glandwr Terrace with the nearby Green Bank, forms a key part of the residential development of the Garth area in the mid 19th Century and reflects the growing population and wealth of Bangor and nearby Porth Penrhyn. The quality of construction, internal layout and fittings within No 4, which would originally have been reflected in each of the houses of Glandwr Terrace, suggests that they were built to house members of the middle class in Bangor. Mid to late 19th Century census returns show that master mariners, traders and those connections to the slate industry abd Port Penrhyn were resident in the terrace in that period. the position and layout of the terrace with first floor oriels also suggests that it was specifically sited and designed to provide views to the sea abd the maritime traffic into and out of Porth Penrhyn, so may have been built with the maritime trade in mind.

Listed notwithstanding minor alterations for its special architectural interest as a well-preserved example of middle class housing of the mid 19th Century. The terrace displays definite quality and character in its overall architectural composition, use of materials and refinement of detailing and refinement of detailing which all reflect the growing wealth and importance of Bangor as a trading centre in this period. The terrace is also of special historic interest for its connections with the maritime and industrial history of Wales: the various trade, professional and commercial interest of 19th Century residents of the terrace reflect those connections. During the later 19th Century the slate industry of north-west Wales was the leading world wide producer of slate and a dominant economic power in Wales. The nearby Porth Penrhyn was the source of export for slate from the Penrhyn Quarry, at the time one of the largest quarries in the world.

The proposed development would have no impact on the asset.

Plate 4: Location of proposed northern section of coastal wall, Glandŵr Terrace beyond. View from south, scale:1m

PRN 29571 **ID** 3988 **NGR** SH58407290
Site Name
Former Garth Road Primary School
Description
The terrace is located approximately 230m west of the development area.

The Cadw Listed Building record states the following:

Built in 1848 the British School. It established a high standard and was used from 1854 for teaching practice by the Normal College. Became a Board School in 1871 and was closed ca 1946. Now in use by sports clubs.

Symmetrical single storey rubble front in Tudor style with Penmon dressings; slate roof and cement rendered chimney stacks. The gable ends of the cross ranges are set forward at either end with parapets, kneelers and finials. Each have central gabled porches, to the left for Boys and to the right for Girls; these are flanked by cross fame windows with Tudor hoodmoulds. The main gabled have attic ventilation slits over inscribed slate tablets giving the date etc..... Set back in the middle are 3 similar cross frame windows; that to the centre is higher and with gabled roof. Later cement rendered porch below with half glazed door. Behind this a cross range extends to rear lower than those than those at the sides. 3 rubble gable ends at rear, 2 of which retain their paired diagonally set chimney stacks. Off centre extends a further gabled range, original and with cross frame windows; corrugated iron extension to left and lean-to at right. Flat roofed dormer window to left hand side.

Included as a rare survival of a mid C19 British School, in a town location and not significantly altered

Elements of the proposed development may be visible from the asset but would have no impact. If there is a reduction in the risk of flooding to the building the development would have a beneficial impact.

PRN 24871 **ID** 4130 **NGR** SH58407301
Site Name
Plas Isaf, No. 27 Upper Garth Road
Description
The terrace is located approximately 110m west of the development area.

The Cadw Listed Building record states the following:

Said to have been built ca 1843; alterations to the rear in mid C20; L-plan.

Late Georgian 2-storey, 2-window scribed render front with channelled quoins and band course below eaves. Hipped slate roof, wide bracket eaves and cement render and pebbledash chimney stacks. 12-pane sash windows, with label mouldings to ground floor. Panelled door with overlight under bracket hood. Later splayed bay to left side with casement glazing; 2-pane sashes at rear. The 3-storey cross range at rear right is largely the modern conversion of the outbuildings; splayed bay to garden side.

Analysis of LiDAR data suggests that the development would not be visible from the asset. Given the scale of the proposed development any visual impact would not be significant.

PRN 11497 **ID** 4097 **NGR** SH58927247
Site Name
Tan-y-Coed
Description
The building is located approximately 140m south east of the development area.

The Cadw Listed Building record states the following:

Dated 1810, (opened 25 October). Built by Benjamin Wyatt, architect to Penrhyn Estate, as the Caernarfonshire and Anglesey dispensary; commissioned by Dean Warren. Said to have been converted into a private house in 1847; the right hand cross range had been added by 1854 and the 1987 OS map shows the building much as it is today. In 1960's it was the office of Howell and Doherty, architects.

2-storey, 3-window coursed rubble symmetrical front with band course over ground floor. Slate roof and rendered end chimney stacks. Small pane sash windows, 16-pane except for that over the porch with parapet and cornice; segmental entrance with 6-panel door; modern inner door. In the porch are 2 slate tablets describing the history of the building, one states that it was sited here to be clearly visible from Anglesey. Advanced at either end are single storey screen walls with boarded doors in round arched headed entrances giving access to the cross ranges. French windows on the left gable end; right end it scribed rendered. Slate paves courtyard to rear with cross ranges stepped out from gable ends and extending back to Castle Bank. That to the left retains small pane sash windows, including one horizontally sliding; the large pebbledash chimney stack may represent the former extend of this range before enlargement. The right hand range retains the Victorian larder with slate shelving. Dressed stone gate piers to the front; slate steps and plain iron railings.

The interior retains 6-panel doors, segmental hallway arch and tightly winding staircase with turned newel. The 1st floor was originally undivided and used as the hospital ward.

Elements of the development are likely to be visible from parts of the building but would be of a scale which would not cause negative impact. The development would not impede or intrude on views from Anglesey.

4.4.2 Undesignated Assets

See Figure 2

Table 4 provides the details of previously recorded undesignated heritage assets within 200m of the proposed development.

Table 5: Undesignated assets within 200m of the proposed development

PRN	Site Name	Period	Site Type	NGR
24074	Buckle, Possible, Findspot, Bangor	POST MEDIEVAL	FINDSPOT	SH58357305
19605	Bus Depot Buildings, Bangor	MODERN	BUS STATION	SH585728
1973	Collared Urn, Findspot, Upper Garth Road	BRONZE AGE	FINDSPOT	SH58357299
31987	Decorated slab, Bangor Friary	MEDIEVAL	Inscribed stone	SH586728
2300	Dominican Friary, Former Site of, Bangor	MEDIEVAL	CHURCH	SH58577278
31993	Floriated cross, Bangor Friary	MEDIEVAL	Inscribed stone	SH586728
31995	Floriated cross, Bangor Friary	MEDIEVAL	Inscribed stone	SH586728
32012	Floriated cross, Bangor Friary	MEDIEVAL	Inscribed stone	SH586728
32015	Floriated cross, Bangor Friary	MEDIEVAL	Inscribed stone	SH586728
58451	Ship Building Yard, Site of, Bangor	MULTIPERIOD	SHIPYARD	SH58507294
58452	Slate Works, Site of, Bangor	POST MEDIEVAL	SLATE PROCESSING WORKS	SH58487289
NPRN 305488	Timber Yard, Beach Road	POST MEDIEVAL	TIMBER YARD	SH 58777266

Plate 5: Existing coastal wall east of Beach Road car park, possibly associated with Timber Yard. View from north west, scale:1m

Plate 6: Existing coastal wall at Beach Road car park, possibly associated with Timber Yard. View from north east, scale:1m

Table 6: Newly identified assets within the development area

PRN	Site Name	Description	NGR
TBC	Smithy, Beach Road car park *See Figures 3 & 4*	Smithy and Timber Yard shown on 1st to 4th edition Ordnance Survey maps. Some buildings appear to have been demolished for the widening of Beach Road. L shaped layout with buildings no southeast – northwest alignment from the edge of Beach Road to the shoreline, and a range of buildings parallel with Beach Road. It is possible that the existing coastal wall is associated with the Smithy and the Timber Yard shown on historic mapping.	SH58757265
TBC	Slipway *See Figure 4*	A slipway appears to the west of the Beach Road car park area on the 3rd edition map of 1920 and remains on all subsequent editions, it is not included on current maps.	SH58827264
TBC	Military/ Prisoner of War Camp *See Plate 7*	A military camp was established on St. George's field at the outbreak of the Second World War. 40 Nissen huts were erected at the site to house troops of the Cheshire Regiment, Royal Irish Fusiliers and South Lancashire Regiment. In 1944 American troops were stationed at the camp whilst training for the D-Day invasion. Shortly after the Americans left Italian Prisoners of War were held at the camp. A fig tree which grows at the south-western end of the sea wall is said to have been planted by the Italian Prisoners of War whilst being held at the camp. Although this cannot be confirmed the story is plausible and comments on social media confirm that the tree, although small, has been present since at least the early 70s.	SH58657280
TBC	Possible Anti-Invasion Defences	Concrete cylinders, partially buried along the coastal edge of the grassed area of the playing fields and set within a section of the sea wall, are likely to be anti-invasion defences which were re-purposed after the war.	

The proposed development is unlikely to have any significant impact on any of the identified undesignated assets outside of the development area itself.

Plate 7: View of Bangor showing military camp on site of St George's Field Playing fields © RCAHMW.

Plate 8: General view from pumping station towards Beach Road car park, former location of Military/Prisoner of War camp. View from north west.

Plate 9: Fig tree growing from existing sea wall. View from north, scale:1m

Plate 10: General view of former location of Military/Prisoner of War camp showing re-used anti-invasion devices. View from south-east, scale:1m

Plate 11: Anti-invasion devices re-used in existing sea wall. View from east, scale:1m

4.5 Assessment of Impact

The assessment of impact is based on the assumption that there would be no construction above approximately 1m in height associated with the development. The assessment should be reviewed once detailed design has been completed. It is assumed that the development would be designed in a way which would blend in with the character of the area using materials similar to those already in use.

Table 7: Assessment of Negative Impact (based on coastal wall and raising of Beach Road car park)

Name	Value	Magnitude of Impact	Significance of Impact
No. 8 Beach Road	Medium	Moderate	Moderate
Seiriol Road Listed Buildings	Medium	Minor	Slight
New Dock	High	Negligible	Slight
Timber Yard and Smithy	Low	Minor	Neutral/Slight
Slipway	Low	Minor	Neutral/Slight
Military/Prisoner of War Camp	Medium	Minor	Slight
Possible Anti-Invasion Defences	Low	Minor	Neutral/Slight

Table 8: Assessment of Positive Impact (reduction in risk of flooding)

Name	Value	Magnitude of Impact	Significance of Impact
No. 8 Beach Road	Medium	Moderate	Moderate
Seiriol Road Listed Buildings	Medium	Moderate	Moderate
New Dock	High	Negligible	Slight
Timber Yard and Smithy	Low	Minor	Neutral/Slight
Slipway	Low	Minor	Neutral/Slight
Military/Prisoner of War Camp	Medium	Minor	Slight
Possible Anti-Invasion Defences	Low	Negligible	Neutral/Slight

5 Discussion

Although the final design of the proposed development has not been selected, the assessment shows that it is unlikely to have any significant negative impact on any of the identified assets.

Map regression has demonstrated that the majority of the coastal wall would be located on ground which has been reclaimed during the 20th century. It is therefore considered unlikely that features associated with the Friary are located within the proposed development area.

The Smithy, Timber Yard and slipway identified at the current location of the Beach Road car park and small park to the east would potentially be within the development area. Options 3 and 4 could potentially impact on buried archaeology during the construction of the coastal and flood defence walls. Option 5 which involves the raising of Beach Road car park would allow for preservation in situ of any buried remains which may be present at the site. It is possible that the current coastal wall in this area is associated with the Smithy and Timber Yard, as such it should be recorded prior to any disturbance.

No features of the military and Prisoner of War camp remain at its former location but the history of the site is remembered locally. It has been suggested that the fig tree which grows from the existing sea wall at Beach Road car park may have been planted by Italian Prisoners of War. It is documented locally that the PoWs decorated their cabins and planted small gardens, it is therefore reasonable to conclude that the fig tree does relate to this period in the history of the site. The probable anti-invasion devices, which are cast concrete cylinders with a central hole, also probably date to this period but may not have been elements in the construction of the camp. Other examples of the cylinders have been found at other coastal sites, including Caernarfon and Morfa Conwy, apparently utilised to reduce coastal erosion. It is difficult to confirm with certainty that the cylinders were used as wartime anti-invasion devices but it is known that in Pembrokeshire such devices were offered to farmers at the end of the war (Thomas, pers. comm. 2018). It is possible that in Gwynedd a decision was made to re-purpose the cylinders in coastal consolidation projects which could explain their use in a number of areas, a similar approach appears to have been taken in East Yorkshire (Thomas pers. comm. 2018). The cylinders are not in their original locations and the significance of any impact to them would be slight.

Although the scale of the coastal wall has not been confirmed it is not expected that it would cause excessive visual intrusion. The main visual impact is likely to be experienced from Listed Buildings at the northern end of Seiriol Road and No. 8 Beach Road.

There would likely be a minor change in the view from the Grade II* listed New Dock at Porth Penrhyn but this would not be a significant negative impact.

Elements of the development would be visible from Pier Camp but the scale and distance would not cause significant impact.

Materials and scale should be considered during detailed design to ensure that the development does not appear out of place whilst maintaining functionality.

The proposed development would have a positive impact on any assets within areas which would be at a reduced risk of flooding.

6 Conclusion

The assessment has shown that the majority of the coastal edge where the proposed coastal wall would be constructed was reclaimed or built up during the 20th century. It is therefore unlikely that any significant archaeological deposits would be encountered during groundworks in these areas. It is possible that the current coastal wall at the Beach Road car park is associated with the Smithy and Timber Yard, as such it should be recorded prior to any development of the site.

The location of the WWII anti-invasion devices should be recorded in advance of disturbance and arrangements should be made to ensure that any which need to be removed during the works are stored until long-term curation arrangements can be made.

The fig tree which is likely to have been planted by the Italian Prisoners of War should be re-located. If this is not possible the use of cuttings from the tree should be considered for any planting undertaken as part of the works.

Buried remains of buildings may be present at the Beach Road car park. The option of raising the car park would not impact any buried archaeology in this area.

The construction of a raised flood defence wall at the southern edge of the Beach Road car park may impact any buried archaeology which may be present. Appropriate mitigation, including watching brief and investigation of any identified features, would make the significance of the impact minor.

It is possible that the development could have a visual impact on the Listed Buildings at Seiriol Road and No. 8 Beach Road. Visual impact from these assets should be considered during detailed design.

The development would not have an impact on Pier Camp Scheduled Ancient Monument.

Detailed flood modelling would allow the positive impact on assets to be assessed in detail, any Listed Buildings in areas which would be at lower risk of flooding would be positively impacted by the development.

The development offers an opportunity to increase and preserve knowledge of the history of the site, especially the military and Prisoner of War camp. Interpretation panels should be considered as part of the project. The fig tree and anti-invasion devices offer a tangible link to a period in recent history, which could be utilised to tell the story of the site. Fig trees could be utilised in any planting to be undertaken and the concrete cylinders could be used as bases for interpretation panels or re-utilised in non-structural elements of the scheme.

7 Sources Consulted

7.1 Archival Sources

7.1.1 National Library of Wales, Aberystwyth

Tithe Map, Bangor, 1845 (Digital Scan)

7.2 Unpublished Sources

7.2.1 Images and Data

Evans, R. & Roberts, J. 2012. *Dickie's Boatyard, Bangor: Archaeological Assessment.* Gwynedd Archaeological Trust Report No. 1049

Gwynedd Historic Environment Record, Craig Beuno, Garth Road, Bangor, Gwynedd, LL57 2RT

Natural Resources Wales: LiDAR Data, DTM 1m

Natural Resources Wales: LiDAR Data, DSM 1m

Thomas, R.J.C. 2018. *Email between Roger Thomas (Historic England) and Jeff Spencer (Cadw) dated 6th December 2018. Roger Thomas states that Pembrokeshire County Council rounded up most anti-invasion cylinders and offered them to farmers and used some as bollards. Also states that East Yorkshire to harden sea defences.*

7.2.2 Unpublished Reports

Gwynedd Archaeological Trust, 1991. Report on the Archaeological Assessment at the Crosville Bus Depot, Beach Road, Bangor.

Gwynedd Archaeological Trust, 2004. Crosville Bus Station, Beach Road, Bangor.

Longley, D. & Richards, A., 2000. *Early Medieval Burial in Gwynedd.* Gwynedd Archaeological Report No. 350

7.3 Published Sources

Ordnance Survey:

Ordnance Survey Anglesey XIX.NE

- 1st Edition 6" County Series 1889
- 2nd Edition 6" County Series 1901
- 3rd Edition 6" County Series 1920
- 4th Edition 6" County Series 1953

Ordnance Survey Anglesey XIX.SE

- 1st Edition 6" County Series 1889
- 2nd Edition 6" County Series 1901
- 3rd Edition 6" County Series 1920
- 4th Edition 6" County Series 1948
- 5th Edition 6" County Series 1953

Cadw, 2107. *Heritage Impact Assessment in Wales.* Cadw, Cardiff

Cadw, 2017. *Setting of Historic Assets in Wales.* Cadw, Cardiff

Chartered Institute for Archaeologists, 2014. *Standard and guidance for historic environment desk-based assessment.*

7.4 Websites

British Geological Survey: Geology of Britain viewer
www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html

Cof Cymru – National Historic Assets of Wales

www.cadw.gov.wales/advice-support/cof-cymru

Coflein

www.coflein.gov.uk

Lle Geo-Portal

www.lle.gov.wales

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