

**New Wellhead Structure
over Borehole BH6
Princes Gate Springwater
SA67 8JD
Historic Environment
Desk-Based Assessment**



Report by: Trysor

For: Princes Gate Water Ltd

September 2018



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By

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Trysor

Trysor Project No. 2018/631

For: Princes Gate Water Ltd

September 2018

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Cover photograph: The existing well-head cover for borehole 6 with the western round barrow (ID number 1) behind, looking west southwest

New Wellhead Structure over Borehole BH6 Princes Gate Springwater, SA67 8JD Historic Environment Desk-Based Assessment

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Paratowyd yr adroddiad hwn gan bartneriad Trysor. Mae wedi ei gael yn gywir ac yn derbyn ein sêl bendith.

This report was prepared by the Trysor partners. It has been checked and received our approval.

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Croesawn unrhyw sylwadau ar gynnwys neu strwythur yr adroddiad hwn.

We welcome any comments on the content or structure of this report.

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1. Summary

- 1.1 This historic environment assessment has been undertaken by Trysor to examine the impacts on the historic environment from a new wellhead structure over Borehole 6 at Princes Gate Water Ltd, Pembrokeshire at SN1575411403.
- 1.2 A site visit was undertaken by Trysor to examine the location of the development. Information was also gathered on the indirect, visual impacts on historic assets within the wider landscape, and their setting.
- 1.3 The assessment studied the direct and indirect impacts on all recorded historic assets within an area measuring 500 metre in radius, focused on SN1577511495, the centre of the borehole 8, 94 metres to the north northeast (the same recorded archaeological sites would lay within a 500 metre radius assessment area around Borehole 6). The Dyfed Archaeological Trust Historic Environment Record and data from RCAHMW and Cadw were consulted. Historical mapping was also consulted as well as aerial photographs and LiDAR.
- 1.4 There is one Scheduled Monument within a 500 metres radius of the development, the New House Round Barrow Cemetery (PE178) which consists of three separate round barrows. This Scheduled Monument would experience a Low-Moderate Negative impact on setting, with no impact on its significance from the development. The impact on the setting of the western round barrow in the group is assessed as being Moderate Negative however.
 - 1.4.1 Mitigation has been undertaken at the design stage to minimise impacts on setting and the landscape. The dimensions of the proposed structure have been reduced. Plans for an access trackway have been amended in favour of using an unobtrusive grass reinforcement mesh to reduce impacts. Plans for a paved area around the structure have also been dropped.
 - 1.4.2 It is not recommended that screening planting is sought in this case, ensure that the relatively open landscape of the field in which the barrow cemetery now stands is preserved. Adding more trees or shrubs into the environment close to the western barrow would also increase the footprint of the development, causing a greater physical impact on buried archaeology. Trees growing around the well-head building could also make more of an impact on the sight-lines between the eastern and western barrows in the barrows cemetery.
 - 1.4.3 Similarly landscaping and creating earthwork bunds is not appropriate, as it would create earthwork features which could detract from the barrows themselves, and would require more ground disturbance, or bringing in of soil from elsewhere.

- 1.5 There are no Listed Buildings within a 500 metres radius of the development.
- 1.6 There are no Registered Parks & Gardens within the 500 metres radius.
- 1.7 The development site does not lie within a Registered Historic Landscape.
- 1.8 There are no significant impacts on any other recorded historic assets within the 500 metre radius assessment area.
- 1.9 The proximity of the round barrow cemetery to the development site indicates a high potential for further buried archaeology. A condition for archaeological mitigation should be considered for any groundworks, including foundation trenches and pipelines, if planning permission is granted.

2. Copyright

- 2.1 Trysor holds the copyright of this report. Further copies may be made of this report without gaining permission to reproduce but it must be noted that Figures 6, 7, 8, 9 and 10 include other copyrighted material and should not be copied.

3. Introduction

- 3.1 Princes Gate Water of The Well Fields, Princes Gate, Narberth, Pembrokeshire, Wales, SA67 8JD commissioned Trysor heritage specialists to undertake an historic environment desk-based assessment for a proposed wellhead building to cover the one of the water boreholes (Number 6) and pipes, see Figure 1.
- 3.2 The Chartered Institute for Archaeologists' Standard and Guidance for Historic Environment Desk-based Assessment (CIfA, 2017) and Cadw's Setting of Historic Assets (Cadw, 2017) were used to write a specification for the desk-based assessment for Borehole 8, which was approved by the planning archaeologist at Dyfed Archaeological Trust, the archaeological advisors to the local planning authority, see Appendix A. That specification has been used to assess the impact of Borehole 6, including the same assessment area, as Boreholes 6 and 8 are in relatively close proximity and within the same field parcel and no additional, recorded, archaeological sites or features would be included within a 500 metre radius assessment area focused on Borehole 6.
 - 3.2.1 Borehole 6 differs from Borehole 8 in a number of respects. The two boreholes are in different locations within the field; Borehole 6 is found at SN1575411403 and Borehole 8 is found at SN1577511495. The dimensions of the well-head structures at each borehole are also different. That at Borehole 8 would measure 5.65 long, by 5.10 metres and up to 3.5 metres high, an amendment to the original specification.. The structure at Borehole 6 has been reduced in size to 4.85 metres long, by 3.15 metres wide and 3.35 metres high, in order to minimise

its impact on the landscape and the setting of the New House Round Barrow Cemetery.

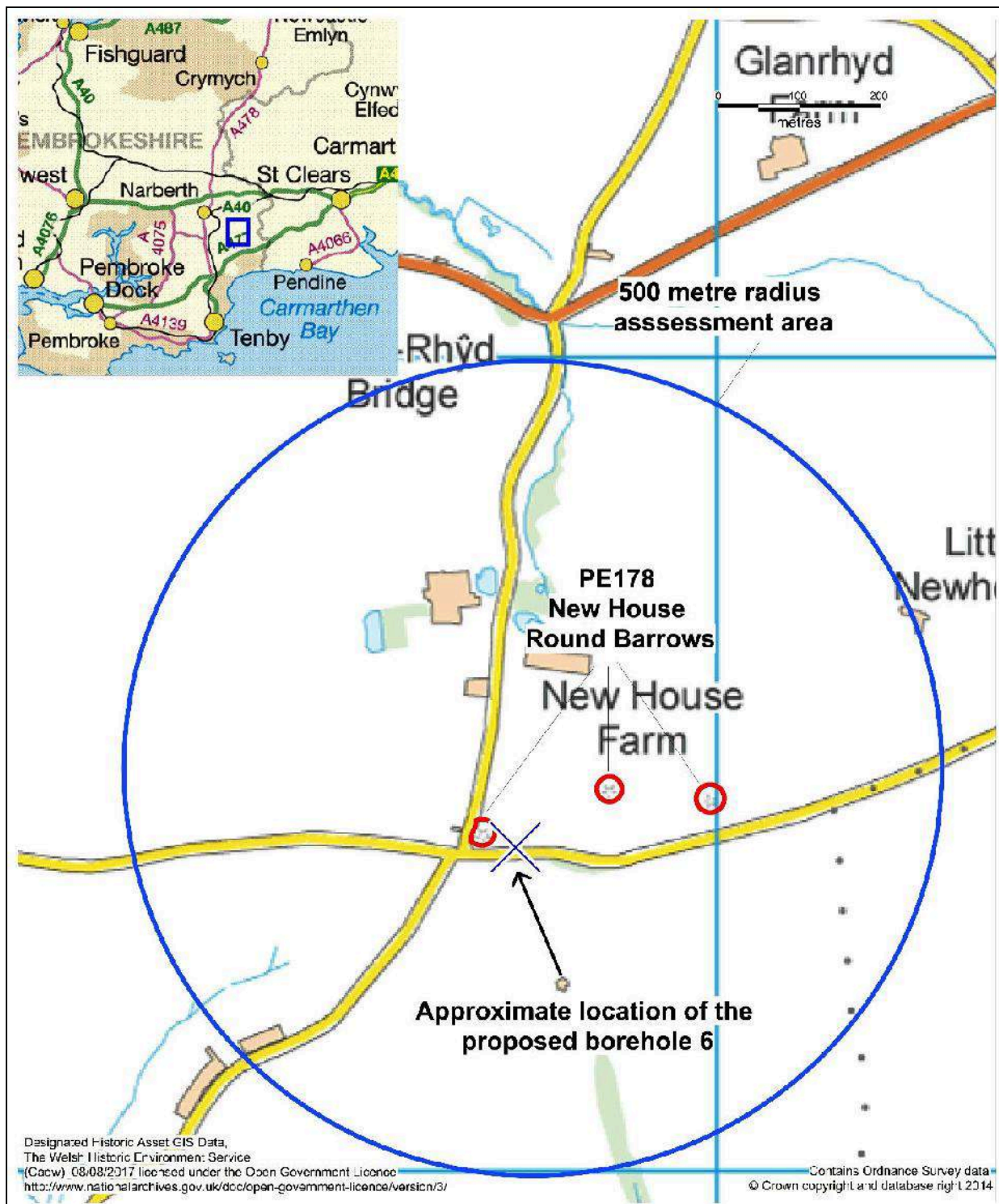


Figure 1: Location of the development, showing the 500 metre radius assessment area.

4. The development

- 4.1 It is proposed that a building is erected around an existing borehole, Borehole 6, which is used to extract water carried by an underground pipe to the nearby water bottling and distribution plant. The existing extraction pipes above the borehole require shielding from the elements.
- 4.2 The building will be 4.85 metres by 3.15 metres and up to 3.135 metres high and constructed of stone-faced blockwork with double access door on one elevation. The flat roof is surrounded by a shallow parapet. There will be a hatch in the roof to allow access for cranes to extract or input machinery or pipes. The dimensions have been revised since Trysor prepared the specification in order to accommodate more equipment.
- 4.3 The well-head is currently covered by a dark green metal cabinet.
- 4.4 There are three other well-heads within the same field as Borehole 6.

5. Methodology

- 5.1 The desk-based assessment considered known historic assets within a 500 metre radius circle centred on SN1577511495, centred on borehole 8, 94 metres to the north-northeast (see Figure 1). This has helped develop an understanding of the archaeology and landscape of the surrounding area as well as assess any direct or indirect impacts, including impact on setting. Historic assets have been given an ID number for the purposes of this report, other reference numbers, such as regional HER PRNs are cross referenced in Appendix B.
- 5.2 Data from the regional Historic Environment Record held by Dyfed Archaeological Trust was acquired for the 500 metre assessment. Data on designated historic assets was obtained from Cadw.
- 5.3 Historic mapping was consulted. The maps used included the early 19th century Ordnance Survey Original Surveyors Drawings, as well as late 19th and 20th century 1:2500 scale Ordnance Survey mapping and the parish tithe map.
- 5.4 A site visit was made by Trysor to the development site, and the surrounding area, on August 30th, 2018. Visible archaeological features within the area that would be directly affected by the development were searched for and any information which might indicate that there had been a direct impact on the historic environment through the erection of the shed. The wider landscape was studied taking note of topography, vegetation and structures and the impact on the setting and therefore the significance of historic assets (Cadw, 2017).
- 5.5 Aerial photographs on Google Earth, dating to 2006, 2009 and 2017 were used to inform the assessment as well as aerial photographs from

1947, 1969 and 2013 available from the Welsh Government Aerial photographic unit online. LiDAR data of 2 metre resolution was available for the assessment area.

- 5.6 Modern mapping was used to assess current public access.
- 5.7 All information gathered during the desktop assessment and site visit was entered into a bespoke database created in Access 2003 to form an assessment dataset.
- 5.8 The final dataset is the source of the material output in this report, including the GIS mapping which illustrates the location of historic assets in the area, and the tables and appendices which provide detailed information on the historic assets within the study area.
- 5.9 Each of the records in the final assessment 500 metre dataset was assessed for Period, Rarity, Documentation, Group Value¹, as well as Evidential Value, Historical Value, Aesthetic Value, Communal Value² and Setting³. Once these had been considered the significance of each historic asset was determined and scored in accordance with the categories adopted by the Welsh Archaeological Trusts i.e. Nationally Important, Regionally Important, Locally Important, Minor and Features Needing Further Investigation (Unknown), see Figure 4. Full details of this exercise are given in Appendix B. The setting of nationally important historic assets is given in Appendix C.
- 5.10 The Direct and Indirect impact on each historic asset was assessed taking into account both physical and non-physical impacts. Each impact was assessed as to whether it was Positive, Negative or Neutral, and the level of impact within the scale Very Low, Low, Moderate, High and Very High, taken into account the significance of the historic asset and the nature of the impact. Any impacts were reviewed to assess if the impact made a change to the significance of the historic asset.

¹ Period, Rarity, Documentation and Group Value are criteria defined in the Welsh Office Circular 60/96, 1996.

² Evidential Value, Historical Value, Aesthetic Value and Communal Value are criteria defined in Cadw's Conservation Principles publication, 2011.

³ Setting as defined in Cadw's Setting of Historic Assets in Wales, 2017

6. The Development Site

6.1 The development site is located in a pasture field on undulating land on the northwestern flank of a low hill. The land falls away gently to the north towards the valley of a tributary stream of the Afon Marlais. It is one of several hills which rise above the upper reaches of this stream valley, which restrict views from the development site to the east and west, leaving limited views to the north and south. The development site sits in a saddle or pass between two hills, linking the stream valley to the north with a separate stream valley to the south.

6.2 The development site is located on land immediately to the south of the Prince's Gate Water factory, Narberth, Pembrokeshire, which was founded on the land of New House Farm in 1991. The factory buildings are visible 200 metres to the north of the development site. Several boreholes drilled to pipe spring water to the factory are found in the same field as the development site, Borehole 6, and Borehole 8 which will be subject to a separate planning application and for which a separate historic environment desk-based assessment has been prepared.

6.3 The underlying bedrock is composed of sedimentary rocks of the Milford Haven Group, which belong to the Devonian and Silurian Periods and were deposited along river courses some 408 to 427 million years ago. The bedrock is masked by later superficial deposits and the soil here is classed as a freely draining, slightly acid loam of low fertility but highly suited for use as pasture.

7. Archaeological Overview

7.1 The development site is situated in an area of relatively high ground above a minor tributary valley which lies to the north. Important Bronze Age and Iron Age sites are known across the hills of the area, suggesting a permanent presence of human communities here in prehistory.

7.2 Palaeolithic and Mesolithic (250,000BC – 4,000BC).

7.2.1 There are no records of artefacts or sites associated with the Palaeolithic period within the 500 metre radius assessment area. This period includes the last Ice Age, when population levels were very low in southwest Wales and evidence of human activity scant.

7.2.2 After the Ice Age, the improvement in climate saw the country swathed in deciduous forests. These proved ideal hunting grounds for small groups of hunter-gathers during the Mesolithic period (10,000BC to 4,000BC). The flint tools used by these hunters are often encountered in Pembrokeshire and this area is no exception. Archaeological excavations on the course of the LNG pipeline through the county included work undertaken in 2006 just to the east of Glan-rhyd Bridge, located in the valley to the north of the development site (Barber, A. & Hart, J., 2014). These excavations uncovered a small number of flint artefacts of Mesolithic date, including a backed flint knife blade. These finds demonstrate that Mesolithic hunters would have been present in the landscape surrounding the development site.

7.3 Neolithic and Earlier Bronze Age (4000BC – 1500BC).

7.3.1 The Neolithic period saw the arrival of agriculture and the development of the first settled agricultural communities in the Welsh landscape. This process expanded during the Bronze Age, when the first metal tools and weapons were introduced.

7.3.2 Pembrokeshire is well known for its wealth of Neolithic archaeology, which includes a number of important chambered tombs, which were communal burial places used by the communities across the region. A damaged burial chamber is known at Llan-mill, 2.8km to the northwest (PE026). This burial chamber is located on the northern side of the stream valley which runs from New House Farm towards Llan-mill and the Marlais valley, which suggests that Neolithic people frequented the valley and its surrounding area.

7.3.3 Despite this, there is scant evidence of Neolithic activity around Princes Gate. There are at present no known sites dating to the period within the 500 metre radius assessment area, although the 2006 excavations at Glan-rhyd Bridge discovered a small number of early Neolithic flint artefacts (Barber, A. & Hart, J., 2014). A series of "burnt mounds", or cooking hearths were also found during the excavations. One of these was radiocarbon dated to the late Neolithic period, between 2700 and 2500 cal. BC. This example included a trough cut into the clay subsoil, a mound of burnt stone and charcoal and a concentration of hazelnut

shells, which suggest that the nuts were used in a cooking process. This discovery is clear evidence that a settled farming community existed in the area by the end of the Neolithic period.

7.3.4 The excavations at Glan-Rhyd Bridge also revealed at least a further six burnt mounds which were radiocarbon dated to the early to mid-Bronze Age and show evidence of people returning to use the site from approximately 2400BC until 1200BC, a remarkable date range (Barber, A. & Hart, J., 2014).

7.3.5 The purpose of “burnt mounds” has never been fully understood. Typically such sites consist of mounds of burnt stone and charcoal, near a stream or water source, sometimes with evidence of clay or wooden troughs to direct and store water. Artefacts are notable by their absence. Traditionally they have been thought of as cooking places, where heated stones could be dropped into water to be used for cooking. An alternative explanation is that these are the sites of sweat-lodges or saunas, possibly used in ritual activities.

7.3.6 The presence of the burnt mounds suggests that an organised Bronze Age community was present in the area, although the location of any settlement has not been established. The presence of the New House Round Barrow Cemetery (Scheduled Monument number PE178) within the field of the development site strengthens this theory. The cemetery consists of three earthwork round barrows, which would have been erected over cremation burials during the early to mid-Bronze Age, the period during which there was activity at the Glan-rhyd burnt mounds. It is perhaps significant that this round barrow group faces northwards, from high ground overlooking the stream valley where the burnt mound group has been discovered. It is possible that the barrows and the burnt mounds were created by the same Bronze Age community.

7.4 Later Bronze Age and Iron Age (1500 BC – AD43).

7.4.1 The Iron Age is a period characterised by the frequent remains of Hillforts and Defended Enclosures in the Welsh landscape, some excavated examples of which have been found to have their origins in the late Bronze Age.

7.4.2 There are two important Iron Age defended settlements recorded within a kilometre of the proposed development site. Their presence indicates that settled Iron Age communities existed in the district. Some 890 metres to the west-northwest of the development site is the scheduled hillfort known as Castell Meherin (Scheduled Monument number PE034), which occupies the top of a prominent hill. Castell Meherin consists of two adjacent enclosures, both now best seen from the air as their earthworks have become denuded. The western enclosure is the smallest and is oval in form, defined by a single bank and ditch, outside which is a counterscarp bank. The eastern enclosure

lies immediately alongside and is three times larger and is also an oval, univallate enclosure, but appears to have an outer annexe or outwork at its eastern side. Approximately 1.07km to the northwest of the development site is the smaller promontory fort known as Blaengwaith Noah Camp (Scheduled Monument number PE085). This fort has been constructed on a spur of land above a stream confluence, with an earthwork rampart and ditch raised across the level ground approaching the spur. A possible Defended Enclosure (PRN52390), identified only on aerial photographs, just west of New House Farm, has been discounted by the Dyfed Archaeological Trust.

7.5 Roman (AD43 – AD410)

7.5.1 There is no recorded evidence of activity during the Roman period within the 500 metres radius assessment area.

7.6 Early Medieval (AD410 – AD1100).

7.6.1 There is no evidence of Early Medieval activity within the 500 metre assessment area.

7.7 Medieval (AD1100 – AD1539).

7.7.1 There is no recorded evidence of Medieval activity within the 500 metre radius assessment area.

7.8 Post Medieval & Industrial (AD1539 – present day).

7.8.1 The landscape around the proposed development site is now dominated by the post-medieval field system which was created by the 19th century and saw the land enclosed into field parcels divided by banks and hedgerows. Historic field name evidence around the development site, recorded on the parish tithe maps of the 1840s, such as *Waun Fach (Little Marsh)* - the original name of the field in which the development site is located, and *Mountain uchaf*, suggest that the land here was open, upland pasture during Medieval and early Post-Medieval times.

7.8.2 The field system at the development site is associated with New House Farm. The earliest accurate maps we have include the Ordnance Survey's Original Surveyors Drawings of 1809 which show that New House Farm was in place by that time, see Figure 2. The map also shows that the surrounding landscape appears to have already been enclosed, which suggests that the field system here has its origins in the period before the 19th century. The name of the nearby farm of New House indicates that the land may not have been settled until the 17th or 18th centuries.

7.8.3 The area around the development site was characterised by working farmsteads from the early 19th century onwards. During the later 20th century the character of the landscape began to change, with the introduction of a small telephone exchange building at the road junction to the southwest by the 1960s. In 1991, the Princes Gate Water factory

was established at New House Farm. This factory has grown over the past three decades and continues in production. On the hill to the west of the development site, in the direction of the Castell Meherin hillfort, two large wind turbines have been erected in recent times. These additions give the local landscape a much more developed or industrial character, which is increased by the relatively busy flow of traffic along the Tavernspite to Templeton road to the south of the development site, and the traffic generated by the water factory.



Figure 2: The 1809 Ordnance Survey Original Surveyors Drawing shows a New House Farm and indicates that the land around the development site was enclosed by the post medieval field system. The stream valley to the north of the development site is clearly visible as a shaded area.



Figure 3: The 1819 Ordnance Survey 1:63360 gives a clearer representation of the area, but does not show field boundaries.

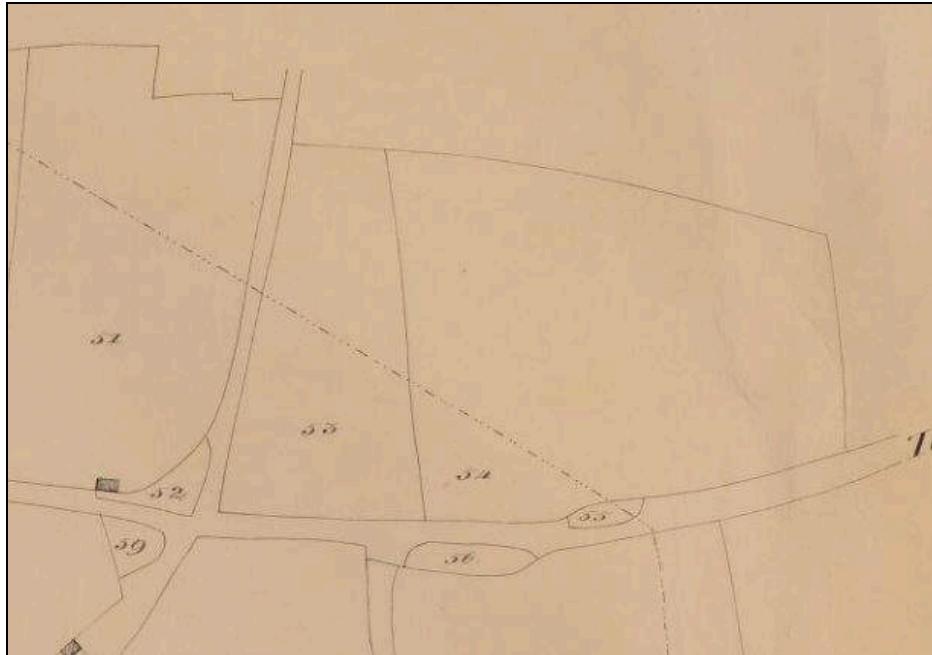


Figure 4; An excerpt from the Ludchurch parish tithe map of 1841. The development site falls within field parcel number 53, which is named as Waun Fach on the tithe schedule.

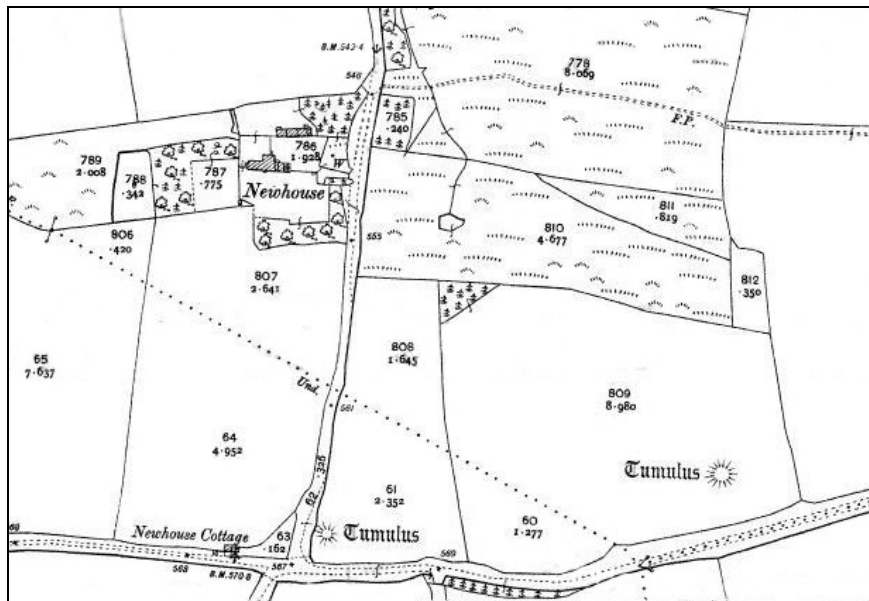


Figure 5; The 1907 1:2500 scale Ordnance Survey map shows two of the tumuli or round barrows of the New House Round Barrow Cemetery. The denuded central barrow is not shown on this map. The Princes Gate Water factory stands in field parcel 810 and 811 but also encroaches into parcels 808 and 809.

8. Data Collation

8.1 The DAT HER enquiry for the 500 metre radius assessment area yielded 9 records for historic assets.

8.2 Out of the 9 records, 1 was removed from the project dataset: this was for an overall record linking the barrow group with other possible features in the landscape. For fuller details see Section 14.

8.3 No new records were created in the project database by Trysor for this project.

8.4 After the site visit, the historic map search, the evaluation and the rapid assessment of the readily available data the final dataset for the 500 metres radius assessment area contained 8 records for historic assets.

9. Assessment of Significance

9.1 The significance of each historic asset was determined and scored in accordance with the categories adopted by the Welsh Archaeological Trusts i.e. Nationally Important, Regionally Important, Locally Important, Minor and Features Needing Further Investigation (Unknown), see Figure 7. Full details of the results of this exercise are given in Appendix B.

9.2 Within the 8 records there were 4 records linked to a single Scheduled Monument, and no Listed Buildings.

Table 1: Significance of assessed historic assets

ID Number	Historic Asset Name	Historic Asset Type	Significance	Historic Asset Status
8	NEW HOUSE	DEFENDED ENCLOSURE	Minor Importance	
1	NEWHOUSE (WEST);NEWHOUSE A	ROUND BARROW	Nationally Important	Scheduled Monument
2	NEWHOUSE (EAST);NEWHOUSE B	ROUND BARROW	Nationally Important	Scheduled Monument
3	NEWHOUSE (CENTRAL);NEWHOUSE C	ROUND BARROW	Nationally Important	Scheduled Monument
7	NEWHOUSE ROUND BARROW GROUP	ROUND BARROW CEMETERY	Nationally Important	Scheduled Monument
4	LITTLE NEWHOUSE;NEWHOUSE D	STANDING STONE (POSSIBLE)	Unknown	
5	NEWHOUSE	ROUND BARROW,RING BARROW (POSSIBLE)	Unknown	
6	NEWHOUSE	ROUND BARROW (POSSIBLE)	Unknown	

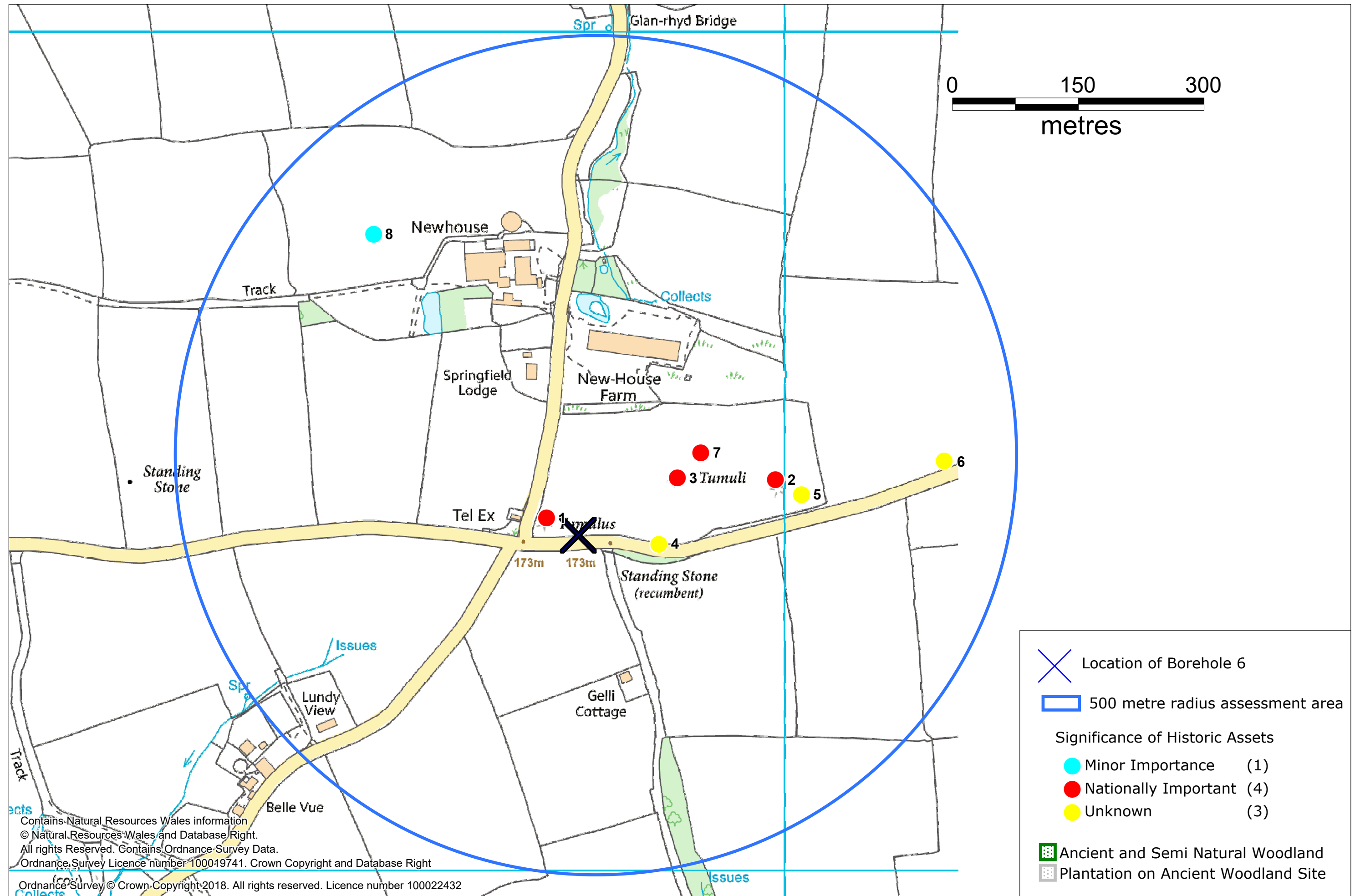


Figure 6: The 500 metre assessment area showing significance of historic assets, labelled with Project ID number

10. Assessment of Impact

10.1 The Direct and Indirect impact on each historic asset was assessed taking into account both physical and non-physical impacts, and whether the impact was Positive, Negative or Neutral. Each impact was assessed within the scale Very Low, Low, Moderate, High and Very High, taking into account the significance of the historic asset, including its setting and the nature of the impact. A full table is found in Appendix B but a summary is tabulated in Table 2 below and illustrated in Figures 7 and 8.

Table 2: Impact on assessed historic assets within the 500 metre radius assessment area

ID Number	Historic Asset Name	Historic Asset Type	Level of Direct Impact	Level of Indirect Impact	Level of Impact on Setting	Level of Impact on Significance
1	NEWHOUSE (WEST); NEWHOUSE A	ROUND BARROW	None	Moderate Negative	Moderate Negative	None
2	NEWHOUSE (EAST); NEWHOUSE B	ROUND BARROW	None	Low Negative	Low Negative	None
7	NEWHOUSE ROUND BARROW GROUP	ROUND BARROW CEMETERY	None	Low-Moderate Negative	Low-Moderate Negative	None
3	NEWHOUSE (CENTRAL); NEWHOUSE C	ROUND BARROW	None	Low-Moderate Negative	Low-Moderate Negative	None
4	LITTLE NEWHOUSE; NEWHOUSE D	STANDING STONE (POSSIBLE)	None	None	None	None
5	NEWHOUSE	ROUND BARROW, RING BARROW (POSSIBLE)	None	None	None	None
6	NEWHOUSE	ROUND BARROW (POSSIBLE)	None	None	None	None
8	NEW HOUSE	DEFENDED ENCLOSURE	None	None	None	None

10.2 Table 2 shows that within a 500 metre radius of the proposed development, only the scheduled Round Barrow Cemetery at New House (PE178), consisting of three separate barrows, would be exposed to a negative impact from the development. Full details of the assessment of direct and indirect impact for each of the historic assets in Table 2 can be found in Appendix B.

10.2.1 The proposed development would result in a Low-Moderate Negative impact on the setting of the Round Barrow Cemetery, although there would be a Moderate Negative impact on the western barrow of the group. It should be noted that this assessment shows that the setting of the monument has already been considerably changed by post-medieval farming and modern agricultural and industrial development.

10.2.2 There would be no impact on the Significance of the Round Barrow Cemetery, however. It is of national importance and scheduled for its group value, condition and archaeological potential. Setting is not

mentioned as a factor in the scheduling and was not considered to contribute substantially to significance by this assessment.

10.3 Four recorded historic assets would be unaffected by the development.

10.4 There are no Listed Buildings within the 500 radius assessment area.

10.5 There are no Registered Historic Parks and Gardens within the 500 metre assessment area.

10.6 There are no World Heritage sites within the 550 metre assessment area.

10.7 The development site does not lie within a registered Historic Landscape.

10.8 The development lies within the Newhouse LANDMAP Historic Landscape Aspect Area (MNTGMHL309), see Figure 9, which is described as; *"Newhouse is a medium-sized aspect area (10.23 sq km) essentially occupying a flat lowland ridge. It comprises medium-large regular enclosures, some of which, particularly towards the east, may be relict medieval strip fields. Very little woodland is present, although there are a number of planted shelter belts at the west end which are associated with a gentry house. The area is crossed by a modern road, which was formerly a turnpike and features a listed milestone. Characteristic of this area is the lack of modern development. Settlement is dispersed, slight and scattered, and is mainly represented by small informal farms. Little other settlement is present, although two former parsonages are listed buildings, and there is a gentry house, with a lodge. A caravan park is also present. The area is rich in prehistoric monuments including a bronze age barrow cemetery (part-scheduled), another scheduled round barrow, a standing stone and a scheduled iron age defended settlement. Recorded archaeology is otherwise restricted to post-medieval buildings, documented sites and a disused quarry. Summary of the most significant archaeological elements: prehistoric funerary and ritual sites, iron age hillforts, post-medieval buildings and other structures. There are a number of individual wind turbines within this aspect area."*

10.8.1 The overall evaluation of this aspect area is High and the justification is given as *"The overall value of this aspect area has been assessed as high, based on the diverse, multi-period scope of the archaeological resource, distinguished particularly by the survival of two important prehistoric ritual/funerary complexes at Newhouse Barrows and Crug Swllt, W of Tavernspite, both of which offer considerable potential for further investigation."*

10.9 The development area lies within the extensive Lowlands LANDMAP Cultural Landscape Aspect Area (PMBRKCL196), see Figure 10, which is described thus; *"The lowland part of Pembrokeshire, characterised by rich farmland, English speaking communities, residential and*

commercial expansion. The settlement patterns are historically rich, and the area also includes the Landsker castles as well as more modern defensive structures around Milford Haven."

- 10.9.1 The overall evaluation of this aspect area is High and the justification is given as *"This is an area that is experiencing cultural change as the economics of rural land use are influencing the types of crops grown, the size of actual farms and other human geography."*
- 10.10 There are no conservation areas within the 500 metre radius study area.
- 10.11 During the field visit, no physical, visible evidence was noted suggestive of buried archaeology on land which would be affected by the development. The development would, however, take place in close proximity to a Bronze Age Round Barrow Cemetery. Three round barrows have been identified within this group, and it has been postulated that a fourth barrow may exist, as well as the site of a now lost standing stone. There is clearly a high level of archaeological potential within the field parcel and therefore any ground-breaking work, such as the excavation of foundations or pipe-laying should be subject to archaeological mitigation.
- 10.12 No palaeoenvironmental potential was identified at the development site.
- 10.13 There are no place-names identified on the list of Historic Place Names in Wales within the development area, (RCAHMW, 2018)
- 10.14 There are no field names of archaeological significance at the development site. The field in which the development is located was two fields when the tithe survey was undertaken in the 1840s. The smaller western field in which the development will be located was known as *Waun Fach* on the Ludchurch 1841 tithe map. The eastern field was *Park y Bank*.
- 10.15 No boundary banks will be removed by the development.

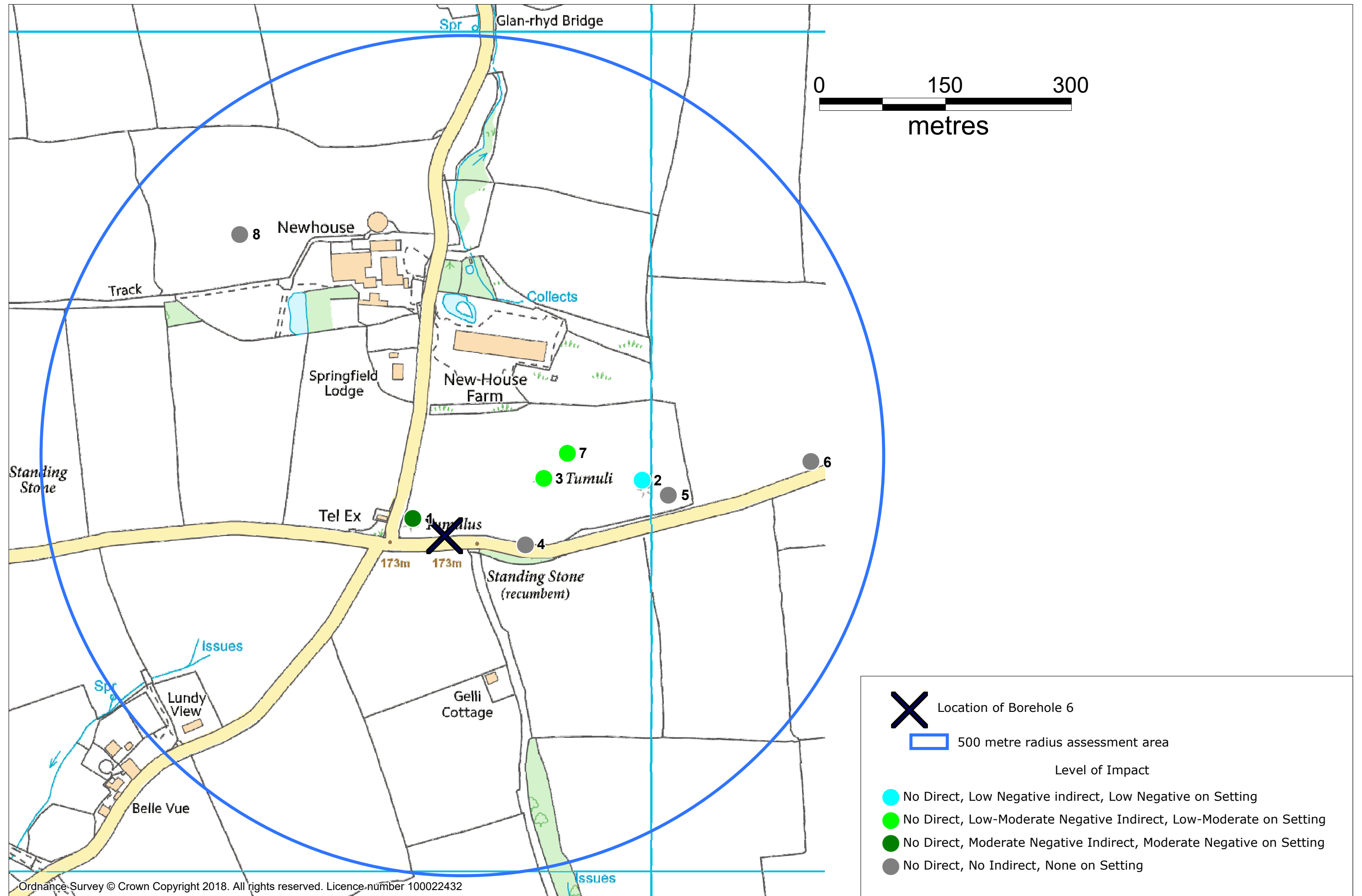


Figure 7: The 500 metre assessment area showing the impact on the recorded historic assets, labelled with Project ID number

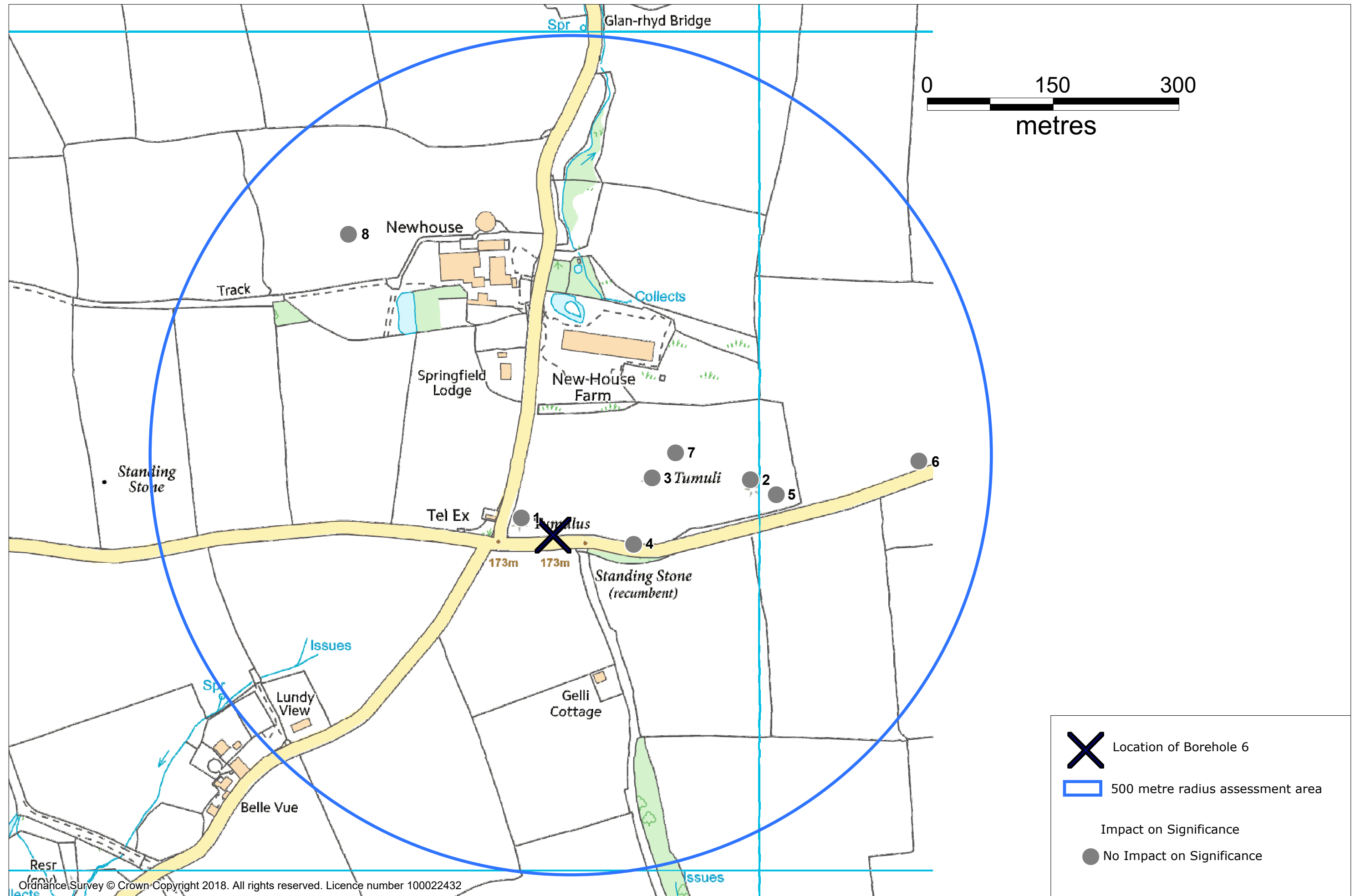


Figure 8: The 500 metre assessment area showing the impact on the significance of the recorded historic assets, labelled with Project ID number



Figure 9: The 500 metre assessment area showing the LANDMAP Historic Landscape aspect, labelled with LANDMAP Aspect Area Numbers



Figure 10: The 500 metre assessment area showing the LANDMAP Cultural Landscape aspect, labelled with LANDMAP Aspect Area Number

11. Conclusion

11.1 The development would cause a Low-Moderate Negative impact on the setting of the scheduled New House Round Barrow Cemetery (PE178). There would be a Moderate Negative impact on the western barrow in the group, due to the proximity of the development to that barrow. The proposed development would not impact on the Significance of the monument, however, either as individual round barrows or as a group of round barrows.

11.1.1 Mitigation has been applied during the design stage, with the size of the structure decreased, a proposed access track and paving around the structure withdrawn. Unobtrusive grass reinforcement mesh would be used for the trackway to reduce impacts.

11.1.2 To reduce the visual impact of the well-head structure, consideration should be given to facing the building with a stone sympathetic in colour and texture to the vernacular style of the Princes Gate district.

11.1.3 It is not recommended that screening planting is sought in this case, ensure that the relatively open landscape of the field in which the barrow cemetery now stands is preserved. Adding more trees or shrubs into the environment close to the western barrow would also increase the footprint of the development, causing a greater physical impact on buried archaeology. Trees growing around the well-head building could also make more of an impact on the sight-lines between the eastern and western barrows in the barrows cemetery.

11.1.4 Similarly landscaping and creating earthwork bunds is not appropriate, as it would create earthwork features which could detract from the barrows themselves, and would require more ground disturbance, or bringing in of soil from elsewhere.

11.2 There is a high potential for buried archaeology at the development site and its immediate environs, due to the proximity of the New House Round Barrow Cemetery, particularly the western barrow in the group.

11.2.1 Archaeological mitigation should be considered for groundworks associated with the proposed development, including the excavation of foundations for the well-head structure and any pipeline trenches.

12. Reporting

12.1 Copies of this report will be provided to the client, National Monument Record and the Regional Historic Environment Record.

13. References

13.1 Map sources

Ordnance Survey, 1809, 2" to 1 mile Original Surveyors drawing

Ordnance Survey, 1819, 1 inch to 1 mile (1;633360) First Edition Series,

Ordnance Survey, 1889, 1:2500, 1st edition

Ordnance Survey, 1907, 1:2500 2nd edition
Ordnance Survey, 1970, 1:2500
Ludchurch Parish, Tithe Map, 1841

13.2 Web-based materials

British Museum, 2016, *Online Gallery: Ordnance Survey Drawings*
<http://www.bl.uk/onlinegallery/onlineex/ordsurvdraw/index.html>
accessed 18/09/2018
Welsh Tithe Maps – Places of Wales, 2018
<https://places.library.wales/>
accessed on 18/09/2018
RCAHMW, 2018, List of Historic Placenames,
<https://historicplacenames.rcahmw.gov.uk/placenames/map>
accessed on 18/09/2018

13.3 Published sources

Cadw, 2010, *Conservation Principles for the Sustainable Management of the Historic Environment in Wales*
Cadw, 2017, *Setting of Historic Assets in Wales*

13.4 Unpublished Sources

Barber, A. & Hart, J. , 2014 , *Land East of Glan-rhyd Bridge, Lampeter Velfrey, Pembrokeshire: Archaeological Excavation*, Cotswold Archaeology report number 13249, DAT HER event PRN 108821

Trysor, 2018, *Specification for an Historic Environment Desk-Based Assessment for Proposed Building to Cover Borehole and Pipes at Princes Gate Springwater, Pembrokeshire*

13.5 Data Sources

Dyfed Archaeological Trust, Historic Environment Record, data received 04/09/2018 – Enquiry Number 1070
Cadw, Listed Building all-Wales dataset, downloaded March 2017
Cadw, Parks and Gardens all-Wales dataset, downloaded August 2015
Cadw, Scheduled Ancient Monument all-Wales dataset, downloaded March 2017
Cadw, Registered Historic Landscapes dataset, supplied June 2014

14. Reliability & Limitations of Sources

- 14.1 In line with the requirements of the CIfA Standards & Guidance notes for Desk-based Assessments (Point 3.3.6), the following observations on the usefulness and reliability of the sources used have been made.
- 14.2 The cartographic sources used include a range of Ordnance Survey maps produced during the 19th and 20th centuries, all of which provided sufficiently clear and accurate representations of the evolving landscape of the assessment area.
 - 14.2.1 The earliest map source was the 1813 Ordnance Surveyors Original Surveyors Drawings, of which reasonably clear digital copies are available through the British Museum website.
 - 14.2.2 The parish tithe map and apportionment for Ludchurch of 1841 and the parish tithe map and apportionment for Lampeter Velfrey of 1842 are available for inspection at the National Library of Wales and on the website "Welsh Tithe Maps". The tithe map and apportionment are both clear and informative sources.
- 14.3 The main source of data for the assessment was the Dyfed Archaeological Trust HER. The HER data supplied by the Dyfed HER was generally of reasonable quality although some records had not been updated and some did not conform to glossaries.
- 14.4 Data from the National Monuments Record was generally accurate, although limited in the number of records and their relevance to the assessment.
- 14.5 There were no Listed Buildings.
- 14.6 Google Earth aerial images of the assessment area were also used online and provide reasonable coverage for the whole assessment area.
- 14.7 LiDAR imagery available from Natural Resources Wales was of good quality for this area, and helped confirm existing sites, but did not show any new features in close proximity to the development site.
- 14.8 RCAHMMs' List of Historic Placenames in Wales website was consulted but held no information of relevance to this assessment. More detail could be gained from historic maps which were consulted in the course of the assessment. The locational information on the place-names website is poor, and the names often do not relate accurately to the location shown.

Table 4: Comments on HER data supplied by DAT

DAT HER PRN	Historic Asset Name	Historic Asset Type	Record created?	Trysor comments
3792	NEWHOUSE (WEST); NEWHOUSE A	Round Barrow	Record created	Broadclass did not conform to glossary
3793	NEWHOUSE (EAST); NEWHOUSE B	Round Barrow	Record created	Broadclass did not conform to glossary
3794	NEWHOUSE (CENTRAL); NEWHOUSE C	Round Barrow	Record created	Broadclass did not conform to glossary
3795	LITTLE NEWHOUSE;NEWHOUSE D	Standing Stone	Record created	Broadclass did not conform to glossary
8309	NEWHOUSE	Round Barrow, Ring Barrow	Record created	Broadclass did not conform to glossary
12873	NEWHOUSE	Round Barrow	Record created	Broadclass did not conform to glossary
47435	NEWHOUSE ROUND BARROW GROUP	Round Barrow Cemetery	Record created	
47436	NEWHOUSE PREHISTORIC MONUMENT COMPLEX	Prehistoric Monument Complex	No record created	Not necessary for this assessment, Round Barrow Group used
52390	NEW HOUSE	Defended Enclosure	Record created	Not mentioned in report 2004/100 as given in sources.. It is mentioned in REPORT NO. 2007/01, event 54269 as a rejected Defended Enclosure on page 83.

Jenny Hall & Paul Sambrook
Trysor,
September, 2018

Appendix A: Specification

The following specification was written for a separate application for a well-head structure at Borehole 8. The two applications are similar in most respects and therefore a new specification has not been prepared for Borehole 6 at this point.

The important differences between the two application sites are;

- The two boreholes are in different locations within the field; Borehole 6 is found at SN1575411403 and Borehole 8 is found at SN1577511495.
- The dimensions of the well-head structures at each borehole are also different. The revised size of the structure at Borehole 8 would measure 5.65 long, by 5.10 metres and up to 3.5 metres high, larger than the original measurements submitted in the specification. The structure at Borehole 6 has been reduced in size to 4.85 metres long, by 3.15 metres wide and 3.35 metres high, in order to lessen its impact on the landscape and the setting of the New House Round Barrow Cemetery.

**SPECIFICATION FOR AN HISTORIC ENVIRONMENT
DESK-BASED ASSESSMENT FOR
PROPOSED BUILDING TO COVER BOREHOLE AND PIPES
AT PRINCES GATE SPRINGWATER, PEMBROKESHIRE**

1. Introduction

1.1 Princes Gate Springwater of The Well Fields, Princes Gate, Narberth, Pembrokeshire, Wales, SA67 8JD has commissioned Trysor heritage to undertake an historic environment desk-based assessment for a proposed building to cover the spring water borehole and pipes.

2. The proposed development

2.1 It is proposed that a building is erected around an existing borehole that is used to extract water which is then carried by a short pipeline to the nearby water bottling and distribution plant. The existing extraction pipes above the borehole require shielding from the elements.

2.2 The building will be 2.5 metres by 3 metres x 3.5 metres high and constructed of natural local stone with a single access door on one elevation, with a flat roof surrounded by a parapet. There will be a hatch in the roof to allow access for cranes to extract or input machinery or pipes.

3. Planning context of the proposed development

3.1 A planning application has not been submitted yet.

4. Objective of the Written Scheme of Investigation

4.1 The objective of this written scheme of investigation (WSI) is to specify the method to be used for a desk-based assessment in order to identify and assess impact, both direct and indirect on the historic environment and historic assets, from the proposed development.

4.2 The Chartered Institute for Archaeologists' Standard and Guidance for Historic Environment Desk-based Assessment (CIfA, 2017) and Cadw's Setting of Historic Assets (Cadw. 2017) were used to write this Written Scheme of Investigation.

5. Nature of the Archaeological Resource.

5.1 The development site lies approximately 100 metres to the southwest of the main block of the existing buildings at Princes Gate Springwater, 1.75 kilometres to the east northeast of Ludgate, Pembrokeshire.

5.2 The proposed building will stand in the same field as Scheduled Monument PE178 New House Round Barrows. The scheduled monument consists of three round barrows that all lie within the same field. Two of the barrows, to the east and west, are still in good condition and measure over 22 metres in diameter and 1.3 metres high (East – HER PRN 3793 & NMR NPRN 400216 and West - HER PRN 3792 & NMR NPRN 400215). The central barrow is of a similar size but now much denuded (HER PRN 3794 & NMR NPRN 304251).

5.3 A stone, thought to be a Bronze Age standing stone, is shown on historic Ordnance Survey maps as being on the southern boundary of the field but the stone was not located in 2003 during the Cadw grant-aided review of prehistoric funerary and ritual monuments across Wales (HER PRN 3795 & NMR NPRN 304250).

5.4 Another possible barrow has previously been identified within the field (HER PRN 8309) and another in the field to the east (HER PRN 12873) although neither of these can now be seen above ground, but below ground archaeology may remain.

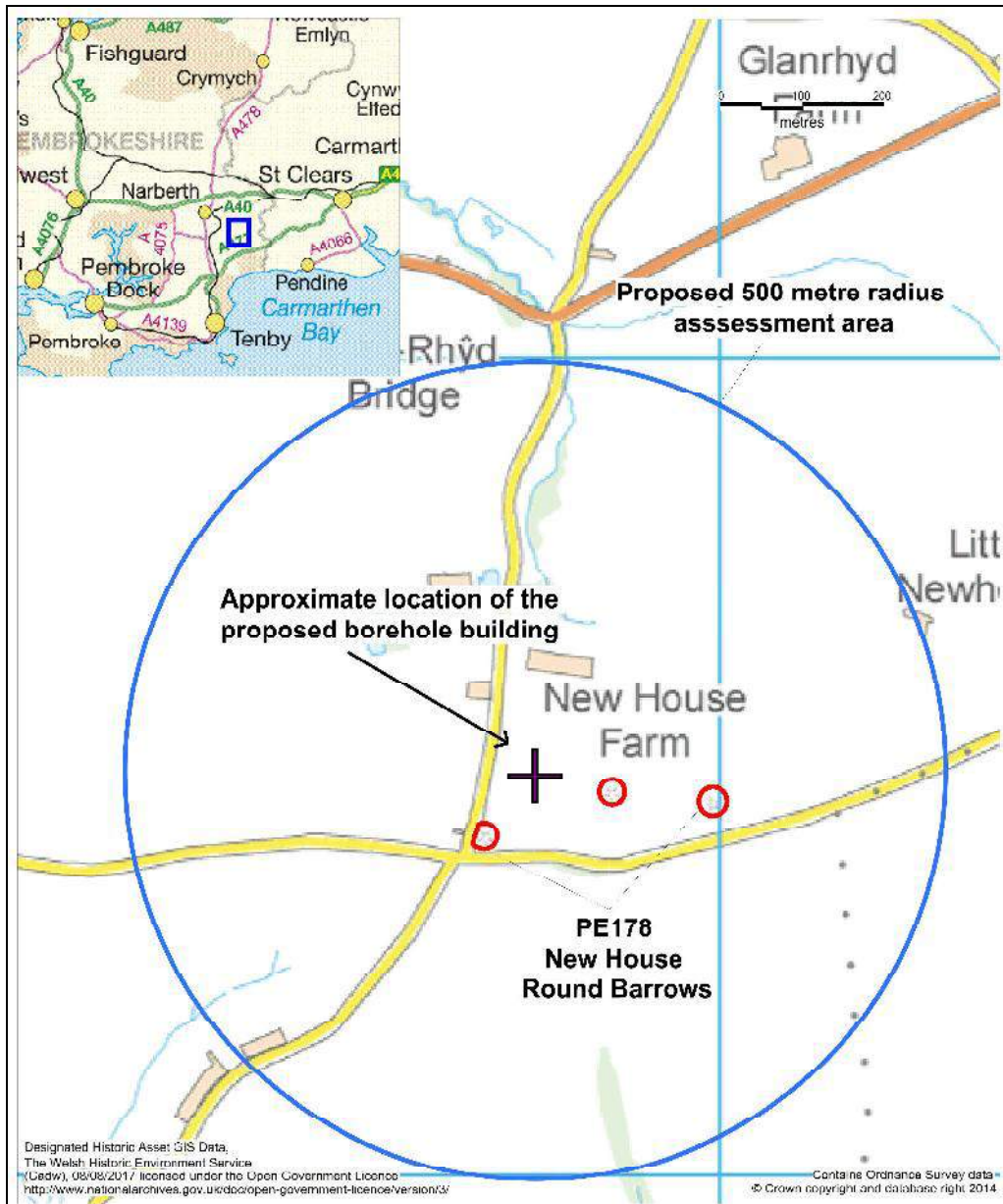


Figure 1: The approximate location of the development area and the proposed 500 metre assessment area.

6. Scope of Work

6.1 The assessment will consider known historic assets within a 500 metre radius circle centred on SN1577511495 (see Figure 1). This study area may be revised once the importance, proximity and intervisibility of the sites have been established.

6.2 The desk based assessment will evaluate previous recorded historic assets, record previously unidentified historic assets and assess the potential for buried features in the development area, as well as the impact on the setting of historic assets.

7. Methodology

7.1 The following components of the historic environment will be considered, where relevant;

- a. Scheduled Monuments and their settings.
- b. Listed buildings and their settings.
- c. Registered Parks and Gardens and their essential settings.
- d. World Heritage Sites
- e. Conservation Areas
- f. Previously recorded non-designated historic assets and their settings,
- g. Buildings identified as of Local Importance where such buildings have been identified
- h. Newly identified historic assets, and their settings
- i. Historic Landscapes, and their characterisation
- j. Hedgerows and field patterns
- k. Ancient woodland
- l. Place-name evidence
- m. Cumulative impacts
- n. Any agri-environmental interests or requirements, e.g. Environmental Stewardship or Countryside Stewardship scheme
- o. Potential for buried archaeological
- p. Potential for palaeoenvironmental evidence

7.2 The following data sources will be consulted:

- Pembrokeshire Historic Environment Record
- Cadw
- RCAHMW
- Historic Ordnance Survey maps
- Other historic maps including parish tithe map
- Aerial photographs
- Documentary sources
- Published journals

7.3 A site visit will be carried out in accordance with Chartered Institute for Archaeologists' *Standard and Guidance for an Historic Environment Desk-based Assessment* (CifA, 1014a). The site visit will be record any unknown features in the vicinity of the proposed development. It will also assess the condition of known historic assets and an examination and record will be made of the nature of adjacent field boundaries. A rapid record of features will be made, including a written description on pro-forma record sheets. The setting of historic assets will be assessed and photographs taken where appropriate.

7.4 Colour digital photographs will be taken, using a 16M pixel camera. A written record will be made on site of the photographs taken. Appropriate photographic scales will be used.

7.5 Once the dataset of existing and new data has been created, the significance of all identified historic assets will be assessed considering their evidential, historical, aesthetic and communal values (Cadw, 2010).

7.6 An assessment will be made of the development's potential impact on all historic assets, looking at direct physical, and indirect physical, and visual impacts. This will include impact on the setting of the historic assets in line with Cadw guidance (Cadw, 2017)

7.7 Elevation profiles, in conjunction with photos from the site visit and aerial photos, will be used assess to intervisibility, views and impact on setting. ZTV and photomontages from the client will be used if available. If a ZTV is not available Trysor will create one.

8. Reporting

8.1 A written report will be submitted to the client to inform the current planning application. The report will include;

- a. contents list
- b. a non-technical summary
- c. an introduction
- d. aims and objectives of the assessment
- e. methodology
- f. a site location plan
- g. a bibliography
- h. a gazetteer of all historic assets included in the assessment giving significance and impact, with descriptions.
- j. an assessment of the value and significance of each historic asset
- k. an assessment of the impact of the proposed development on the historic assets of the study area – impacts will be assessed whether negative or positive, direct or indirect and will include the impact on the setting of nationally important historic assets.
- l. statement of the local and regional context of the historic assets identified as have being impacted on by the development.
- m. statement on reliability of resources used during assessment.
- n. potential for buried archaeological features within the development plot

8.2 The report will be guided by the requirements of Annexe 2 of the Chartered Institute for Archaeologists' *Standard and Guidance for an Historic Environment Desk-based Assessment (CIfA, 2017)*. Copies of the report will be provided to the client and the Regional Historic Environment Record.

9. Health & Safety

9.1 Trysor will undertake a risk assessment in advance of any field visit in accordance with their health and safety policy.

10. Dissemination

10.1 A summary of the work undertaken and its findings will be submitted to *Archaeology in Wales*, if appropriate. A pdf copy of the report will be submitted to the regional Historic Environment Record (HER), as well as with the archive to the National Monuments Record (NMR).

11. Archive

11.1 The paper archive will be deposited with National Monuments Record. This archive will include all written, drawn and photographic records relating directly to the investigations undertaken. Digital archives will follow RCAHMW guidelines, (RCAHMW 2015).

12. Resources to be used

12.1 Jenny Hall, BSC, MCIfA and Paul Sambrook, BA, PGCE, MCIfA of Trysor will undertake the desk-based assessment and field walking. During the field visit and field walking they will be equipped with standard field equipment, including digital cameras, GPS and first aid kit. Trysor have access to the computer hardware and software required to deliver the completed final report and archive to a professional standard.

13. Qualification of personnel

13.1 Trysor is a Registered Organisation with the Chartered Institute for Archaeologists and both partners are Members of the Chartered Institute for Archaeologists, www.archaeologists.net

13.2 Jenny Hall (BSc Joint Hons., Geology and Archaeology, MCIfA) had 12 years excavation experience, which included undertaking watching briefs prior to becoming the Sites and Monuments Record Manager for a Welsh Archaeological Trust for 10 years. She has been a partner in Trysor since 2004 undertaking a variety of work that includes upland field survey, desk-based appraisals and assessments, watching briefs and evaluations as well heritage interpretation and community-based projects.

13.3 Paul Sambrook (BA Joint Hons., Archaeology and Welsh, MCIfA, PGCE) has extensive experience as a fieldworker in Wales. He was involved with Cadw's pan-Wales Deserted Rural Settlements Project for 7 years. He also undertook Tir Gofal field survey work and watching briefs. He has been a partner in Trysor since 2004 undertaking a variety of work including upland field survey, desk-based appraisals/assessments, watching briefs and evaluations as well as community-based, non-intrusive projects and community heritage interpretation.

14. Insurance & Professional indemnity

14.1 Trysor has Public Liability and Professional Indemnity Insurance.

15. Project identification

15.1 The project has been designated Trysor Project No. 2018/629

16. Sources

Cadw, 2010, Conservation Principles

Cadw, 2017, Setting of Historic Assets in Wales

Chartered Institute for Archaeologists (CIfA), updated January 2017, *Standard and Guidance for an Historic Environment Desk-based Assessment*.

RCAHMW, 2015, *RCAHMW Guidelines for Digital Archives*

Jenny Hall & Paul Sambrook
Trysor,
August 2018

Appendix B: Site Gazetteer

ID number: 1 NEWHOUSE (WEST);NEWHOUSE "A"
Round Barrow

HER PRN: 3792

NMR NPRN:

NGR: SN1571611422

Grid reference taken at centre of site

Period: Bronze Age

Broadclass: Religious, Ritual and Funerary

Form: Earthwork

Condition: Near Intact

Site Status: Scheduled Monument

SAM number:

LB number:

grade:

**Trysor
Description:**

This is a large round barrow, which still measures about 22 metres in diameter by 1.3 metres in height, despite its denuded condition within the farmed landscape. It is the westernmost of three barrows visible within the same field parcel on Newhouse Farm and adjacent to the buildings of the Prince's Gate Water factory. The three barrows make up barrow cemetery PRN 47435.

Rarity: Not rare

Distance from development: 32 metres to the west-northwest

Group Value: Part of Round Barrow Cemetery PRN47435

Evidential Value: Earthwork

Historical Value: Mentioned in archaeological sources

Aesthetic Value: None

Communal Value: None

Setting:

This is the western barrow in a group of three round barrows which can still be seen in close proximity. The three barrows formed a cemetery group and were presumably created by a Bronze Age community, living somewhere within the adjacent landscape. The location of any such settlement is not known, but it should be noted that a group of Bronze Age burnt mounds were excavated in 2006, approximately 700 metres to the north-northeast (PRN106790), when the LNG pipeline was laid down across Pembrokeshire. No artefacts were found in association with the burnt mounds, but radiocarbon dating showed that the site had been in use for some 1,570 years, from late Neolithic until the middle Bronze Age. It is possible that the community using the burnt mounds also raised the Newhouse Round Barrow Cemetery.

The three barrows are located in a natural saddle between two discrete blocks of higher ground to the west and the southeast. They are on the northern side of the saddle and therefore overlook ground which descends gently to the north-northwest. The saddle effectively acts as a pass linking two neighbouring stream valleys; to the north is a tributary valley of the Afon Marlais river, to the south is a stream valley which flows southwards towards Amroth and the coast. The location of the barrows in this pass may suggest that they stood alongside a routeway which was in use during the Bronze Age. They may also have acted as territorial boundary markers. They are on the northern side of the saddle and therefore overlook ground which descends gently to the north-northwest.

The land here has been farmed during post-medieval times and is now overlain by an extensive field system, defined by banks and hedges. It should be noted that the barrow group was divided by a post-medieval hedgerow until relatively recent times, with the western barrow in a separate field parcel to the central and eastern barrow. The original field

layout is shown on historic mapping.

A network of rural roads also crosses the area, one running north to south through the pass to the west of the barrow group and another running east to west just to the south of the barrow group.

Modern developments have also come into the surrounding landscape. Two small telephone exchange buildings and a mast are located close to the western side of the barrow group, on the opposite side of a minor road. To the northwest, on high ground, are two wind turbines. To the north is the Prince's Gate Water factory.

Significance:	Nationally Important
Any Direct Impact?:	No None
Any Indirect Impact?:	Yes Moderate Intervisibility
Level of Impact on Setting:	Moderate
Level of Impact on Setting:	None
Comment on Impact:	<p>The proposed well-head structure would be in relatively close proximity to the round barrow, just over 30 metres from the scheduled area. The impacts would include;</p> <p>i) A moderate-high visual impact on views of the barrow from the north, northeast and east, as the well-head structure would be visible in views of the barrow from those directions.</p> <p>ii) A moderate impact on the line of sight in views between the east and west barrows in the round barrow cemeteries. The building would stand just south of the line of sight and would appear in those views from barrow to barrow, but would not block the views or partially block those views.</p> <p>iii) There would be cumulative impact. There are currently a number of modern developments close to the round barrow, with a telephone exchange building and mast to the west, two wind turbines on high ground to the west-northwest, the spring water factory to the north and a number of other well-head cabinets within the field parcel. The proposed replacement of a well-head cabinet here at Borehole 6 increases the density of built structures to some degree (a cabinet already stands on the site but the new structure would be larger and more visible).</p> <p>iv) There is a potential for associated buried archaeology around the round barrow and any groundworks might impact on any features which may be present.</p> <p>Mitigations can reduce some of these impacts.</p> <p>i & iii) The developer has already proposed a smaller structure than originally envisaged (and planned for Borehole 8) with the intention of reducing the physical and visual impact of the structure and its impact on the setting of the scheduled barrows. Building the well-head structure in natural, local stone or sympathetic equivalent, would lessen its visual impact and help it blend into the landscape better.</p> <p>ii) Tree or shrub planting close to the well-head structure could further</p>

reduce its visibility and lessen visual impacts and the impact on setting. However, it can also be argued that adding more trees or shrubs into the environment would increase the footprint of the development, causing a greater physical impact. Trees growing around the well-head could also make more of an impact on the sight-lines between the eastern and western barrows in the barrows cemetery, for example. It is therefore not recommended that such planting is sought. This would ensure that the relatively open landscape of the field in which the barrow cemetery now stands would be better preserved.

iv) A scheme of archaeological investigation should be considered for any groundworks on the well-head cabinet and any new pipeline could ensure that any buried features which were exposed could be recorded and understood, helping enhance our understanding of the site.

Initially, it was assessed that the impact on setting would be moderate-high. The reduction in the size of the proposed well-head structure, the fact that the setting of the monument has already been significantly modified by modern development and agriculture and the fact that the structure can be removed completely when no longer required and the land restored to pasture, reduces the level of impact on setting to Moderate.

ID number: 2 NEWHOUSE (EAST);NEWHOUSE "B"
Round Barrow

HER PRN: 3793

NMR NPRN:

NGR: SN1598911468

Grid reference taken at centre of site

Period: Bronze Age

Broadclass: Religious, Ritual and Funerary

Form: Earthwork

Condition: Damaged

Site Status: Scheduled Monument

SAM number:

LB number:

grade:

**Trysor
Description:**

This is a large round barrow, which still measures about 28 metres in diameter by 1.4 metres in height, despite its denuded condition within the farmed landscape. It is the easternmost of three barrows visible within the same field parcel on Newhouse Farm and adjacent to the buildings of the Prince's Gate Water factory. The three barrows make up barrow cemetery PRN 47435.

Rarity:

Not rare

**Distance from
development:**

230 metres to the east-northeast

Group Value:

Part of Round Barrow Cemetery PRN47435

Evidential Value:

Earthwork

Historical Value:

Mentioned in archaeological sources

Aesthetic Value:

None

Communal Value:

None

Setting:

This is the eastern barrow in a group of three round barrows which can still be seen in close proximity. The three barrows formed a cemetery group and were presumably created by a Bronze Age community, living somewhere within the adjacent landscape. The location of any such settlement is not known, but it should be noted that a group of Bronze Age burnt mounds were excavated in 2006, approximately 650 metres to the north-northeast (PRN106790), when the LNG pipeline was laid down across Pembrokeshire. No artefacts were found in association with the burnt mounds, but radiocarbon dating showed that the site had been in use for some 1,570 years, from late Neolithic until the middle Bronze Age. It is possible that the community using the burnt mounds also raised the Newhouse Round Barrow Cemetery.

The three barrows are located in a natural saddle between two discrete blocks of higher ground to the west and the southeast. They are on the northern side of the saddle and therefore overlook ground which descends gently to the north-northwest. The saddle effectively acts as a pass linking two neighbouring stream valleys; to the north is a tributary valley of the Afon Marlais river, to the south is a stream valley which flows southwards towards Amroth and the coast. The location of the barrows in this pass may suggest that they stood alongside a routeway which was in use during the Bronze Age. They may also have acted as territorial boundary markers. They are on the northern side of the saddle and therefore overlook ground which descends gently to the north-northwest.

The land here has been farmed during post-medieval times and is now overlain by an extensive field system, defined by banks and hedges. It should be noted that the barrow group was divided by a post-medieval hedgerow until relatively recent times, with the western barrow in a separate field parcel to the central and eastern barrow. The original field

layout is shown on historic mapping.

A network of rural roads also crosses the area, one running north to south through the pass to the west of the barrow group and another running east to west just to the south of the barrow group.

Modern developments have also come into the surrounding landscape. Two small telephone exchange buildings and a mast are located close to the western side of the barrow group, on the opposite side of a minor road. To the northwest, on high ground, are two wind turbines. To the north is the Prince's Gate Water factory.

Significance: Nationally Important

Any Direct Impact?: No
None

Any Indirect Impact?: Yes
Low
Intervisibility

Level of Impact on Setting: Low

Level of Impact on Setting: None

Comment on Impact: The proposed well-head structure would be visible from the barrow group, but in a landscape which has already been developed and includes much larger structures, such as the water factory to the north, wind turbines to the northwest. Two small telephone exchange buildings and an associated mast are also found close to the westernmost barrow in the group. These developments lessen the impact of the proposed structure. Mitigation could reduce the impact to some degree. It should be noted that ultimately the well-head structure could be removed and the land reverted to pasture.

ID number: 3 NEWHOUSE (CENTRAL);NEWHOUSE "C"
Round Barrow

HER PRN: 3794

NMR NPRN:

NGR: SN1587211470

Grid reference taken at centre of site

Period: Bronze Age

Broadclass: Religious, Ritual and Funerary

Form: Earthwork

Condition: Near Destroyed

Site Status:

SAM number:

LB number:

grade:

Trysor

Description:

This is a very denuded round barrow, which still measures about 24 metres in diameter, by only 0.6 metres in height, found within a pasture field. It is the central barrow of three which are visible within the same field parcel on Newhouse Farm and adjacent to the buildings of the Prince's Gate Water factory. The three barrows make up barrow cemetery PRN 47435.

Rarity:

Not rare

**Distance from
development:**

120 metres to the east-northeast

Group Value:

Part of Round Barrow Cemetery PRN47435

Evidential Value:

Earthwork

Historical Value:

Mentioned in archaeological sources

Aesthetic Value:

None

Communal Value:

None

Setting:

This is the central barrow in a group of three round barrows which can still be seen in close proximity. The three barrows formed a cemetery group and were presumably created by a Bronze Age community, living somewhere within the adjacent landscape. The location of any such settlement is not known, but it should be noted that a group of Bronze Age burnt mounds were excavated in 2006, approximately 700 metres to the north-northeast (PRN106790), when the LNG pipeline was laid down across Pembrokeshire. No artefacts were found in association with the burnt mounds, but radiocarbon dating showed that the site had been in use for some 1,570 years, from late Neolithic until the middle Bronze Age. It is possible that the community using the burnt mounds also raised the Newhouse Round Barrow Cemetery.

The three barrows are located in a natural saddle between two discrete blocks of higher ground to the west and the southeast. They are on the northern side of the saddle and therefore overlook ground which descends gently to the north-northwest. The saddle effectively acts as a pass linking two neighbouring stream valleys; to the north is a tributary valley of the Afon Marlais river, to the south is a stream valley which flows southwards towards Amroth and the coast. The location of the barrows in this pass may suggest that they stood alongside a routeway which was in use during the Bronze Age. They may also have acted as territorial boundary markers. They are on the northern side of the saddle and therefore overlook ground which descends gently to the north-northwest.

The land here has been farmed during post-medieval times and is now overlain by an extensive field system, defined by banks and hedges. It should be noted that the barrow group was divided by a post-medieval hedgerow until relatively recent times, with the western barrow in a separate field parcel to the central and eastern barrow. The original field

layout is shown on historic mapping.

A network of rural roads also crosses the area, one running north to south through the pass to the west of the barrow group and another running east to west just to the south of the barrow group.

Modern developments have also come into the surrounding landscape. Two small telephone exchange buildings and a mast are located close to the western side of the barrow group, on the opposite side of a minor road. To the northwest, on high ground, are two wind turbines. To the north is the Prince's Gate Water factory.

Significance: Nationally Important

Any Direct Impact?: No
None

Any Indirect Impact?: Yes
Low-Moderate
Intervisibility

Level of Impact on Setting: Low-Moderate

Level of Impact on Setting: None

Comment on Impact: The proposed well-head structure would be visible from the barrow group, but in a landscape which has already been developed and includes much larger structures, such as the water factory to the north, wind turbines to the northwest. Two small telephone exchange buildings and an associated mast are also found close to the westernmost barrow in the group. These developments lessen the impact of the proposed structure. Mitigation could reduce the impact to some degree. It should be noted that ultimately the well-head structure could be removed and the land reverted to pasture.

ID number: 4 LITTLE NEWHOUSE;NEWHOUSE "D"
Standing Stone (Possible)

HER PRN: 3795

NMR NPRN:

NGR: SN1585011391

Unknown

Period: Bronze Age (Possible)

Broadclass: Religious, Ritual and Funerary

Form: Structure

Condition: Moved

Site Status:

SAM number:

LB number:

grade:

Trysor

Description:

A "Stone" is shown near this location, at SN15930 11409, on the 1889 1:2500 Ordnance Survey map. This stone is not shown on the 1907 edition of the map. A different stone is shown at SN15889 11404 on the 1970 1:2500 scale Ordnance Survey map. In 2004, the RCAHMMW created a record in the NMR, based on Ordnance Survey records (OS Card dating to 1965), which placed a "monolith" which measured 1.4 metres in length but which had been broken by blasting. The record stated that it had lain at SN15850 11391 until it had been "moved to its present position." It seems that this had been done by 1975 when it was seen in the hedgerow. No stone was found by the Dyfed Archaeological Trust when visited as part of the Prehistoric & Funerary Ritual Monuments project in 2003. Trysor also examined the area in 2018 and found no evidence of a stone. It is not known whether there was one stone or more than one stone in the vicinity in the past, but there is no evidence to confirm that the stones marked on Ordnance Survey maps were of prehistoric date. A parish boundary passes close to the site of the stone shown on the 1889 Ordnance Survey map and it is possible that the stone had been erected there to denote the boundary.

Rarity:

Not rare

Distance from development:

Aproximately 96 metres to the east-southeast

Group Value:

Unknown

Evidential Value:

Historic mapping and documentary sources

Historical Value:

Mentioned in archaeological records

Aesthetic Value:

None

Communal Value:

None

Setting:

The removal of the stone and uncertainty about its position and purpose mean that its setting cannot be assessed, beyond noting that at least one stone was present at the edge of a pasture field, close to a parish boundary. The record may be referring to more than one stone however, which confuses matters further.

Significance:

Unknown

Any Direct Impact?:

No
None

Any Indirect Impact?:

No
None

Level of Impact on Setting:

None

Level of Impact

None

on Setting:

***Comment on
Impact:***

ID number: 5 NEWHOUSE
Round Barrow, Ring Barrow (Possible)

HER PRN: 8309

NMR NPRN:

NGR: SN16021145

Grid reference taken at centre of site

Period: Bronze Age (Possible)
Ritual and Funerary

Broadclass: Religious, Ritual and Funerary, Religious

Form: Earthwork

Condition: Unknown

Site Status:

SAM number:

LB number:

grade:

**Trysor
Description:**

Dyfed Archaeological Trust suggested in 1991 that a denuded Bronze Age round barrow or ring barrow may exist at this location. It is not visible on the ground and LiDAR imagery shows no evidence of any earthwork feature here. A slight arc is visible on ploughed ground on the 2017 Google Earth aerial photograph, which may be a fortitious mark or could represent faint evidence of a circular feature here. Dyfed Archaeological Trust photographed the location in 2003 and note that a possible faint earthwork is visible on that image. The site remains unverified however.

Rarity: Not rare

Distance from development: 270 metres to the east-northeast

Group Value: Possible part of the Round Barrow Cemetery PRN47435

Evidential Value: Possible earthwork, possibly visible on an aerial photograph

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: This site remains unverified. It is located in the corner of a pasture field and immediately to the southeast of the round barrow PRN3793, which belongs to the Newhouse Round Barrow Cemetery (PRN47435).

Significance: Unknown

**Any Direct
Impact?:** No
None

**Any Indirect
Impact?:** No
None

**Level of Impact
on Setting:** None

**Level of Impact
on Setting:** None

**Comment on
Impact:** As the existence of the postulated barrow here has not been verified and there are no clear surface traces of a monument, it is not possible to assess the level of impact. There would be no direct, physical impact however.

ID number: 6 NEWHOUSE
Round Barrow (Possible)

HER PRN: 12873

NMR NPRN:

NGR: SN16191149

Unknown

Period: Bronze Age

Broadclass: Religious, Ritual and Funerary

Form: Earthwork

Condition: Unknown

Site Status:

SAM number:

LB number:

grade:

Trysor Description: A possible round barrow reported in this vicinity by the Dyfed Archaeological Trust in 1991 has never been retraced in the field, including by the Trust's survey of Prehistoric Funerary and Ritual Monuments in 2003.

Rarity: Not rare

Distance from development: Unknown

Group Value: Unknown

Evidential Value: Documentary reference

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: Unknown. The existence of the site and the accuracy of the grid-reference have not been verified and there is no trace of the feature at the given location.

Significance: Unknown

Any Direct Impact?: No
None

Any Indirect Impact?: No
None

Level of Impact on Setting: None

Level of Impact on Setting: None

Comment on Impact:

ID number: 7 NEWHOUSE ROUND BARROW GROUP
Round Barrow Cemetery

HER PRN: 47435

NMR NPRN:

NGR: SN15901150

Grid reference taken at centre of site

Period: Bronze Age

Broadclass: Religious Ritual and Funerary

Form: Complex

Condition: Various

Site Status: Scheduled Monument

SAM number: PE178

LB number:

grade:

**Trysor
Description:**

This round barrow cemetery consists of three scheduled, earthwork barrows in a pasture field to the southern side of the Prince's Gate Water factory. The western barrow measures about 22 metres in diameter by 1.3 metres in height. The western side of this barrow is clipped by a minor road and adjacent boundary bank. The central barrow lies 142 metres to the east-northeast and is the most denuded in the group, measuring 28 metres in diameter by 0.6 metres high. The eastern barrow lies 97 metres east-southeast of the central barrow and is the best preserved, at 24 metres in diameter by 1.4 metres high.

Previous studies have suggested that there may be a fourth barrow immediately to the southeast of the eastern barrow, but this remains unverified and there is no persuasive evidence of such a barrow on LiDAR surveys, aerial photographs or on the ground. It has been suggested that a monolith which stood to the south of the barrows and is shown on the 1889 Ordnance Survey map may have formed part of a prehistoric monument complex, but the stone was moved by the early 20th century and again has never been verified as a Bronze Age standing stone.

Rarity: Not rare

Distance from development: 30 metres to the west-northwest

Group Value: None

Evidential Value: Earthworks

Historical Value: Described in historical sources

Aesthetic Value: None

Communal Value: None

Setting:

This is a group of three round barrows which can still be seen in close proximity. The three barrows formed a cemetery group and were presumably created by a Bronze Age community, living somewhere within the adjacent landscape. The location of any such settlement is not known, but it should be noted that a group of Bronze Age burnt mounds were excavated in 2006, approximately 650 metres to the north-northeast (PRN106790), when the LNG pipeline was laid down across Pembrokeshire. No artefacts were found in association with the burnt mounds, but radiocarbon dating showed that the site had been in use for some 1,570 years, from late Neolithic until the middle Bronze Age. It is possible that the community using the burnt mounds also raised the Newhouse Round Barrow Cemetery.

The three barrows are located in a natural saddle between two discrete blocks of higher ground to the west and the southeast. They are on the northern side of the saddle and therefore overlook ground which descends gently to the north-northwest. The saddle effectively acts as a pass linking two neighbouring stream valleys; to the north is a tributary

*New Wellhead Structure over borehole BH6
Princes Gate Water*

valley of the Afon Marlais river, to the south is a stream valley which flows southwards towards Amroth and the coast. The location of the barrows in this pass may suggest that they stood alongside a routeway which was in use during the Bronze Age. They may also have acted as territorial boundary markers. They are on the northern side of the saddle and therefore overlook ground which descends gently to the north-northwest.

The land here has been farmed during post-medieval times and is now overlain by an extensive field system, defined by banks and hedges. It should be noted that the barrow group was divided by a post-medieval hedgerow until relatively recent times, with the western barrow in a separate field parcel to the central and eastern barrow. The original field layout is shown on historic mapping.

A network of rural roads also crosses the area, one running north to south through the pass to the west of the barrow group and another running east to west just to the south of the barrow group.

Modern developments have also come into the surrounding landscape. Two small telephone exchange buildings and a mast are located close to the western side of the barrow group, on the opposite side of a minor road. To the northwest, on high ground, are two wind turbines. To the north is the Prince's Gate Water factory.

Significance: Nationally Important

Any Direct Impact?: No
None

Any Indirect Impact?: Yes
Low-Moderate
Intervisibility

Level of Impact on Setting: Low-Moderate

Level of Impact on Setting: None

Comment on Impact: The proposed well-head structure would be visible from the barrow group, but in a landscape which has already been developed and includes much larger structures, such as the water factory to the north, wind turbines to the northwest. Two small telephone exchange buildings and an associated mast are also found close to the westernmost barrow in the group. These developments lessen the impact of the proposed structure. Mitigation could reduce the impact to some degree.

ID number: 8 NEW HOUSE
Defended Enclosure

HER PRN: 52390

NMR NPRN:

NGR: SN15511176

Period: Iron Age

Broadclass: Monument <by Form>

Form: Cropmark

Condition: Not Known

Site Status:

SAM number:

LB number:

grade:

Trysor Description: This was identified as a possible Defended Enclosure by the Dyfed Archaeological Trust on the basis of cropmarks shown on a 1955 Meridian Airmaps aerial photograph. The Dyfed Archaeological Trust discounted the site in 2007, after further evaluation (Murphy, K, 2007, Survey of Defended Enclosures in Pembrokeshire 2006-7; Gazetteer of Ordnance Survey Grid Squares SN10, SN11 & SN12, p.83).

Rarity: Discounted site

Distance from development: 430 metres to the northwest of the development

Group Value: None

Evidential Value: Possible cropmaek, now discounted

Historical Value: None

Aesthetic Value: None

Communal Value: None

Setting: This site has been discounted by the Dyfed Archaeological Trust

Significance: Minor Importance

Any Direct Impact?: No
None

Any Indirect Impact?: No
None

Level of Impact on Setting: None

Level of Impact on Setting: None

Comment on Impact:

**Appendix C:
Setting Assessment Notes
for PE178
Newhouse Round
Barrow Cemetery

Stages 2 & 3**

Stage 2: How do the present surroundings contribute to our understanding and appreciation of the historic asset today?	
• Thinking about when the historic asset was first built and developed: Newhouse Round Barrow Cemetery, Scheduled Monument PE178	
What were its physical, functional and visual relationships with other structures/ historic assets and natural features?	<p>This is a group of three round barrows which can still be seen in close proximity. It is possible that there were other barrows or features in the group but these are no longer apparent in the landscape.</p> <p>The three barrows formed a cemetery group and were presumably created by a Bronze Age community, living somewhere within the adjacent landscape. The location of any such settlement is not known, but it should be noted that a group of Bronze Age burnt mounds were excavated in 2006, approximately 650 metres to the north-northeast (PRN106790), when the LNG pipeline was laid down across Pembrokeshire. No artefacts were found in association with the burnt mounds, but radiocarbon dating showed that the site had been in use for some 1,570 years, from late Neolithic until the middle Bronze Age. It is possible that a community using the burnt mounds also raised the Newhouse Round Barrow Cemetery.</p> <p>The three barrows are located in a natural saddle between to discrete blocks of higher ground to the west and the southeast. They are on the northern side of the saddle and therefore overlook ground which descends gently to the north-northwest, although views are restricted.</p>
What topographic or earlier features influenced its location?	The saddle in which the barrow group is located effectively acts as a pass linking two neighbouring stream valleys; to the north is a tributary valley of the Afon Marlais river, to the south is a stream valley which flows southwards towards Amroth and the coast.
What was its relationship to the surrounding landscape/streetscape?	The location of the barrows in this pass may suggest that they stood alongside a routeway which was in use during the Bronze Age. They may also have acted as territorial boundary markers. They are on the northern side of the saddle and the ground descends gently to the north-northwest although views are limited.
Was it constructed to take advantage of significant views or to be a part of a significant view? Although there may be a 360 degree view, some areas of the view may be more significant than others.	This northerly aspect of the barrow group may be significant and may suggest a relationship with a community living in the valley in that direction. It is also possible that they were positioned in the saddle to be visible to those moving through the north-south pass between the hills at this point.
Thinking about changes since the Round Barrows were built	
Has its function or use changed?	The original purpose of the barrow group has long been forgotten and the three barrows are all denuded and found within the farmed landscape. The parish boundary between Ludchurch and Lampeter Velfrey goes through the area occupied by the barrow group and their presence may have been a factor in deciding where to fix these boundaries, long after the purpose of the barrows had been forgotten.

What changes have happened to the surrounding landscape/streetscape?	<p>The land here has been farmed during post-medieval times and is now overlain by an extensive field system, defined by banks and hedges. It should be noted that the barrow group was divided by a post-medieval hedgerow until relatively recent times, with the western barrow in a separate field parcel to the central and eastern barrow. The original field layout is shown on historic mapping.</p> <p>A network of rural roads also crosses the area, one running north to south through the pass to the west of the barrow group and another running east to west just to the south of the barrow group.</p> <p>Modern developments have also come into the surrounding landscape. Two small telephone exchange buildings and a mast are located close to the western side of the barrow group, on the opposite side of a minor road. To the northwest, on high ground, are two wind turbines. To the north is the Prince's Gate Water factory.</p>
Have changes happened because of changes to the historic asset or to its historical setting?	No.
Has the presence of the historic asset influenced changes to the landscape, for example, where a monument has been used as a marker in the layout of a field enclosure?	No.
Has the presence of the historic asset influenced the character of the surrounding landscape/streetscape?	No.
Have historic and designed views to and from the historic asset changed?	<p>There is no evidence that there was a designed view to or from the barrow group, although the northerly aspect of the cemetery may suggest a link to a community living and farming on lower ground in that direction. In modern times the Prince's Gate Water factory has appeared within that view to the north. The large sheds of the factory are now the backdrop to the barrows when viewed looking northwards.</p>
Thinking about the original layout of the Round Barrow Cemetery and its relationship to its associated landscape	
Were these relationships designed or accidental?	<p>Although it is not possible to be certain about the reasons for the selection of this site for the barrow cemetery, it seems quite credible to suggest that the saddle between two hills was chosen for a number of reasons. These include a visual relationship with the landscape occupied by the community which raised the barrows, a position within a pass used by members of that community to move through the landscape and also perhaps a high position, on marginal land, with a view to the wider landscape to the north.</p>

How did these relationships change over time?	It has to be presumed that once the community which created the barrow group had ceased to function or exist, the purpose of the barrows became forgotten and interactions with them changed. By post-medieval times they may have had some significance as landmarks or boundary markers (a parish boundary runs through the area of the cemetery group). The post-medieval field system which now occupies the land shows no respect for the presence of the barrows, however.
How do these relationships appear in the current landscape; are they visual or buried features?	The barrows survive as large, grassed-over mounds within a field parcel in the farmed landscape. The central barrow is much more denuded than the barrows to either flank of the group.
• Are there other significant factors, such as historical, artistic, literary, place name or scenic associations, intellectual relationships (for example, to a theory, plan or design), or other non-visual factors such as sounds or smells that can be vital to understand the historic asset and its setting?	No.

Stage 2 should also identify the viewpoints from which the impact of the proposed change or development should be assessed, taking into account, for example:	
• views to, from and across the historic asset that were designed and developed when the historic asset was first created – for example, in the case of a defensive or ritual structure	The local topography suggests that there would only have been short views in three directions, to the south, east and west of the barrow group, as the land rises in each of these directions. To the north, however, the landscape falls gradually away and would have afforded some longer range views. In this direction lies the upper reaches of a stream valley which runs to the north-northwest to join the Afon Marlais. The land rises again beyond the stream valley which means that there are no good long range views in that direction either, although there could have been some glimpses of the Preseli hills in the distance, dependent on vegetation and tree cover in the Bronze Age. With such limited views, it seems that the high ground surrounding the upper reaches of the stream valley enclosed the landscape of relevance to the barrow group.
• views to, from and across the historic asset which are linked with a time in its history – for example, a historic artistic depiction of the site	There are no known artistic depictions of the barrow group.
• important modern views to, from and across the historic asset – for example, popular visitor viewing points.	There are views of the barrows from the adjacent modern roads to the west and south of the group, although hedgerows limit these views. The best views are at close range and from within the field, which does not have public access. There are also only limited outward views from within the area of the barrow group. The rising land on three sides, south, east and west, is enclosed farmland and hedgerows and trees limit views in these directions. The large sheds of the Prince's Gate Water factory and mature trees limit views to the north also.

Stage 3: Evaluate the potential impact of change or development; Newhouse Round Barrow Cemetery PE178			
POSSIBLE IMPACT	COMMENT	IMPACT ON SETTING	IMPACT ON SIGNIFICANCE OF THE HISTORIC ASSET
The visual impact of the proposed change or development relative to the scale of the historic asset and its setting	<p>The proposed well-head structure would measure 3.35 metres in height, to its flat roof, and would be 4.85 metres in length by 3.15 metres wide. This is relatively small in area, compared to the round barrows, which are all over 20 metres in diameter, but is relatively high in comparison, at 3 metres high compared to the barrow heights, which are 1.8 metres or less.</p> <p>Unobtrusive grass reinforcement mesh would be used for the trackway to be put in place to serve the structure. This will reduce physical and visual impacts on the landscape around the scheduled monument.</p>	<p>Moderate Negative.</p> <p>The well-head would be visible from the barrow group, but in a landscape which has already been developed and includes much larger structures, such as the water factory to the north, wind turbines to the northwest. Borehole 6 is also located alongside a post-medieval hedgerow separating the field from a modern rural road. Two small telephone exchange buildings and an associated mast are also found close by to the west.</p> <p>The initial assessment was that there would be a Moderate-High impact on setting, but the developer has amended their plans to reduce the size of the structure and not include an access track or paving around the structure. Natural stone facing will be used to soften the appearance of the structure. These steps reduce the level of impact to Moderate.</p>	<p>None.</p> <p>The development would have no physical impact on the round barrows in the cemetery group and would therefore not affect the archaeological significance of the three barrows, which would continue to be of national importance.</p>
The visual impact of the proposed change or development	The proposed well-head structure would stand just to the south of the round barrow group,	<p>Moderate Negative.</p> <p>The well-head structure would be</p>	As above.

<p>relative to the location of the historic asset</p>	<p>close to the western barrow, but within the same modern field parcel.</p> <p>There would be some impact on the view between the eastern and western barrows. The structure would not block the line of sight, but would be close to it on the southern side. A well-head cabinet already stands in the same position and does not impact significantly on the view from one barrow to the other.</p>	<p>visible from the barrow group, particularly the western barrow, but in a landscape which has already experienced development, with the water factory to the north and wind turbines on Castell Meherin to the northwest and the buildings of a small telephone exchange to the west. Compared to these developments, it would be a very small structure.</p>	
<p>Whether the proposed change or development would dominate the historic asset or detract from our ability to understand and appreciate it – for example, its functional or physical relationship with the surrounding landscape and associated structures and/ or buried remains</p>	<p>The development would not dominate the barrow group, as larger built structures already exist in the surrounding landscape and the structure is relatively small compared to the extent of each barrow and the area covered by the cemetery group. The landscape around the barrows has been changed considerably since they were built, with an extensive post-medieval field system and a road network imposed on what was presumably an unenclosed landscape in the Bronze Age. Trees, hedgerows and buildings already limit views outwards from the barrow cemetery and the development would not represent any further loss of view. There is no evidence at present that further buried archaeology exists at the well-head site.</p>	<p>Low Negative</p> <p>In terms of the round barrow cemetery the siting and scale of the proposed development would not dominate the group or detract from our ability to understand or appreciate it.</p> <p>The modern setting of the barrow cemetery includes the above-named modern developments and post-medieval fields and roads, which mean that the historic setting of the barrows has already been lost. The well-head structure would represent a relatively small, additional structure against the backdrop of existing developments. It will still be possible to appreciate the barrows as a group or as individual features</p>	<p>As above</p>

The presence, extent, character and scale of the existing built environment within the surroundings of the historic asset and how the proposed change or development compares with this	The well-head structure would represent a relatively small, additional structure in a landscape which includes a number of existing developments. These include the water factory to the north, wind turbines on the hill to the west of Newhouse Farm to the northwest and the small telephone exchange buildings and associated mast located close to the westernmost barrow in the group. The proposed structure would be relatively small in scale in comparison to the existing structures.	As above	As above
The lifespan of the proposed change or development and whether or not the impact might be reversible	It is likely that the borehole and its well-head structure would be operation for several decades. The proposed structure could be removed in future and the land reverted to pasture.	n/a	n/a
The extent of tree cover, whether it is deciduous or evergreen, and its likely longevity	There are a number of mature deciduous copses in the local landscape, one of which blocks any view of the outbuildings of Newhouse Farm from the barrow cemetery. A bund has been constructed along the southern edge of the water factory and a mixed planting of trees along the bund now screens views of part of the factory from the area of the barrow group. There is also a small copse at the roadside to the south of the barrow group. Mature hedgerows define the field parcel on its southern, eastern and western sides and also limit the view from the barrow group.	n/a	n/a

The impact of artificial lighting – for example, on night-time views	There is no external artificial lighting proposed for the well-head structure.	n/a	n/a
The capability of a landscape setting to absorb change or new development without the erosion of its key characteristics	<p>The landscape setting is already influenced strongly by modern and post-medieval development. The key characteristics include a factory, wind turbines and a telephone exchange and mast, set in an enclosed, farmed landscape served by modern roads. Local road traffic is relatively busy, particularly that generated by the water factory.</p> <p>No existing, characteristic, landscape feature would be removed to accommodate the proposed structure. Ultimately the landscape could be returned to pasture with the removal of the structure when it has become redundant.</p>	n/a	n/a
The impact of the proposed change or development on non-visual elements of the setting and character of the historic asset, such as sense of remoteness, evocation of the historical past, sense of place, cultural identity or spiritual responses	The presence of the water factory, wind turbines and local farms means that this is not a remote or tranquil area. Such modern features are important elements in defining the character of the landscape.	n/a	n/a
The impact of non-visual elements of the proposed change or development, such as the removal or addition of noises and smell	The well-head structure would not introduce new noises or smells into the landscape.	n/a	n/a

<p>The cumulative effect of the proposed change or development — sometimes relatively small changes, or a series of small changes, can have a major impact on our ability to understand, appreciate and experience a historic asset.</p>	<p>The field within which the barrow group is found has been a part of the water factory complex since the business was established. Four boreholes from which water is piped to the factory have long been established here, each with a well-head cabinet for protection. These are all located close to the round barrow group. The proposed well-head structure would replace an existing well-head cabinet at Borehole 6 within the water factory complex. The existing box consists of a green-painted, steel cabinet. A separate application is also to be submitted to replace the well-head cover at Borehole 8 with a new building. It is likely that new well-head structures would be provided for the other two boreholes in the field in future. The proposed new well-head structure, therefore, replaces an existing cabinet. The structure is larger than the present cabinet and would be more visible. With at least one other structure added into the field, it is likely that the association between the field and the factory would be more evident to some degree.</p>	<p>n/a</p>	<p>n/a</p>
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Appendix D: Photographs

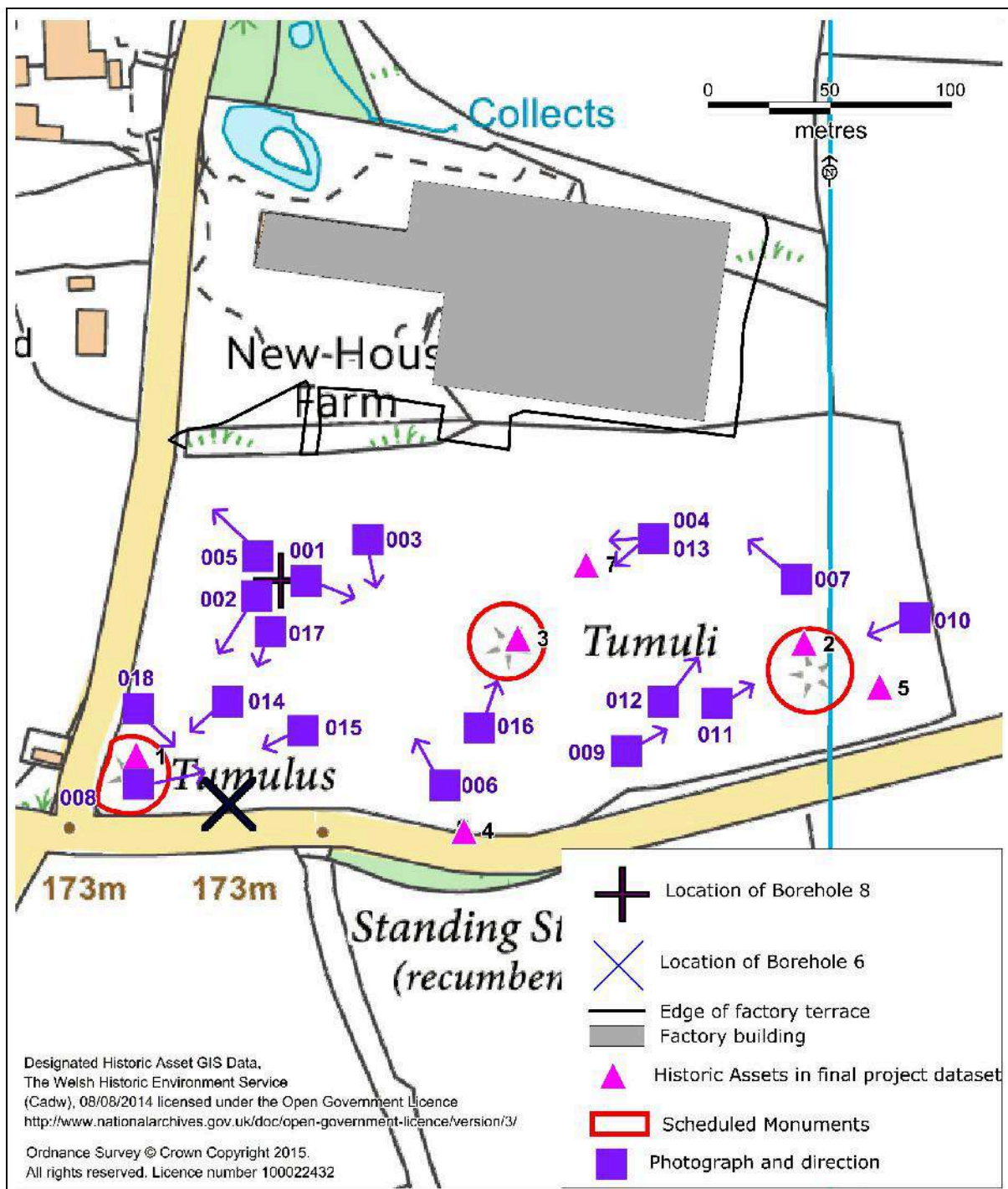


Figure 11: Location of photographs



Plate 1: PRG2018_001, a view of the field within which the proposed development would take place, looking east-southeast from Borehole 8.



Plate 2: PRG2018_002, a view towards Borehole 6 and the western round barrow (ID number 1), looking south-southwest from Borehole 8. The green well-head cabinet at Borehole 6 is just visible in front of the hedgerow, to the left of the barrow. Although the green blends into the vegetation in summer, it would be more visible during the autumn and winter months, whilst natural stone would be less visible over the autumn and winter.



Plate 3: PRG2018_003, a view of the cropmark (a broad line of buttercups) which shows the line of the field boundary which was removed in the later 20th century to amalgamate two fields into the single, large field where the proposed development would take place. Looking south-southeast.



Plate 4: PRG2018_004, a view looking west towards Borehole 8 (left of the white van), with the turbines near Castell Meherin in the background and the water factory to the right. New House Farm stands behind the woodland to the right.



Plate 5: PRG2018_005, view looking northwest towards Springfield Lodge. New House Farm stands behind the woodland to the right.



Plate 6: PRG2018_006, view towards Borehole 8, Springfield Lodge and the water factory, looking north-northwest.



Plate 7: PRG2018_007, a view of the main buildings at the Princes Gate Water factory, looking northwest.



Plate 8: PRG2018_008, a view looking east-northeast from the west barrow in the barrow cemetery PE178, towards the east barrow which can just be seen in front of the hedgerow at the other side of the field. The well-head cabinet at Borehole 6 is visible centre-right and marks the site of the proposed well-head structure.



Plate 9: PRG2018_009, view of the eastern barrow, looking east-northeast. Note the land rising in the distance.



Plate 10: PRG2018_010, a view of the eastern barrow, looking west-southwest. The Castell Meherin wind turbines are visible in the background and the water factory to the far right.



Plate 11: PRG2018_011, a closer view of the eastern barrow, looking east-northeast. A well-head cabinet is visible in the background, far right. The barrow is best appreciated when in close proximity.



Plate 12: PRG2018_012, a view of the eastern barrow, looking northeast. This image shows how the terrain undulates within the field and also how high ground surrounding the development site truncates views of the wider landscape.



Plate 13: PRG2018_013, a view towards the western barrow, looking west-southwest. Borehole 6 is just visible to the left of the barrow, and Borehole 8 is to the right near the white van. The Castell Meherin wind turbines stand in the background.



Plate 14: PRG2018_014, a closer view of the western barrow, looking southwest. The barrow is best appreciated when in close proximity. Note the 2 metre high surveying rod against the hedgerow. The proposed well-head structure would be 3.13 metres high and would therefore be about 1 metre higher than the hedgerow.



Plate 15: PRG2018_015, a view of the western barrow, looking southwest. The cabinet for Borehole 6 is to the left, the telephone exchange and mast can be seen behind the barrow, with the Castell Meherin wind turbines to the right. The proposed well-head structure would be centred on the present borehole.



Plate 16: PRG2018_016, the central round barrow, looking north-northeast, with the water factory behind. This barrow is very denuded and is best experienced at very close range. It is not highly visible in the landscape.



Plate 17: PRG2018_017, a view of the western barrow, looking south-southwest. The cabinet for Borehole 6 is visible in front of the hedgerow, to the left of the barrow, the telephone exchange buildings can be seen far right. The vegetation shows the line of the water pipe to Borehole 6, running through the centre of the photograph.



Plate 18: PRG2018_018, Borehole 6 viewed across the western round barrow, looking southeast. The proposed well-head structure would be seen against the background the hedgerow and trees. Screening trees and shrubs could be considered to hide the structure, but these would cause further ground disturbance, including root damage, and would need management to stop them spreading towards the barrow. In the long term the structure could be removed and the land reverted to pasture, leaving no permanent impact on the barrow's environs and setting.

Appendix E: Client Plans

