



Bempton SPS Rising Main Replacement

Archaeological Desk-based Assessment

March 2022

Mott MacDonald Floor 3 1 Whitehall Riverside Leeds LS1 4BN United Kingdom

T +44 (0)113 394 6700 mottmac.com

Yorkshire Water

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Executive summary

This archaeological desk-based assessment has been commissioned by Mott MacDonald Bentley, on behalf of Yorkshire Water, to assess the likely historic environment impacts of a new gravity sewer from Flamborough Village Sewage Pumping Station (SPS) at approximate National Grid Reference (NGR) TA 522560 469948 connecting to an existing rising main east of the Scheduled Dane's Dyke at NGR TA 521550 470644.

The existing rising main was constructed in 1980 and at some points only laid at shallow depths. From 2014 the existing main has burst eight times. Given the age and material of the main as well as poor design in places, Yorkshire Water have decided to replace the eastern section with a new gravity sewer still discharging at the existing SPS.

The new gravity sewer involves the provision of a buried pipe and fifteen manholes located where the pipe changes direction. A cut trench will be required to install the pipe and a construction easement of 20m from the centre line of the pipe will be required for stockpiling material. A new interceptor land drain parallel to the upstream length of the sewer will be installed between Manholes 14 and 15.

No known non-designated heritage assets are recorded on the Humber Historic Environment Record within the route of the rising main replacement. However, during the site walkover an area of extant ridge and furrow was identified in a field immediately west of Flamborough Village and possible field boundaries of uncertain date have been identified on LiDAR imagery in the most northern field where the rising main replacement runs through.

The rising main replacement route also lies within an area of known prehistoric and Roman activity, common with many parishes in the East Riding of Yorkshire. The Scheduled Bronze Age Dane's Dyke runs on a north to south alignment only 89m west from where the new rising main replacement route will be connected to the existing rising main. The dyke effectively cut off the Flamborough peninsula on its eastern side which was naturally defended on all sides by the steep chalk cliffs of the coastline. This area would have been large enough to support a sizeable community during the Bronze Age, Iron Age and probably Roman periods and it is therefore considered that the potential for further remains from these periods within the rising main replacement route is moderate. Similarly, evidence exists within the rising main replacement route for medieval or post-medieval agricultural land management features. Therefore, works associated with the rising main replacement route have the potential to impact on known as well as unknown archaeological remains.

Following consultation and agreement with Humber Archaeology Partnership (HAP) it is recommended that Geophysical Survey be undertaken across the full length of the replacement rising main route using a 60m wide corridor from its centre line to archaeologically evaluate the proposed development. The 60m wide corridor will allow for sufficient data to be acquired that if significant or substantial archaeological remains are identified in certain sections of the rising main replacement route that the route can be diverted or realigned to preserve these remains in-situ. The Geophysical Survey will also help to identify potential future stages of archaeological evaluation or excavation where the rising main replacement cannot be moved and archaeological features are present. The Geophysical Survey should be undertaken in accordance with a Written Scheme of Investigation (WSI) to be agreed in advance with HAP. Further consultation should be undertaken with HAP following completion of the Geophysical Survey to discuss the results and determine further archaeological work.

1 Introduction

This archaeological desk-based assessment (DBA) has been commissioned by Mott MacDonald Bentley (MMB), on behalf of Yorkshire Water, to assess the likely historic environment impacts of a new gravity sewer from Flamborough Village Sewage Pumping Station (SPS) at approximate National Grid Reference (NGR) TA 522560 469948 connecting to an existing rising main east of Dane's Dyke at NGR TA 521550 470644.

The existing rising main is approximately 4.2km long and currently takes flows from Bempton and Buckton Villages and transfers them to Flamborough Village SPS. This route has burst eight times since 2014 along the length between Dane's Dyke and Flamborough. Yorkshire Water have therefore decided to replace the eastern section with a new gravity sewer along a new route to discharge into Flamborough Village SPS.

1.1 Site location

The rising main replacement will be connected to the SPS which is located at the south-western corner of Flamborough Village, East Riding of Yorkshire. The route will skirt around the village of Flamborough crossing a series of horse paddocks before continuing under the B1255 Bridlington Road, passing behind residential houses lining the route into the village and then heading north-westwards across four agricultural fields, terminating east of Dane's Dyke to connect to the existing rising main.

New Rising Main Replacement Route

| Description Laboratory | Descripti

Figure 1.1: Plan showing the new rising main replacement route in red

Source: Mott Macdonald (2022)

1.2 Scheme works

The existing rising main carries flows from Bempton and Buckton villages and transfers them to Flamborough Village SPS from Bempton SPS across approximately 4.2km of asbestos cement mains. The rising main was constructed in 1980 and only laid at depths between 1.00m up to 2.00m deep. Given the age and material of the main as well as poor design in places. Yorkshire Water have decided to replace the eastern section with a new gravity sewer still discharging at the existing SPS.

The new gravity sewer will involve the provision of a buried pipe, approximately 0.22m in diameter and fifteen manholes located where the pipe changes direction as shown on Figure 1.2 below. A cut trench with a maximum width of 1m varying in depths between 0.9m up to a maximum depth of 3.5m will be required to install the pipe. A construction easement of 20m from the centre line of the pipe will be required for stockpiling material during construction. A new interceptor land drain parallel to the upstream most length of the sewer will be installed between Manholes 14 and 15.

In order to facilitate works for the rising main replacement, a temporary main works construction compound will be required and placed on land to the rear of The Crofts on Bridlington Road (at Manhole 10) and a temporary satellite compound near Flamborough Village SPS.

MAIS

Colored HI

Place Story

Main Story

St

Figure 1.2: Plan showing the location of manholes

Source: Mott MacDonald (2022)

2 Methodology

This archaeological DBA identifies the potential for buried archaeological remains to exist within the proposed development area and their likely heritage significance. The report will then go on to address how this significance will be affected by the rising main replacement. Built heritage assets are explicitly excluded from this assessment due to the nature of the proposed works, as there will be no permanent above ground works which would impact on the significance of built heritage assets.

In accordance with paragraph 194 of the National Planning Policy Framework and Historic England guidance (see Section 3), the level of detail supplied is proportionate to the level of significance of the potential archaeological resource and the overall effect the proposed development will have on this significance.

2.1 Study area

A search area of 1km radius from the route of the rising main replacement has been established, hereafter referred to as the study area. This is considered to be proportionate to the scale and nature of the proposed works and rural nature of the site. All designated and all non-designated heritage assets within this area have been considered for their potential to be impacted by rising main replacement.

A plan showing the study area with all heritage asset locations can be found in Appendix B. Heritage assets in the study area are also have been included in a gazetteer in Appendix A.

2.2 Resources

The following resources have been consulted in the process of comping the baseline information contained within this DBA;

- A search of the Historic England National Heritage List for England (NHLE) dataset for world heritage sites, scheduled monuments, listed buildings, registered parks and gardens, and registered battlefields within the study area;
- A search of the Humber Historic Environment Record (HER) (search Ref No. CHU29030) database for non-designated archaeological sites, find spots, and non-designated historic buildings within the study area;
- A site walkover (see Section 4.1);
- A search of East Riding of Yorkshire Council local plans for conservation areas;
- An examination of local, regional and national planning policies in relation to the historic environment;
- An inspection of geological (maps) relevant to the study area;
- An inspection of the cartographic evidence for the land use history of the site;
- An assessment of relevant published and unpublished historical sources, both online and archive resources;
- an inspection of Environment Agency LiDAR data relevant to the proposed development area; and
- Information on previous impacts to the site (previous developments, contaminated land, natural erosion etc).

2.3 Consultation

HAP were approached on Monday 22nd March 2022 on the rising main replacement route and proposed works. They agreed the strategy to produce an Archaeological Desk-based Assessment to assess the likely historic environment impacts of the new gravity sewer followed by Geophysical Survey across the full extent of the route at an early stage would be a sensible approach. The full survey extent will potentially allow the route to be altered to avoid significant archaeological remains if present but also allow for targeted further archaeological investigations in advance or during construction where necessary. HAP also recommended consulting with Historic England given the Schemes close proximity to the Scheduled Monument of Dane's Dyke.

Historic England had previously been consulted on the Scheme in November 2021 when the route originally crossed the Scheduled Dane's Dyke. Historic England were subsequently contacted in January 2022 on the amended proposals to avoid Dane's Dyke and tie into the existing main west of the Scheduled Monument. Confirmation was provided that an Archaeological Desk-based Assessment was still being carried out and liaison with HAP to understand what archaeological work may be required in advance and during construction. Historic England confirmed they would not need to be consulted further on the Scheme.

2.4 Assumptions and limitations

The following assumptions and limitations have been assumed for the assessment:

- The assessment is reliant on available data. All designated and non-designated data is up to date as of January 2022;
- Databases are limited in their ability to predict new sites and the information from the HER
 has been used as a starting point for further research rather than as a definitive list. Where
 there is an absence of data, professional judgement has been used to reach informed
 decisions regarding the historic environment; and
- The current understanding of the extent and survival of archaeological remains within the study area is based on data relevant to the assessment which has been selected based on professional judgement. However, the specific nature extent, date, degree of preservation and significance of known and potential archaeological remains is impossible to predict without invasive investigation. There is the possibility that further or more complex unknown buried archaeology exists on sites which has not been assessed in this report.

3 Legislation, planning policy and guidance

This section sets out the legislation and planning policy against which the Scheme area will be considered during the planning process. These policies have been used to inform the DBA and have been considered in the assessment.

3.1 Legislation

3.1.1 Ancient Monuments and Archaeological Areas Act 1979

The Act imposes a requirement for Scheduled Monument Consent for any works of demolition, repair, and alteration that might affect a scheduled monument. For non-designated archaeological assets, protection is afforded through the development management process as established both by the Town and Country Planning Act 1990 and the National Planning Policy Framework.

3.1.2 Planning (Listed Building and Conservation Areas) Act 1990

This Act sets out the protection given to buildings of special architectural or historic interest through or historic interest the character or appearance of which it is desirable to preserve or enhance listing. It also sets out the process for designation of conservations areas, being areas of special architectural.

3.2 National Planning Policy Framework

The revised National Planning Policy Framework (NPPF 2021)¹ considers the importance of the historic environment in planning and development and sets out the government's policies regarding development which affects the historic environment. Paragraphs 194 to 203outline these policies. The following paragraphs are relevant to this Heritage Statement:

Paragraph 194: In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of information submitted should be proportionate to the assets importance and no more that is sufficient to understand the potential impact on the asset's significance.

Paragraph 197: The following should be taken into account when determining applications;

- The desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation;
- The positive contribution that conservation of heritage assets can make to sustainable communities including their economic vitality; and
- The desirability of new development making a positive contribution to local character and distinctiveness.

Paragraph 199: When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation. The more important the asset, the greater the weight should be.

Ministry of Housing, Communities and Local Government (2019) National Planning Policy Framework. Available online at: https://www.gov.uk/government/publications/national-planning-policy-framework--2

Paragraph 200: Any harm to, or loss of, the significance of a designated heritage asset (from its alteration or destruction, or from development within its setting), should require clear and convincing justification.

Paragraph 202: Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use.

Paragraph 203: The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application.

3.3 Local planning policy

The East Riding Local Plan Strategy Document² was adopted in April 2016, it sets out the overall strategic direction for the Local Plan. The following policies are relevant to this assessment:

Policy ENV3: Valuing our heritage

- Where possible, heritage assets should be used to reinforce local distinctiveness, create a
 sense of place, and assist in the delivery of the economic well-being of the area. This can be
 achieved by putting assets, particularly those at risk, to an appropriate, viable and
 sustainable use.
- The significance, views, setting, character, appearance and context of heritage assets, both designated and non-designated, should be conserved, especially the key features that contribute to the East Riding's distinctive historic character including:
 - Those elements that contribute to the special interest of Conservation Areas, including the landscape setting, open spaces, key views and vistas, and important unlisted buildings identified as contributing to the significance of each Conservation Area in its appraisal;
 - Listed Buildings and their settings;
 - Historic Parks and Gardens and key views in and out of these landscapes;
 - The dominance of the church towers and spires as one of the defining features of the landscape, such as those of Holderness and the Wolds;
 - Heritage assets associated with the East Yorkshire coast and the foreshore of the Humber Estuary;
 - The historic, archaeological and landscape interest of the Registered Battlefield at Stamford Bridge;
 - The historic cores of medieval settlements, and, where they survive, former medieval open field systems with ridge and furrow cultivation patterns;
 - The nationally important archaeology of the Yorkshire Wolds; and
 - Those parts of the nationally important wetlands where waterlogged archaeological deposits survive.
- Development that is likely to cause harm to the significance of a heritage asset will only be granted permission where the public benefits of the proposal outweigh the potential harm.
 Proposals which would preserve or better reveal the significance of the asset should be treated favourably.

² East Riding of Yorkshire Council (2016), East Riding Local 2012-2029, Strategy Document, Available online at: East Riding Local Plan (adopted April 2016)

 Where development affecting archaeological sites is acceptable in principle, the Council will seek to ensure mitigation of damage through preservation of the remains in situ as a preferred solution. When in situ preservation is not justified, the developer will be required to make adequate provision for excavation and recording before or during development.

3.4 Guidance

The following relevant guidance has been consulted in order to inform this assessment:

- Chartered Institute for Archaeologists (ClfA), Standard and Guidance for historic desk-based assessments³;
- Conservation Principles, Policies and Guidance⁴;
- Historic England, Good Practice Advice in Planning Note 2: Managing Significance in the Decision-Making⁵;
- Historic England, Good Practice Advice in Planning Note 3: The Setting of Heritage Assets⁶;
 and
- Historic England, Statements of Heritage Significance: Analysing Significance in Heritage Assets. Advice Note 12⁷.

³ Chartered Institute for Archaeologists, 2020. Standards and Guidance for Historic Desk-based Assessment. Available online at: https://www.archaeologists.net/sites/default/files/ClfAS%26GDBA_3.pdf

English Heritage, 2008. Conservation Principles, Policies and Guidance. Available at: http://modgov.southnorthants.gov.uk/ieDecisionDetails.aspx?ld=923

⁵ Historic England, 2015. Good Practice Advice in Planning Note 2 (GPA2) – managing significance in decision taking in the historic environment. Available online at: https://historicengland.org.uk/images-books/publications/gpa2-managing-significance-in-decision-taking/gpa2/

⁶ Historic England, 2017. Good Practice Advice in Planning Note 3 (GPA3) – the setting of heritage assets. Available online at: https://historicengland.org.uk/images-books/publications/gpa3-setting-of-heritage-assets/heag180-gpa3-setting-heritage-assets/

⁷ Historic England, 2019. Statements of Heritage Significance: Analysing Significance in Heritage Assets. Available online at: https://historicengland.org.uk/images-books/publications/statements-heritage-significance/

4 Archaeological Baseline

4.1 Site description

A site walkover was undertaken on 3rd March 2022 to inspect the route of the replacement rising main, identify any assets recorded on the Humber HER and identify any previously unrecorded assets. It consisted of three distinct areas, a series of horse paddocks and single agricultural field between Flamborough Village SPS and the B1255 Bridlington Road, a scrub field to the rear of The Crofts and then a mixture of pasture and arable fields heading north-westwards where it connects to the existing main, east of Dane's Dyke.

The areas between Flamborough Village SPS and the B1255 Bridlington Road mainly consist of horse paddocks associated with a stable along an unclassified track off the Bridlington Road (see Figures 1.1 and 1.2). The rising main replacement then passes through an agricultural field before reaching Bridlington Road. The topography is relatively flat through the horse paddocks at Flamborough Village at approximately 38m AOD (above Ordnance Datum) before climbing slightly towards the stable building and continuing to rise before it reaches Bridlington Road at an approximate height of 41m AOD.

Photo 4.1: View of horse paddocks south of the B1255 Bridlington Road, looking northwest.



Source: Mott MacDonald (2022)

After the route crosses the Bridlington Road, the land remains relatively level as it passes through a scrub field to the rear of The Crofts fronting the B1255 Bridlington Road at an approximate height of 48m AOD.

Photo 4.2: Scrub field to the rear of The Crofts, looking north-west.



Source: Mott MacDonald (2022)

The routes continues beyond the scrub field into a mixture of pasture and arable fields. Those in use as pasture contain horses and are to the south of Velvet Stud Farm. The large agricultural field is to the east of Dane's Dyke. The land remains relatively level, which only starts to rise towards Dane's Dyke.

Photo 4.3: Route of Rising Main Replacement through agricultural fields to the east of Dane's Dyke, looking north-west.



Source: Mott MacDonald (2022)

4.2 Geology

The bedrock geology of the area as identified on the British Geology Survey⁸ consists of the Flamborough Calk Formation covered with superficial glacial tills from the Devensian period (formed up to two million years ago). The nature of the geology provides clay soils resulting in medium grade quality of agricultural land and presumably why some areas of the new gravity sewer are in use as pasture fields for horse paddocks. The underlying chalk has been locally quarried since the medieval period, as the materials for the castle and the Church within Flamborough are likely to have been locally sourced. The local clays were also exploited for brick making (see Section 4.4).

4.2.1 Ground investigations

Ground investigations (GI) were carried out by Dunelm Geotechnical and Environmental Ltd in 2021⁹. The investigations included a series of boreholes and windowless samples rotary cores. Those relevant to the rising main replacement route are shown on drawing D10535/02 in Appendix B.3 and include:

⁸ British Geological Survey (2020) Geology of Britain viewer. Available online at https://mapapps.bqs.ac.uk/geologyofbritain/home.html

Dunelm Geotechnical and Environmental (2022) Factual Report on Site Investigation for Bempton SPS Rising Main Replacement Definition. Unpublished report.

- WS11 excavated in the large agricultural field to the east of Dane's Dyke which identified 0.10m of dark brown slightly clay topsoil which sealed varying gravelly clays down to the bottom of the borehole:
- WS12 in the pasture field north-west of Velvet Stud Farm which contained 0.30m of dark brown slightly sandy gravelly topsoil which overlaid varying slightly gravelly clays to the end of the borehole;
- WS13 south of Velvet Stud Farm which contained 0.40m of dark brown slightly sandy gravelly topsoil which overlaid varying slightly gravelly clays to the end of the borehole;
- BH05 at the corner of the residential houses along The Croft containing a disturbed topsoil deposit with gravel, brick and concrete throughout to a depth of 0.30m below the present ground level (bpgl) which in turn sealed a deposit of made ground 0.40m in depth which overlaid the natural clay;
- WS14 immediately south of the B1255 Bridlington Road contained 0.40m of dark brown slightly sandy gravelly topsoil which overlaid varying slightly gravelly clays to the end of the borehole: and
- WS15 at the horse paddocks immediately off Water Lane contained 1.30m of made ground which sealed sand deposits. Clayey gravel was revealed at 4.30m bpgl.

Generally, the GI has identified a good survival of topsoil which generally overlaid the superficial till deposits. At BH05 disturbed topsoil containing brick and concrete and a made-ground deposit suggest the field in use as scrub land has had some degree of tipping on it or some form of recent disturbance.

4.3 Archaeological and historical background

The historic baseline in the following narrative is based on indicative archaeological and historic periods compiled using information primarily collated form the NHLE and Humber HER. These historical periods are outlined in Table 4.1.

Table 4.1: Archaeological and historic periods used for the purpose of this assessment

Prehistoric Period Dates	Historic Period Dates
Palaeolithic 500,000 to 10,000 BC	Roman AD 43 to 410
Late Glacial / Mesolithic 10,00 to 4,000 BC	Early Medieval AD 410 to 1066
Neolithic / Early Bronze Age 4,000 to 1,600 BC	Medieval AD 1066 to 1540
Middle Bronze Age 1,600 to 1,100 BC	Post-medieval AD1540 to 1900
Late Bronze Age 1,100 BC to 700 BC	Modern AD 1901 to modern
Early Iron Age 700 to 400 BC	
Middle Iron Age 400 to 100 BC	
Late Iron Age/ Roman Transition 100 BC to AD 43	

4.3.1 Prehistoric

The new gravity sewer lies within an area of known prehistoric activity, common with many parishes in the East Riding of Yorkshire. The earliest activity from the study area is derived from excavations at Sewerby Golf Course (MM045), 947m west of the rising main replacement route, which recorded an industry that began in earnest in the Early Mesolithic and continued into the Bronze Age period. Elsewhere, remains of a Neolithic to Bronze Age occupation site (MM032), 642m south of the rising main replacement route were identified at Beacon Hall. A similar Neolithic occupation site was also identified at Sea Road (MM031), 672m south of the rising main replacement route. Remains from the sites included a cobbled floor with hearth and accompanying Grooved Ware pottery. A series of findspots, including a Neolithic basalt axe

(MM028) and Neolithic flint knapping site (MM030) have also been identified along the coastline.

The scheduled remains of Dane's Dyke (MM009/MM015) forms a substantial headland in the landscape, 89m from the western end of the rising main replacement route and has formed a defensive promontory in the landscape from at least the Bronze Age. The monument consists of a linear bank and ditch which in its entirety runs from the coast north of Flamborough Head south for a distance of two and half miles. Its name, suggests it may have been later in date and possibly reused as a defensive earthwork in the Iron Age and early medieval period. Danes dyke effectively cuts off the Flamborough peninsula, which is also naturally defended on all sides by steep chalk cliffs, converting it into a promontory fort. Find spots adjacent to the dyke include flint axes, scrapers and arrowheads (MM014) recovered at Dane's Dyke House and two Bronze Age socketed axes (MM013) found 760m east from the rising main replacement route.

Scattered across this landscape as with neighbouring Wold Parishes within East Yorkshire hill-top settlements continued from the Bronze Age into the Iron Age period. Dane's Dyke likely defended these settlements. Bronze Age round barrows are known from the headland and Iron Age square barrows. Many sites are recorded as unknown on the Humber HER and depicted as cropmarks. These are distributed across the whole study area and include double ditched trackways (MM038), ring ditches (MM040 and MM042), or larger settlements including hut circles surrounded by large rectilinear enclosures (MM041). The form of these likely mean they can be attributed to the Iron Age, as there is a common occurrence in the Yorkshire Wolds for marked east-west aligned Roman ditches, with Iron Age data filling in the spaces between them¹⁰. The closest is the remains of the ring ditch (MM040) on the southern side of the B1255 Bridlington Road.

4.3.2 Roman

Generally, Roman evidence has been recorded at Flamborough and the surrounding agricultural landscape from many of the fields that were previously occupied during the prehistoric period 11. From this period a network of signal stations is also known to have been constructed along the Yorkshire coast as a defensive measure during the fourth century. It has often been suggested that there would have been one of these stations somewhere on Flamborough Head. The site of Beacon Hill has always been traditionally associated with the location of one of these Roman Signal Stations (MM020) as Roman pottery has been recovered at numerous times from hill.

Elsewhere excavations at Flamborough quarry in 1979, located 402m south from the rising main replacement route, identified a series of east to west ditches with possible Romano-British burials lying parallel to them (MM050). Within the area of horse paddocks, approximately 174m south of the rising main replacement, a prehistoric/Roman circular enclosure, pit alignment, and ditch are visible as cropmarks on aerial photographs centred at TA 2233 6979. The circular enclosure measures 19m in diameter and the ditch and pit alignment are located to the west of this enclosure. The ditch curves around the circular enclosure at a distance of 60m and the pit alignment runs north to south. Elsewhere, towards the northern end of the study area cropmarks of Iron Age to Roman rectilinear ditched enclosures are also recorded on the Humber HER. Various findspots throughout the study area, include possible Roman horse fittings (MM084)

Noskams, S. and Whyman, M. (2007), Yorkshire Archaeological Research Framework: research agenda, A report prepared for the Yorkshire Archaeological Research Framework Forum and for English Heritage – project number 2936 RFRA. Available online at: https://historicengland.org.uk/images-books/publications/yorks-arch-res-framework-resource-assessment/yorkshire-resource-assessment/

¹¹ East Riding of Yorkshire Council, (2014), Conservation Area Appraisal: Flamborough. Available online at: https://www.eastriding.gov.uk/planning-permission-and-building-control/conservation-areas-and-listed-buildings/conservation-areas/conservation-area-appraisals-and-management-plans/

found in 1993 south of Flamborough village and in the same year, a series of Roman finds were identified at the Grange (MM081), 440m from the rising main replacement route.

4.3.3 Early medieval

The settlement of Flamborough was established in the early medieval period. The name either derives from the Scandinavian meaning 'a spit' or 'tongue', referencing the Headland on the east coast, or from Norse origin referring to 'borg' or 'burgh', which refers to a stronghold¹².

The Domesday Survey of 1086 records two holdings in Flamborough. The larger was held by Earl Harold in 1066, and was later owned by Hugh d'Avranches, Earl of Chester in 1086. The holding consisted of 1800 acres of land, costing roughly 10 shillings (£24). The death of d'Avranches meant possession of the estate fell onto William, son of Niel, whose father had been created Constable of Chester by d'Avranches. The Constable Family played an important role in the early development of Flamborough¹². Evidence for early medieval activity is largely restricted to place-name evidence apart from suggestions that Dane's Dyke probably served as a defensive ditch until the 9th century AD.

4.3.4 Medieval

Flamborough was a well-established settlement by the medieval period. From the 12th century Bridlington Priory built up a substantial holding which included the Church (MM004) and the original village core which lay around the church. By 1377, 278 people were recorded in the village contributing to the Poll Tax indicating a substantial settlement. The settlement predominantly lay to the south of the church. Geophysical Survey and subsequent Evaluation by Trial Trenching at Church Farm Lily Lane, 132m north of where the rising main replacement ties into the SPS has identified 12th/13th century chalk and cobble house platforms one with the foundations of an enclosure containing two phases of stone building, including a hearth/oven. This was disused by the late 14th century. The second platform may have supported a timber building. Parallel to Lily Lane was a further timber building and two later 12th-/13th- to 14th-century stone buildings. Elsewhere remains of 12th century Northern Gritty Wares were recovered at Hartendale Close (MM024).

Flamborough castle (MM002; MM012; 385m east of the rising main replacement) is a 14th century fortified manor house of the Constable Family, the family were licensed to have the manor crenelated (fortified), giving the appearance and function of a castle ¹¹. After the notorious actions and execution of Sir Robert Constable in 1537, the castle complex was forfeited to the Crown and gradually fell into decay. The ruined tower of the former castle was later used as a castle shed in the 19th century; the main part of the complex has been relatively undisturbed since the late 16th century. Only three sides remain of the castle today, to a height of 4m, the north wall most likely collapsed in 1925. Originally the structure would have been two or three storeys high.

From the 14th century, there is evidence to suggest Flamborough was a small port focused on fishing. And by the mid-16th century there were extensive common pastures and closed meadows, and there are several references to open fields in the parish. The rising main replacement route is largely focussed away from what was the original medieval settlement core of Flamborough and likely served as common land for the village. Remains of agricultural regimes are still visible as surviving ridge and furrow (MM141) within fields where rising main replacement is proposed to cross, identified during the Site Walkover in 2022.

Dennison, E & Richardson, S. (2017), Flamborough Castle, Tower Street, Flamborough, East Yorkshire: Archaeological Survey and Monitoring of 2017-18 Repairs. Unpublished Report.

4.3.5 Post-medieval

In 1551, a document refers to a recently built horse-mill and by the 17th century the town was said to have two horse mills and a windmill (MM054; c. 970m from the rising main replacement). There were originally at least two village ponds, North Mere and South Mere (MM018), one immediately adjacent to the rising main replacement route where it crosses the horse paddocks. During the 18th-19th centuries the income of the local community of Flamborough was largely derived/dependant upon fishing and agricultural activity. This allowed for the fishing port to expand creating room for additional fishing vessels. Boat building is first documented within the study area from 1872 and provide a bit more detail. Trading within the area also included chalk quarrying. As discussed earlier, this may have been as early as the medieval period to use as raw material for constructing the castle and church. Evidence of former quarrying is depicted on Ordnance Survey maps variously as 'Chalk Pit' or 'Old Chalk Pit' (MM073, MM074 and MM075).

By the mid-19th century two thirds of the population of Flamborough Village were thought to be dissenters. Various buildings were licensed for worship within the village, with the first purpose built chapel (MM033) being erected in 1799 for the Wesleyan Methodists on the east side of Chapel Street. In 1889 a new separate chapel (MM062), was constructed opposite MM033. In 1821 the Primitive Methodists constructed their own chapel (MM034) which was later replaced in 1874. All these early churches have since been demolished.

Elsewhere various pump sites have been recorded which may indicate the waterlogged nature of meadows surrounding the village. A former wooden pump lines The Crofts on the way into the village, replaced by an iron pump in 1864 (MM025) and various post-medieval farmsteads throughout the study area.

4.3.6 Modern

The most recent structures within the study area are generally associated with the Second World War and clustered towards the coast line. Aerial photographs show Second World War coastal defence structures (MM112), consisting of tank traps, trackways, and potential weapons pits. Pill boxes have also been found in the study area; one at Beacon Hill (MM114) and the other at Dykes End (MM116), roughly 771m south and 1km south-west from the rising main replacement route respectively.

In the centre of Flamborough, a grade II listed war memorial (MM008) commemorates the fallen men of Flamborough, who fought in the First and Second World Wars.

4.4 Historic maps and LiDAR

Little can be discerned from the cartographic evidence of the replacement rising main route. The earliest depictions of Flamborough Village itself date from the later 18th century, including Jeffreys Map of 1775 and the Enclosure Map of 1767. The earlier map shows a substantial core of settlement to the south of the church rather than surrounding it, which can be seen today. Some roads no longer exist.

By the time of the Ordnance Survey the rising main replacement route is generally depicted running through a series of regular agricultural fields. Between the 1849 and 1888 maps some fields have been consolidated into larger fields and field boundaries removed, such as the large agricultural field immediately east of Dane's Dyke.

LiDAR for the entirety of the rising main replacement route was supplied by the Environment Agency at 2m resolution (downloaded in June 2021). The data was then processed and put through various visualisation models using ArcMap in order to aid the interpretation of features. The data is presented in the form of a slope model in Figure 4.3. This visualisation was considered to give the clearest representation of the features discussed below.

The area of ridge and furrow identified during the site walkover in the horse paddocks just east of Flamborough Village is visible on the model. Although now segmented by a public footpath heading towards the Dane's Dyke, the ridge and furrow can be seen running on east to west alignments. A further linear feature is visible in the most northern field where the rising main replacement route runs through. This seems to run on a roughly north-west to south-east alignment before diverging into two separate linears, with one heading off south-eastwards and the other south-westwards. The linears appear to be on different alignments to the current agricultural field boundaries and may suggest they are earlier in date. The 1888 Ordnance Survey map depicts a former field boundary at the location of this linear which was removed to create a larger agricultural field sometime after 1970 and may indicate these are post-medieval in date.

Figure 4.1: LiDAR composite DTM 2m resolution slope model. Indicative replacement rising main route shown in red and areas of interest highlighted by blue arrows.



Source: LiDAR data downloaded from the Environment Agency June 2021.

4.5 Designated assets

A search of the NHLE has identified the following designated heritage assets, within the study area. Each of these assets are described in detail within Appendix A, Table A.1 and their locations shown in Appendix B, Drawing Ref: UV21-MM-NWW-NRB-DR-Y-5000.

• Four Scheduled Monuments, including three sections of Dane's Dyke (Grouped as MM009 NHLE ID's 1013191, 1013192 and 1013193), the closest section 89m east from the western

end of the rising main replacement route and Flamborough Castle (MM012 NHLE ID 1014896) 297m north of the rising main replacement route;

- One Grade II* listed building, The Church of St Oswald (MM004 NHLE ID 1162230) 217m north of the rising main replacement route;
- Seven Grade II listed buildings the closest of which is located 211m to the north of the rising main replacement route; and
- The Flamborough Conservation Area immediately north and east of the rising main replacement route where it connects to the existing Flamborough SPS.

The Listed buildings and conservation areas are considered as built heritage assets and excluded from this assessment due to the below ground nature of the proposed works. Dane's Dyke has the potential to be impacted by the proposed works and is considered below.

4.5.1 Danes' Dyke (MM009)

The monument is recorded on its official listing as a linear bank and ditch system which in its entirety runs from the coat north of Flamborough Head south for a distance of two and a half miles, enclosing an area of five square miles of headland. The sections within the study area are thought to have been constructed in the Bronze Age along with other linear earthworks on the nearby Yorkshire Wolds. The dyke effectively cuts off the Flamborough peninsula, which is also naturally defended on all sides by steep chalk cliffs. The area thus enclosed is large enough, and has sufficient resources, to support a sizeable community, with sources of fresh water available. Throughout most of its length the dyke has a single bank and ditch, although in places additional stretches of parallel bank and ditch also exist. The dyke system appears to have an original rounded terminal to the east of the former Danes' Dyke House and at the head of the valley which runs south to the sea. Although this terminal appears original, the east side of the valley further south was augmented by some form of rampart, building rubble for which has been recorded falling onto the beach from the southern end of the valley. This therefore suggests that the eastern side of the valley was augmented by a separate section of earthwork. Although normally of a single bank and ditch construction for its length, the dyke becomes a double bank, with a second, lower bank on the westward side, towards the northern end of this segment, where it is cut by the B1255 road.

The scale of many linear boundaries such as Dane's Dyke has been taken to indicate that they were constructed by large social groups and were used to mark important boundaries in the landscape; their impressive scale displaying the corporate prestige of their builders. Danes' Dyke is extremely well preserved and remains a significant boundary in the modern landscape. It would have been a powerful symbol, often with religious associations, used to define and order the territorial holdings of the group who constructed it. Linear earthworks such as these are of considerable importance for the analysis of settlement and land use in the Bronze Age retaining important archaeological and environmental information relating to the date of its construction and function, together with evidence of the contemporary climate and ecology.

5 Archaeological potential

This section outlines the potential for archaeological remains within the rising main replacement route as identified in the baseline. The archaeological potential is set out chronologically as outlined in Table 4.2.

5.1 Prehistoric

There is extensive evidence of prehistoric activity within the study area, although none is recorded within the rising main replacement route. Neolithic to Bronze Age occupation sites have been identified at both the coast line at Beacon Hall and a similarly at Sea Road. Elsewhere various cropmarks depict areas of hut circles surrounded by enclosure ditches. The Bronze Age Dane's Dyke runs on a north to south alignment only 89m west from where the rising main replacement route will be connected to the existing main. The dyke effectively cut off the Flamborough peninsula on its eastern side which was naturally defended on all sides by the steep chalk cliffs of the coastline. This area would have been large enough to support a sizeable community during the Bronze Age and probably Iron Age periods and it is therefore considered that the potential for further prehistoric remains within the rising main replacement route is **moderate**.

5.2 Roman

Generally, Roman evidence has been recorded at Flamborough and the surrounding agricultural landscape from many of the fields that were previously occupied during the prehistoric period. Although no evidence has been recorded within the rising main replacement route. It has been suggested earthworks such as Danes' Dyke had multi-period use and continued to be used beyond the prehistoric period. The dyke may have been used as a defensive ditch during the Roman period, similarly defending settlement on the eastern side. It is therefore considered that the potential for Roman remains within the rising main replacement route is also **moderate**.

5.3 Early medieval

During this period Flamborough was a small settlement and evidence of activity within the rising main replacement route and study area is scarce. Evidence suggests the area was probably open fields during the early medieval period. Overall, it is considered that the potential for early medieval remains within the rising main replacement route is **low**.

5.4 Medieval

The Bridlington Priory built up a substantial holding at Flamborough during the medieval period and by the 14th century a large settlement had been established centred around the core of the church. Archaeological Investigations within the village have revealed evidence of these medieval structures including chalk and cobble house platforms some containing two phases of stone building and accompanying hearth/ovens. The areas outside the main core of the village were likely common pastures and closed meadows during this period supporting the village. During the site walkover potential surviving medieval ridge and furrow was identified. Based on this information, the potential for medieval remains within the rising main replacement route which largely runs through agricultural fields away from the village is therefore considered **moderate**.

5.5 Post-medieval

The rising main replacement route continued to be used for agriculture during the post-medieval period supporting nearby post-medieval farmsteads. Within the fields at the northern end of the rising main replacement route, cartographic evidence has identified smaller field parcels than is known today with at least one field boundary which was removed after the 1970s. Overall it is considered that the potential for post-medieval remains within the rising main replacement route is **moderate**.

6 Impact assessment

This impact assessment looks at the impact of the proposed development on the archaeological resource. Recommendations for further archaeological investigation are outlined in Section 7.

Archaeological potential has been assessed as moderate for the prehistoric and Roman periods due to the close proximity of Dane's Dyke and its defensive nature effectively cutting off the Flamborough peninsula on its eastern side large enough to support a sizeable community. A moderate potential was also assessed for medieval and post-medieval remains. The rising main replacement route is away from known settlement but within agricultural areas that are largely previously undisturbed and there is a good chance of medieval and post-medieval agricultural activity to survive as shown by the extant ridge and furrow (MM141).

6.1 Design Mitigation

Efforts have been made through the design process to reduce the impact on the archaeological resource. Initial design proposals involved the replacement rising route to cut across Dane's Dyke. This would have been in a different location to the existing rising main which crosses the Scheduled Dyke further to the north resulting in new excavations through the Scheduled Monument. The current proposed permanent solution will avoid the Scheduled monument by tying into the existing rising main, 89m east of the Scheduled Area thus reducing the potential to impact the archaeological resource.

6.2 Temporary works

In order to facilitate the rising main replacement, a temporary main works construction compound will be required and placed on land to the rear of The Crofts on Bridlington Road (at Manhole 10) and a temporary satellite compound near Flamborough Village SPS. Ground investigations have identified a disturbed topsoil deposit within the field where the main works compound will be located. This is the only scrub field within the rising main replacement route. All the other fields are used for horse paddocks (pasture) or arable agricultural fields and may suggest recent disturbance/dumping on the field. The limited nature of the excavations required to form the compounds, along with the evidence for previous ground disturbance in this location suggests that these works are unlikely to remove or truncate any significant unknown archaeological remains.

6.3 Permanent works

Works required for the new gravity sewer will require a cut trench excavation with a maximum width of 1m varying in depths between 0.9m up to a maximum depth of 3.5m. A construction easement of 20m from the centre line of the pipe will be required for stockpiling. These works will remove archaeological remains within their footprint.

No known non-designated heritage assets are recorded on the Humber HER within the rising main replacement route. However, during the site walkover an area of extant ridge and furrow was identified in a field immediately west of Flamborough Village and possible field boundaries of uncertain date have been identified on LiDAR imagery in the most northern field where the replacement rising main runs through. Archaeological potential has been assessed as moderate for the prehistoric and Roman periods due to the close proximity of Dane's Dyke and its defensive nature effectively cutting off the Flamborough peninsula on its eastern side large enough to support a sizeable community. Similarly, evidence exists within the rising main replacement route for medieval or post-medieval agricultural land management features.

Therefore, works associated with the rising main replacement route have the potential to impact on known as well as unknown archaeological remains.

7 Recommendations

Following consultation with Humber Archaeology Partnership it is recommended that Geophysical Survey be undertaken across the full length of the rising main replacement route using a 60m wide corridor from its centre line to archaeologically evaluate the proposed development. The 60m wide corridor will allow for sufficient data to be obtained that if significant or substantial archaeological remains are identified in certain sections of the rising main replacement route that the route can be amended at design stage to preserve these remains insitu. The Geophysical Survey will also help to identify potential future stages of archaeological evaluation or excavation where the replacement rising main cannot be moved and archaeological features are present.

The Geophysical Survey should be undertaken in accordance with a Written Scheme of Investigation (WSI) to be agreed in advance with HAP. Further consultation should be undertaken with HAP following completion of the Geophysical Survey to discuss the results and determine if any targeted archaeological works will be required in advance or during construction.

8 Conclusions

This archaeological DBA has been undertaken to assess the likely historic environment impacts of a new gravity sewer from Flamborough Village Sewage Pumping Station (SPS) at approximate NGR TA 522560 469948 connecting to an existing rising main east of the Scheduled Dane's Dyke at NGR TA 521550 470644.

The existing rising main was constructed in 1980 and at some points only laid at shallow depths. From 2014 the existing main has burst eight times. Given the age and material of the main as well as poor design in places. Yorkshire Water have decided to replace the eastern section with a new gravity sewer still discharging at the existing SPS.

The rising main replacement involves the provision of a buried pipe and fifteen manholes located where the pipe changes direction. A cut trench will be required to install the pipe and a construction easement of 20m from the centre line of the pipe will be required for stockpiling material. A new interceptor land drain parallel to the upstream most length of the sewer will be installed between Manholes 14 and 15.

No known non-designated heritage assets are recorded on the Humber HER within the rising main replacement route. However, during the site walkover an area of extant ridge and furrow was identified in a field immediately west of Flamborough Village and possible field boundaries of uncertain date have been identified on LiDAR imagery in the most northern field where the replacement rising main runs through.

The rising main replacement route also lies within an area of known prehistoric and Roman activity, common with many parishes in the East Riding of Yorkshire. The Scheduled Bronze Age Dane's Dyke runs on a north to south alignment only 89m west from where the new rising main replacement route will be connected to the existing rising main. The dyke effectively cut off the Flamborough peninsula on its eastern side which was naturally defended on all sides by the steep chalk cliffs of the coastline. This area would have been large enough to support a sizeable community during the Bronze Age, Iron Age and probably Roman periods and it is therefore considered that the potential for further remains from these periods within the rising main replacement route is moderate. Similarly, evidence exists within the rising main replacement route for medieval or post-medieval agricultural land management features. Therefore, works associated with the rising main replacement route have the potential to impact on known as well as unknown archaeological remains.

Following consultation with HAP it is recommended that Geophysical Survey be undertaken across the full length of the replacement rising main route using a 60m wide corridor from its centre line to archaeologically evaluate the proposed development. The 60m wide corridor will allow for sufficient data to be acquired that if significant or substantial archaeological remains are identified in certain sections of the replacement rising main route that the route can be amended at design stage to preserve these remains in-situ. The Geophysical Survey will also help to identify potential future stages of archaeological evaluation or excavation where the replacement rising main cannot be moved and archaeological features are present. The Geophysical Survey should be undertaken in accordance with a WSI to be agreed in advance with the HAP.

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A. Gazetteer of heritage assets

Table A.1: Designated heritage assets within the 1km study area

MM No.	Name	Description	List Entry	Grade	Period	Distance from the scheme
MM001	The Vicarage	Vicarage. 1843. Light brown brick with stone dressings, timber eaves cornice, slate roof. Central direct entry, square plan with outshuts to left and to rear. 2 storeys, 3 bays, symmetrical elevation. Centre bay recessed. 6-panel door with oblong fanlight in plain surround. 16-pane sashes with stone sills and lintels under arched recess to ground floor. Brick lintel band. First floor has 12-pane unequal sashes to side bays, 9-pane unequal sash to centre bay. Deep eaves on shaped brackets, hipped roofs with valley stacks. Interior retains panelled doors, cut string stair with panelled tread-ends and slender turned balusters supporting handrail. Included partly for group considerations.	1083398	Grade II Listed Building	Post- medieval	288m
MM002	FLAMBOROUGH CASTLE, TOWER STREET	Castle. Mid C14. Coursed squared chalk rubble with some patching in red brick. Originally rectangular on plan, 3 sides only now surviving. 1 altered doorway to east elevation with plain jambs and square head. Interior retains putlog holes and chamfered springers for barrel-vaulted basement. Scheduled ancient monument.	1083401	Grade II Listed Building	Medieval	406m
MM003	THE MANOR HOUSE, B1259	Early C18, refronted and remodelled early C19. Rendered chalk rubble and brick with stone dressings, plinth, and rusticated quoins, brick stacks. Central directentry plan with rear wing and outshut. 2 storeys, 5 bays, 2:1:2. 6-panelled bolection-moulded door and rectangular fanlight with margin lights, in panelled reveals and soffit. Doorcase with reeded pilasters, panelled frieze and shallow moulded cornice. All windows 16-pane sashes, except 12-pane sash over door, with stone sills and channelled wedge lintels. Hipped roof. Interior contains 2 corner fireplaces and early C19 open string stair with scrolled tread-ends, square section balusters, and moulded handrail. Room to right of entrance hall has fine reused fireplace of c1750 with eared architrave, frieze carved with shell and acanthus motifs in high relief, and moulded cornice. The rear wall is of massive chalk rubble and may represent part of an older building on the same site.	1162217	Grade II Listed Building	Post- medieval	381m
MM004	CHURCH OF ST OSWALD	c1100 largely rebuilt 1864 by R G Smith of Hull. South porch 1893, west tower 1896. Ashlar with cobbles, slate roofs. West tower, 4-bay aisled nave, south porch, chancel. Chancel aisles have 3-light flat-headed windows with trefoils, clerestory has circular windows with cusped cross-tracery. Nave aisles have 2-light windows	1162230	Grade II* Listed Building	Medieval	217m

MM No.	Name	Description	List Entry	Grade	Period	Distance from the scheme
		with cusped ogee tracery, nave clerestory plain 2-light windows with stone mullions under square heads. 3-stage west tower has plinth; stages marked by string-courses: clasping buttresses to lower stage. 3-light west window and 2-light belfry openings, all with Perpendicular tracery. Sculpted figure in canopied niche on tower south wall, first floor. Coped gables throughout, cross finial to chancel. Nave arcades with octagonal piers, pointed arches of 2 orders with broad chamfers. C12 chancel arch with rich roll-mouldings, additional roll to nave, and scalloped capitals. C15 chancel screen, probably from Bridlington Priory: central opening flanked by two 2-light openings, each with fretted tracery. Rood loft over with 15 canopies with crocketed finials all under a running vine- scroll, with fretted band above. C12 font with all-over lozenge ornament. Fragment of effigy with toad at the heart beneath brass inscription to Sir Marmaduke Constable, died 1520, to north of altar. Andrew Marvell, the father of the poet, was the incumbent here 1609-1612.				
MM005	6, HIGH STREET	Small house late C18 / early C19. Rendered, with stone sills, pantiled roof, brick stacks. Central direct entry. 2 storeys, 2 windows. C20 door in plain surround. Ground floor has 16-pane and 20-pane bow- fronted shop windows, upper floor has 16-pane bow windows, all with wooden architraves and stone sills. Stepped eaves cornice. End stacks.	1162251	Grade II Listed Building	Post- medieval	740m
MM006	ROSE AND CROWN INN	mid C18 with C19 alterations. Rendered, stone dressings, pantiled roof, brick stacks. Direct entry with lower rear wing. 2 storeys, 3 windows. 6-panelled door, between left and centre window, with narrow oblong fanlight, under channelled wedge lintel and raised key-block. 4-pane sashes in plain surrounds under splayed flat-headed channelled lintels with raised key-block. Stone sills. Sprocketed eaves, raised gable to right, with kneelers and terracotta poppyhead finial: end and axial stacks.	1162352	Grade II Listed Building	Post- medieval	853m
MM007	CARR FARMHOUSE	Farmhouse, C18. Rendered, stone sills, pantiled roof, brick stacks. Hearth-passage plan. 1 storey and attics. Boarded door in plain surround. 4 windows to ground floor, all 4-pane sliding sashes in moulded wooden architraves. Attic has 2 dormers under sloping roofs with 12-pane sliding sashes in moulded architraves. Plain close verges. End and axial stacks.	1162374	Grade II Listed Building	Post- medieval	211m
MM008	WAR MEMORIAL	II War Memorial, 1918 and 1945, plain stone cross on a double plinth, set in memorial garden which forms part of a scheduled ancient monument (SM 26506). Lowest step of plinth bears the inscription: '1914 - 1918 THEIR NAME LIVETH FOR EVERMORE'. The middle step is inscribed with the names of 12 servicemen, with 15 more on the sides. The upper step has a projecting stone inscribed: 1939-1945, and on the face of the plinth the names of 3(?) servicemen, with a total of 16	1391713	Grade II Listed Building	Post- medieval	393m

MM No.	Name	Description	List Entry	Grade	Period	Distance from the scheme
		names from the 2nd World War. On the shaft of the cross at the base is the inscription: 'TO THE GLORY OF GOD AND IN MEMORY OF THE SONS OF FLAMBOROUGH WHO DIED IN THE GREAT WARS'. The S of WARS was added after the 2nd World War. The memorial was originally unveiled in October 1921.				
MM009	Danes' Dyke	Overall grouping for three sections of Dane's Dyke between the Cliff Plantation and the B1255, between the B1255 and the B1229 and from the B1229 north to Wold Farm field boundary. The monument includes the extreme southern section of the linear bank and ditch system known as the Danes' Dyke, which in its entirety runs from the coast north of Flamborough Head south for a distance of two and a half miles, enclosing an area of approximately five square miles of headland. The Danes' Dyke is thought to have been constructed in the Bronze Age along with other linear earthworks on the nearby Yorkshire Wolds. Its name, however, suggests a later date and it would seem likely that it was reused as a defensive earthwork at some point in the late ninth and tenth centuries AD.	1013191; 1013192 & 1013192	Scheduled Monument	Prehistoric	89m
		MM010 to MM011 no longer need – merged groupings of Dane's Dyke into single	e asset numbe	er		
MM012	Flamborough Castle: a fortified manor house	The monument includes the remains of a medieval fortified house and related earthworks known as Flamborough Castle, located in a field behind the war memorial in Tower Street, in the village of Flamborough. The most visible feature of the site is the ruined tower, which stands in the middle of the site. It is constructed of coursed squared chalk blocks and rubble, probably extracted from a small quarry around 100m to the north of the site. Originally rectangular in plan, only three sides now survive, and include the full length of the south wall, with parts of the east and west walls remaining to an estimated height of 4m. There is one altered doorway to the east with plain jambs and square head, whilst the interior retains putlog holes and chamfered springers for a barrel vaulted basement. Until a few years ago, the vaulted chamber was complete but due to the decay of mortar, has now collapsed. Part of the first floor, with the footings of a door in the south wall, can be traced above the remains of the vaulting. The only evidence for a second floor is a garderobe drain in the south east corner wall. The drain was enclosed in masonry and can be traced up through the basement and first floor level. There are many putlog holes through the walls which may have been filled with clay or wood.	1014896	Scheduled Monument	Medieval	297m

Source: Historic England, National Heritage List for England, data downloaded January 2022

Table A.2: Non-designated heritage assets within the 1km study area

MM No.	Name	Description	HER No.	Period	Distance from the scheme
MM013	Bronze age axes	Two bronze socketed axes, one with cable moulding round the socket, found at Danes Dyke.	MHU556	Bronze age	760m
MM014	Flint Implements, Danes Dyke house	Flint implements found during the construction of a house adjacent to Danes Dyke, and in 1880, in its grounds. Finds include a flint axe, scrapers and arrowheads.	MHU560	Prehistoric	923m
MM015	Danes Dyke	The monument consists of the linear bank and ditch system known as the Danes' Dyke which, in its entirety, runs from the coast north of Flamborough Head south for a distance of two and a half miles, enclosing an area of approximately five square miles of headland. This section of the monument is situated on the coast by Dykes End, Bempton Cliffs and extends south to the eastward bend in the earthwork conforming to the field boundary aligned with Wold Farm. The Danes' Dyke is thought to have been constructed in the Bronze Age along with other linear earthworks on the nearby Yorkshire Wolds. Its name, however, suggests a later date and it would seem likely that it was reused as a defensive earthwork both by Iron Age tribes and probably also at some point in the late ninth and tenth centuries AD. The dyke effectively cuts off the Flamborough peninsula, which is also naturally defended on all sides by steep chalk cliffs, converting it into a promontory fort. The area thus enclosed is large enough, and has sufficient resources, to support a sizeable community, with sources of fresh water available. Scheduled as Section of Danes' Dyke between the Cliff Plantation and the B1255, Scheduled as Northern section of the Danes' Dyke from Wold Farm field boundary to Bempton Cliffs, Section of Danes' Dyke from the B1229 north to Wold Farm field boundary, Scheduled as Section of the Danes' Dyke between the B1255 and B1229 roads.	MHU966	Prehistoric	418m
MM016	Site of Lime Kilns	Marginal site of lime kilns, situated to rear of Grove Farm.	MHU1283	Post-medieval	286m
MM017	Old hall site or SMV	OS1854 6" shows 'Site of Old Hall', and earthworks to E of Beacon Farm may mark site of former houses. The earthworks at TA 2266 6987 were mapped from APs taken in 1999. These include the probable remains of the hall and ?two adjacent enclosures that may have been yards or gardens.	MHU1285	Medieval	138m
MM018	Fishponds, East of Water Lane	OS1854 and 1936/38 6" shows 'Old Fish Ponds'. The three pans and their surrounding ditch are visible as superficial depressions in a pasture field. Fishponds belonged to the manor in 1559.	MHU1286	Post-medieval	109m
MM019	Site of windmill, Highlands	Site of windmill standing in 1839, a new one was built on same site about 1844.	MHU1289	Post-medieval	991m
MM020	Site of Beacon Hill signal station	Site of Beacon Hill traditionally associated with location of Roman signal station of 4th-century date (MHU1291) which is suspected to have existed on Flamborough Head, the most likely location being the summit of Beacon Hill. Roman pottery has been recovered	MHU1291	Roman	639m

MM No.	Name	Description	HER No.	Period	Distance from the scheme
		at various times from the hill and about half a dozen large untrimmed boulders were recorded there. These stones have since been destroyed by quarrying, but may have been similar to those found at the Filey signal station. The hill takes its name from the beacons which stood there from 1588, when 3 were recorded. They were repaired in 1755 and one beacon still stood in 1834, but by 1887 this had disappeared. The stones set around the base of the T-shaped beacon (MHU1293) could still be traced in 1887.			
MM021	Site of Beacon	Site of Beacon Hill traditionally associated with location of Roman signal station of 4th-century date (MHU1291) which is suspected to have existed on Flamborough Head, the most likely location being the summit of Beacon Hill. Roman pottery has been recovered at various times from the hill and about half a dozen large untrimmed boulders were recorded there. These stones have since been destroyed by quarrying, but may have been similar to those found at the Filey signal station. The hill takes its name from the beacons which stood there from 1588, when 3 were recorded. They were repaired in 1755 and one beacon still stood in 1834, but by 1887 this had disappeared. The stones set around the base of the T-shaped beacon (MHU1293) could still be traced in 1887.	MHU1293	Post-medieval	639m
MM022	Site of spa well	Site of spa well with ornamental well-head built in 1753.	MHU1295	Post-medieval	141m
MM023	Circular ditch, well, or mill	Aerial photographs show a double circle near to the tower in Castle Garth.	MHU1296	Unknown	364m
MM024	Pottery find	Findspot of 12th century Northern Gritty Wares and 16th century imported Stoneware found in 1976.	MHU1297	Medieval and post-medieval	147m
MM025	Site of pump, Crofts Hill	Site of wooden pump on Croft's Hill replaced by iron pump about 1864.	MHU1298	Post-medieval	95m
MM026	Site of pump, Church Lane	Site of a pump which stood at the corner of Church Lane.	MHU1299	Post-medieval	203m
MM027	Site of water pump	Site of a pump, known as the Northern Pump, which stood near the former large mere.	MHU1300	Post-medieval	849m
MM028	Basalt axe	Findspot of a basalt axe found at South Landing by RH Jefferson in 1975.	MHU1301	Neolithic	925m
MM029	Roman pottery	Findspot of a late 4th century sherd of Crambeck ware found by MW Barley and CW Wright in gravel pit spoil on top of Beacon Hill in 1939. Also a samian foot ring was picked up in the same area prior to 1934.	MHU1302	Roman	648m
MM030	Flint knapping site	Neolithic flint knapping site at South Landing, Flamborough Head.	MHU1305	Neolithic	925m
MM031	Neolithic occupation, south of Sea Road	Neolithic occupation site with a cobbled floor and hearth. Finds of flints, Grooved Ware, hammerstones, and charcoal.	MHU1306	Neolithic	672m
MM032	Neolithic & Bronze age occupation, Beacon Hall	Neolithic and Bronze Age occupation site, from which many different finds occurred. An oval Beaker period building was recorded, 4.6m wide. Finds included an occupation	MHU1307	Neolithic-Bronze age	642m

MM No.	Name	Description	HER No.	Period	Distance from the scheme
		horizon of Neolithic and Early Bronze Age date. At the N level the pottery was mainly Neolithic. Flint implements were also found. Bronze Age Beaker ware, and evidence of an extensive flint industry were found at the later level. Pottery finds in this area also include late Roman and late 12th- to early 13th-century medieval sherds. The stone finds include fragments of polished greenstone celts from both floors; a jet roundel and flint saws used probably as sickle blades in a composite implement of horn, wood, and flint; scrapers, cores, blades, axes, and petit-tranchet arrowheads. A few post-holes were recorded, and a number of quartz pebbles probably collected to be used in protecting the wearing surfaces of wooden ploughs were found cached in the BA horizon. Description of surface industries at Flamborough Head and report on 1950 excavations of Neolithic to Bronze Age site partly quarried away. Pierced macehead found in a ploughed field in this area. Beaker and Neolithic pottery types described. Flint industry found by Burchell around 1930 recorded as Palaeolithic but much more likely to be Neolithic or later. Five axe fragments from Beacon Hill in list of stone axes from Yorkshire. Site destroyed by quarrying before 2009.			
MM033	Former Wesleyan Methodist Chapel, Chapel Street	A large and ornate building with an angle-turret built of yellow brick with red brick and stone dressings. Built 1889, now demolished.	MHU4947	Post-medieval	689m
MM034	Primitive Methodist Chapel	Primitive Methodist Chapel, built 1874.	MHU4948	Post-medieval	604m
MM035	Stone axe fragment	Axe fragment (Group IV Great Langdale) from Hartendale. Now in J. Davies Collection, no.4079.	MHU5472	Neolithic	601m
MM036	Stone axe fragments, Flamborough Head	Neolithic axe fragments from Great Langdale. Now in Scarborough Museum.	MHU5488	Neolithic	220m
MM037	Manor Cottage, Church Street	Near to church. Single-storey mid 18th-century building with attics. Built of chalk and brick.	MHU6288	Post-medieval	299m
MM038	Double ditched trackway	Aerial photographs show n-s double sitch - possibly an old track.	MHU6483	Unknown	207m
MM039	Linear ditch, south of Bempton Lane	OS 1854 6" sheet 128 shows a section of linear ditch extending into Bempton, possibly an old road.	MHU6484	Unknown	167m
MM040	Ring ditch	Site of a ring ditch.	MHU6485	Unknown	231m
MM041	Settlement complex	Site of small complex of settlement traces, including a hut circle, within a large rectilinear enclosure. Threatened by quarrying.	MHU6487	Unknown	357m
MM042	Two ring ditches	Site of ring ditches.	MHU6488	Unknown	957m
MM043	Linear parchmarks	Linear parchmarks, presumably representing ditches.	MHU7233	Unknown	428m

MM No.	Name	Description	HER No.	Period	Distance from the scheme
MM044	Cottages west of St Oswald's church	Post Medieval cottages.	MHU7614	Post-medieval	239m
MM045	Possible flint industry	Early Mesolithic to Late Bronze Age flint industry found during excavations on Sewerby Golf Course (EHU403: SEW 90), represented by a posthole, flint scatter and worked implements, including a knife, axe and awl.	MHU8793	Mesolithic- Bronze Age	832m
MM046	Prehistoric finds, Flamborough	Find of a flint axehead and chisel in a field between Flamborough and Bempton.	MHU8951	Prehistoric	220m
MM047	Neolithic & Roman occupation	Early Neolithic to Post Medieval occupation site and pottery.	MHU8995	Neolithic-post- medieval	816m
MM048	Church farmhouse	Church Farmhouse, formerly a listed building. Mid 18th-century rendered chalkstone with pantiled roof. Demolished c 1999.	MHU9315	Post-medieval	424m
MM049	Flamborough settlement	Medieval-post-medieval settlement, mentioned in Domesday. The village stands in the centre of Flamborough Head, bounded to the W by Danes Dyke. There are several good landing places in the otherwise inaccessible cliffs, including N & S Landings and Thornwick Bay, which allowed the village to develop as a fishing centre from medieval times. There is abundant evidence for occupation in the area from prehistoric times.	MHU9589	Medieval – post- medieval	582m
MM050	Roman burials and ditches (?)	Excavations at Flamborough Quarry in 1979 (EH134: FQ 79) identified E–W ditches with possible Romano-British burials lying parallel to them.	MHU1205 6	Roman (?)	402m
MM051	Site of postmill, Mill Hill	Site of 16th-century postmill (MHU14094) and 19th-century windmill (MHU14095).	MHU1409 4	Post-medieval	337m
MM052	Site of windmill, Mill Hill	Site of 16th-century postmill (MHU14094) and 19th-century windmill (MHU14095).	MHU1409 5	Post-medieval	337m
MM053	Site of horse mills	Site of horse engine house, built in 1551. There were two in the manor in 1562, in addition to a windmill.	MHU1409 6	Post-medieval	220m
MM054	Site of windmill	Site of windmill, built c 1848.	MHU1409 7	Post-medieval	948m
MM055	Site of water mill	Site of watermill, mentioned c 1260.	MHU1409 8	Medieval	220m
MM056	Sunny cottage	House known as Sunny Cottage and Ogle's Cottage, incorporating cruck trusses and walls of wattle and daub construction. The building probably dates to the 17th century.	MHU1467 5	Post-medieval	203m
MM057	Dog and Duck inn	19th-century inn.	MHU1467 6	Post-medieval	610m

MM No.	Name	Description	HER No.	Period	Distance from the scheme
MM058	The Ship Hotel	The Ship Hotel, High Street, Flamborough, dates from the early 19th century and has a doorcase with fluted columns and a modillioned cornice head.	MHU1467 7	Post-medieval	647m
MM059	The Seabirds Inn	19th-century inn.	MHU1467 8	Post-medieval	539m
MM060	Site of the Strickland Arms Inn	Former inn. Mentioned in 1831, closed by 1846.	MHU1467 9	Post-medieval	220m
MM061	The Victoria Institute	The Victoria Institute in Chapel Street was built in 1887 by Mrs Creyke as a reading and recreation room.	MHU1468 1	Post-medieval	686m
MM062	Site of Wesleyan Chapel	Wesleyan chapel.	MHU1468 2	Post-medieval	582m
MM063	Former dyke cottages, Home farm	18th-century cottages.	MHU1468 3	Post-medieval	582m
MM064	Site of south landing lifeboat station	South Landing lifeboat station, built 1871 as 'number two station'. The original bulding was disused by 1938 and used as a store for fishing gear. It was demolished in 1992 and replaced by the present structure accommodating larger modern lifeboats. It was in good condition in 2009.	MHU1468 6	Post-medieval	776m
MM065	Site of manor house	Site of 17th-century manor house.	MHU1468 8	Post-medieval	444m
MM066	Site of post mill, south of North Mere	Site of former early 19th-century post mill.	MHU1469 0	Post-medieval	740m
MM067	Site of common bakehouse	Site of 16th-century parish bakehouses.	MHU1472 0	Medieval - post- medieval	220m
MM068	Site of brickworks	Site of 18th- to 19th-century brickworks.	MHU1472 2	Post-medieval	610m
MM069	Site of guild house	Site of late 16th-century guild house. The guild of St Margaret was mentioned in 1566 when the building was described as one of three cottages, which with a house and land formed guild property. It was let again in 1576, and mentioned as late as 1633.	MHU1472 3	Post-medieval	220m
MM070	Site of School House	Site of 17th- to 18th-century school house. Schoolmasters are mentioned from as early as 1604–5. Repairs to the schoolhouse are referred to in 1756, 1795 and 1806–7. A school was held in the E end of the N chancel aisle of the parish church by 1811, continuing there until 1845.	MHU1472 4	Post-medieval	220m

MM No.	Name	Description	HER No.	Period	Distance from the scheme
MM071	Former national school	Former National School, built 1845.	MHU1472 5	Post-medieval	714m
MM072	Linear ditches and enclosures	RCHM Plot shows fragmentary east/west linear ditches, with a rectangular subdivided enclosure.	MHU1516 0	Prehistoric	902m
MM073	Site of limekiln, Gell- Spring Hill	'Chalk Pit' and 'Limekiln' printed and shown on O.S. 6" first edition map, 1854.	MHU1532 3	Post-medieval	575m
MM074	Site of limekiln, north of Bempton Lane	'Chalk Pit' and 'Limekiln' printed and shown on O.S. 6" first edition map, 1854. 'Old Chalk Pit' printed and shown on O.S. 25" first edition map, 1891.	MHU1532 4	Post-medieval	1km
MM075	Site of chalk pit, south of Carter Lane	Very large 'Old Chalk Pit' printed and shown on O.S. 6" first edition map, 1854. 'Old Chalk Pit' printed and shown on O.S. 25" first edition map, 1891.	MHU1533 0	Post-medieval	497m
MM076	Site of pinfold, east of Church Farm	'Pinfold' printed and shown on O.S. 6" first edition map, 1854.	MHU1533 1	Post-medieval	350m
MM077	Site of brickfield, east of Beacon Farm	Site of 19th-century brickworks.	MHU1533 3	Post-medieval	246m
MM078	Site of limekilns, south of Sea Road	Site of limekilns.	MHU1533 4	Post-medieval	485m
MM079	Hartendale Neolithic occupation	A watching brief (EHU148: HGF 92) produced evidence for Neolithic occupation, with Neolithic to late Bronze Age pottery.	MHU1552 6	Neolithic	646m
MM080	Cliffe House Farm	Farm.	MHU1577 6	Post-medieval	1km
MM081	Roman – post-medieval finds, The Grange, 1993	Series of finds of Roman to Post Medieval date from The Grange, 1993. Includes MHU16354 and MHU16355	MHU1635 3	Roman – post- medieval	440m
MM082	Possible roman horse fittings, south of Bempton Lane, 1993	Possible Roman harness fittings, 1993.	MHU1636 0	Roman	738m
MM083	Pre-PM finds, Wold Farm	Series of finds of prehistoric to Post Medieval from Wold Farm, 1995. Includes MHU18058, MHU18059, MHU18060, MHU18061, AND MHU18062.	MHU1805 7	Prehistoric – Post-medieval	957m
MM084	Neolithic flint assemblage	A walk over survey undertaken as part of a watching brief in 1998 recovered an assemblage of 33 pieces of worked flint dating from the Neolithic period.	MHU1996 6	Neolithic	346m
MM085	Flint flakes, Beacon Farm,	Findspot of three flint flakes recovered during a watching brief at Beacon Farm, Flamborough, in 2003.	MHU1997 1	Neolithic	89m

MM No.	Name	Description	HER No.	Period	Distance from the scheme
MM086	Well & features, Beacon Farm	A number of features of unknown date were identified during a watching brief at Beacon Farm, Flamborough, in 2003. A west to east covered culvert was identified, which was constructed of stone, brick and chalk and included two re-used architectural fragments. The two fragments were a limestone roof tile and a chalk post-setting and both of these were incorporated within the culvert. A hatch with a well beneath it was also identified within the farm buildings. The well would seem to predate the farm buildings which are said to be 18th or 19th century in date. The well was constructed of chalk blocks and was over 12m deep. <1> A chalk-lined well, which clearly predated the existing farm buildings and a stone, brick and chalk culvert of unknown date were identified during a watching brief on the site (EHU927: WB2003.002).	MHU1997 2	Unknown	90m
MM087	Grove Farm, Flamborough	Grove Farm is a post-enclosure farmstead. The farmhouse is a typical later 19th century double-pile house, constructed from hand-made bricks laid in Flemish bond at the front and English Garden Wall bond at the rear. All windows have stone sills. Of two storeys and three bays and with end stacks. <1> Typical later 18th-century farmhouse, adjacent to Church Lane, Flamborough. The farmhouse has a double-pile plan, and is constructed from hand-made bricks laid in Flemish bond at the front and English Garden Wall bond at the rear. All windows have stone sills. Of two storeys and three bays and with end stacks.	MHU2017 7	Post-medieval	169m
MM088	Farm buildings, Grove Farm	Farm buildings at Grove Farm, ranging in date from the later 18th and later 20th centuries and built of a mixture of brick, chalk blocks and cobbles.	MHU2017 8	Post-medieval	187m
MM089	Beacon Farmhouse	Beacon Farm is a post-enclosure farmstead, with a brick-built farmhouse. The house if of two storeys and three bays built of hand-made bricks in English Garden Wall bond. The house dates to the 1860s.	MHU2017 9	Post-medieval	78m
MM090	Farm buildings, Beacon Farm	Farm buildings at Beacon Farm, including the barn, which was constructed sometime after 1766. Other farm buildings constructed around 1830 with later alterations. Surveyed by the Yorkshire Vernacular Buildings Study Group.	MHU2018 0	Post-medieval	81m
MM091	Greenside cottage, Flamborough	Greenside Cottage in the village of Flamborough, dates from the 18th century. The building was originally a two-celled direct entry single storey building.	MHU2018 1	Post-medieval	761m
MM092	Flint assemblage, Chapel Street	A small assemblage, of three flints, of prehistoric date recovered during a watching brief on land at Chapel Street, Flamborough, in 2004/2005.	MHU2028 2	Prehistoric	660m
MM093	Flint core & flake, Flamborough	A flint core and flake were recovered during a watching brief at Bridlington Road, Flamborough in 2005.	MHU2036 5	Prehistoric	209m
MM094	Late med/PM pottery, Bridlington Road	A small assemblage of pottery, dating from the 14th to 16th century through to pottery of mid to late 19th century date. The sherds were recovered from the topsoil, apart from the sherd of 19th century sponged ware, which came from a ditch.	MHU2036 6	Medieval – Post- medieval	213m

MM No.	Name	Description	HER No.	Period	Distance from the scheme
MM095	Earthwork at Flamborough	A large earthwork, possibly defensive, identified from an aerial photograph, to the north of the village of Flamborough.	MHU2065 9	Unknown	942m
MM096	Iron Age – Romano British enclosure and ditch	Aerial Photographs show Iron Age - Roman rectilinear ditched enclosure and ditch.	MHU2093 6	Iron Age - Roman	950m
MM097	Neolithic – Bronze Age flints, Flamborough rural workshops	An evaluation by Peter Makey on a site in Bempton Lane in 2006 revealed two redeposited flint scatters, containing 296 flints dating from the late Neolithic or early Bronze Age. These included chunks, cores, flakes, and a variety of blades, bladelets, piercers and scrapers.	MHU2094 2	Prehistoric	809m
MM098	Ditched enclosure, Flamborough village	Rectilinear ditched enclosure of uncertain date visible as earthworks on APs centred at TA 2282 7084. Only two corners of the enclosure are visible. It is possible that the feature is the remains of a medieval moat but it may represent later land division and/or drainage. Some sections of NW ditch still visible near TA 22688 70847 as N-S ditch in hedgeline, but E-W section nor visible in pasture. NE section not visible in area around TA 22923 70892.	MHU2094 5	Medieval	904m
MM099	Prehistoric and medieval occupation, Church Farm, Lily Lane	A Geophysical Survey by GeoQuest in 1998 suggested the presence of medieval house platforms, a possible pond, small chalk quarry and a ridge or bank. An evaluation by HFA in 1999 (LLF1999) revealed a ditch, postholes and pit of mid to late Iron Age date, with some residual evidence for a Neolithic and Bronze Age presence. Overlying the early levels were two 12th-/13th-century chalk & cobble house platforms, one with the foundations of an enclosure containing two phases of stone building, including a hearth/oven. This was disused by the late 14th century. The second platform may have supported a timber building. Parallel to Lily Lane was a further timber building and two later 12th-/13th- to 14th-century stone buildings.		Multiperiod	280m
MM100	Prehistoric – Roman enclosure, pit alignment and ditch	A prehistoric/Roman circular enclosure, pit alignment, and ditch are visible as cropmarks on APs centred at TA 2233 6979. The circular enclosure measures 19m in diameter and is centred at TA 2237 6977. The ditch and pit alignment are located to the W of this enclosure. The ditch curves around the circular enclosure at a distance of 60m and the pit alignment runs N–S. Cropmarks of a number of modern field drains are also visible in this area.	MHU2095 9	Multiperiod	174m
MM101	Medieval – post- medieval ridge and furrow	Medieval/post-medieval ridge-and-furrow visible as cropmarks in the South Landing area. Mostly no longer extant.	MHU2096 0	Medieval – post- medieval	881m
MM102	Post-medieval quarry, Beacon Hill	A 20th-century quarry is visible as an earthwork on APs centred at TA 2257 6932. Photographed in 2009. Landscaped and cultivated.	MHU2096 1	Post-medieval	625m

MM No.	Name	Description	HER No.	Period	Distance from the scheme
MM103	Iron Age – Roman enclosures	Potential Iron Age/Roman enclosures and ditches are visible as cropmarks on APs centred at TA 2191 6929. The corner of a potential rectilinear enclosure is visible at TA 2188 6925, and is abutted by three short lengths of ditch. Another ditch extends to the NE of this and is abutted by a small enclosure and a ditch. Further ditches on the same alignment to these are located to the S. No visible remains in 2009.	MHU2096 2	Iron-age - Roman	818m
MM104	WW2 Coastal defences, south landing	WW2 coastal defence site, consisting of tank traps, trackways, and potential weapons pit and trenches, visible on APs centred at TA 2309 6929. Some cropmarks are visible on APs taken in 1994, which may show the remains of these features. The following information is sourced from the revised edition of the Rapid Coastal Zone Assessment Survey Part 2 Gazetter. The site also included a camouflaged pillbox and a row of antitank blocks. No visible remains were noted in 2009. Area overgrown.	MHU2096 3	Modern	879m
MM105	WW2 bombing marker	WW2 bombing range marker visible as a structure on APs centred at TA 2216 6925. No visible remains in 2009.	MHU2096 4	Modern	734m
MM106	WW2 pill box, Beacon Hill	WW2 lozenge shaped pillbox with blast wall, visible on APs. Door not blocked. In good condition, but overhanging the cliff, so at imminent risk.	MHU2096 5	Modern	771m
MM107	Modern statue	Modern wooden statue.	MHU2096 9	Modern	1km
MM108	Pillbox, Dykes End	WW2 type-24 irregular polygonal concrete pillbox at Dykes End at the S end of Danes Dyke.	MHU2097 1	Modern	1km
MM109	Neolithic – Bronze Age flints	Neolithic to Bronze Age flints. During an archaeological strip map and record, forty four worked local flint lithics were recovered from the topsoil surrounding the groundwork's. They include, one piercer, two scrapers, two cores and 38 flakes and one chunk. It is possible they represent a domestic assemblage.	MHU2203 1	Prehistoric	824m
MM110	War memorial, Tower Street	Grade II Listed War Memorial erected in 1921 to commemorate the fallen men of Flamborough, who fought in the First World War and Second World War.	MHU2206 4	Modern	434m
MM111	Prehistoric flints	A large quantity of prehistoric flints were identified and recovered during an archaeological evaluation on land at Bempton Lane, Flamborough. The flints appear to have evidence of rolling on the surface, suggesting they have moved from their original position as the flint was mainly found under a possible hill wash / colluvium deposit, although this has not been fully established. A small amount of 12th to 20th century pottery was also recovered.	MHU2232 5	Prehistoric	789m
MM112	Bull-nosed brick pillar base	The remains of at least two Post Medieval buildings, including a bull-nosed brick pillar base of 17th to 18th century date were identified during a watching brief on land at 3 Tower Street, Flamborough, in 2003.	MHU2003 8	Medieval – post- medieval	469m

MM No.	Name	Description	HER No.	Period	Distance from the scheme
MM141	Surviving ridge and furrow	Area of distinct ridge and furrow identified in horse field paddocks towards the eastern end of the replacement rising main route. (No access into the field to measure the exact size but width would suggest late medieval date.	n/a	Medieval – post- medieval	

Source: Data obtained from Humber HER February 2022

Table A.3: Humber HER archaeological events within the 1km study area

MM No.	Name	HER No.	Туре	Year	Summary
MM113	Watching brief at Flamborough lighthouse sewage transfer, 1998	EHU918	Watching brief	1998	A watching brief was undertaken during the groundworks for the installation of a sewage pumping main. The site of the development is in an area of major archaeological importance where finds of Neolithic worked flint have been made in the past. Several visits were made to monitor the excavation of the pipe trench. No archaeological features were identified within the pipe trench, however a walk over of the adjacent field revealed an assemblage of Neolithic worked flint.
MM114	Watching brief at Beacon Farm, 2003	EHU927	Watching brief	2003	A watching brief was undertaken during the groundworks for the conversion of farm buildings. The site of the development lies close to earthworks and over the probable site of the shrunken medieval village. The ground reduction in the 14 rooms of the conversion was monitored. The ground reduction of the courtyard itself had already been completed prior to the initial visit. A number of features were identified, and a small finds assemblage recovered.
MM115	Watching brief at 3 Tower Street, 2003	EHU995	Watching brief	2003	A watching brief was undertaken during the groundworks for the construction of a new store building and retention of stables. The site of the development lies within the historic core of the village, close to the scheduled monument of Flamborough Castle. A single visit was made to the site to monitor the excavated foundation trenches. The service trench measured 6m by 0.50m and was 0.50m deep. The walls of at least two buildings of post-medieval date were identified. A small finds assemblage was recovered.
MM116	Watching brief at Chapel Street, 2004/2005	EHU1153	Watching brief	2004/2 005	A watching brief was undertaken during the groundworks for the construction of 23 dwellings and associated garages. The site of the development lies at the north end of the village, just to the north of the Castle, and just outside the historic core. However, the wider landscape contains abundant evidence for occupation in the prehistoric and Romano-British periods, and other evaluations within the village has observed prehistoric remains and recovered prehistoric artefacts. A series of twelve visits were made to the development to monitor the groundwork. Eighteen trenches, subject to

MM No.	Name	HER No.	Туре	Year	Summary
					archaeological observation, were excavated varying in dimensions, with depths from 0.70m to 1.80m. No archaeological features were observed, but a small assemblage of three worked flints of prehistoric date were recovered from an unstratified context. The remnants of a subterranean brick structure, possibly a C19 - C20, perishables store was also observed.
MM117	Watching brief at Bridlington Road, 2005	EHU1226	Watching brief	2005	A watching brief was undertaken during the groundworks for the construction of seven dwellings. The site of the development lies within the historic core of the medieval village. Fourteen visits were made to the site to monitor the groundworks. Topsoil was stripped from the southern part of the site to a depth of 0.50m. The foundations for plots 1 to 5 were contiguous and measured 31m by 10.20m and were 0.60m wide and up to 1.30m deep. The site access was excavated to a width of 4.50m and depth of 1.20m. Plots 6 and 7 were stripped to a depth of 1m, to produce a terrace cut into the slope. Due to the depth of the site strip in this area, it was not necessary to monitor the foundation trenches for plots 6 and 7. A ditch containing a single sherd of 19th century pottery, an undated stone structure and other undated features were identified, and a small finds assemblage recovered.
MM118	Watching brief at land south of 34 Tower Street, Flamborough	EHU1370	Watching brief	2007	A watching brief was undertaken during the groundwork for the conversion of an existing building. The development lies within the historic core of the medieval village close to the probable site of the 16th century manor house. The building footings covered an area of 92m square, 0.60m wide and between 1m and 1.20m in depth. An undated ditch was identified, however no finds were recovered.
MM119	Watching brief at land south of 25 Tower Street, Flamborough	EHU1377	Watching brief	2007	A watching brief was undertaken during the groundwork for one detatched house and associated access. The development lies within the historic core of the village, in close proximity to the medieval fortified manor house of Flamborough Castle. The topsoil strip reached up to 1m in depth in some areas of the site. The house footings were 91.27m square, 0.60m in width and between 0.50m - 1.20m in depth. A modern pit and tree bowl were identified in the footings, no artefacts were identified.
MM120	Watching brief land north of Chatterthro, Carter Lane, Flamborough	EHU1452	Watching brief	2008	A watching brief was undertaken during groundwork for four detached houses and access road. The development lies within the historic core of the village. Three house plots between 9.2m - 14.8m by 8.7m - 9.2m, 0.6m wide and between 0.7m - 2.1m deep were monitored. No archaeological features were identified. A single unstratified worked flint was recovered.
MM121	Watching brief at Danes' Dyke, Flamborough	EHU1594	Watching brief	2010	A watching brief was undertaken during groundwork associated with the cutting of an electricity cable. The development site lies within a prehistoric landscape. A single visit was made to monitor the cable trench which was over 220m long by 0.30m wide and 0.60-0.70m deep. A single, unstratified sherd of Romano-British pottery was identified. No other archaeological features or artefacts were identified.

MM No.	Name	HER No.	Туре	Year	Summary
MM122	Watching brief at Grove Farm, Church Lane, Flamborough	EHU1601	Watching brief	2008	A watching brief was undertaken during groundwork for a house and associated services. The development site lies within a prehistoric landscape. Five visits were made to monitor the site strip which was 70m by 11m, and 0.75m deep. The foundation trenches were 12.8m by 7.5m, 0.6 m wide, and between 0.9m-1.15m deep. A service trench between 7m-26m by 0.7m-2m, and between 0.7m-0.85m deep was also monitored. A series of undated pits and a ditch were identified, along with two 18th/19th century chalk wall foundations. No other archaeological features or artefacts were identified.
MM123	Watching brief at the cottage, The Grange, Bempton Lane, Flamborough	EHU1651	Watching brief	2010	A watching brief was undertaken during groundwork's for a building conversion and livery stables. The site sits within a rich archaeological landscape. The groundworks had already been completed by the time the archaeological contractor visited the site, only the backfill was visible spread over an area measuring approximately 80m by 3m. No archaeological features or artefacts were identified.
MM124	Watching brief at Land west of Highlands, Mereside, Flamborough	EHU1826	Watching brief	2011	A watching brief was undertaken during groundwork's for a new dwelling. The development site lies just outside the historic village core of Flamborough. A series of two visits were made to monitor the foundation trenches which were 18m by 9m, 0.60m wide and 0.70m deep. A series of 19th century brick outbuilding foundations were identified along with a quarried tiled floor. No other archaeological features or artefacts were identified.
MM125	Watching brief at land south of the Cloisters, Bempton Lane, Flamborough	EHU1830	Watching brief	2011	A watching brief was undertaken during groundwork associated with a new dwelling. The site lies within the historic core of Flamborough village adjacent to Flamborough Castle. A series of two visits were made to monitor the topsoil strip which covered an area 15m by 15m along with the foundation trenches which were 13m by 8.30m, 0.60m wide and between 1m-1.30m deep. No archaeological features or artefacts were identified.
MM126	Watching brief at land north east of Highlands, Mereside, Flamborough	EHU1873	Watching brief	2011	An archaeological watching brief was undertaken during groundwork associated with a new dwelling and the retention of an outbuilding for the use as a domestic garage. The development lie within a rich prehistoric and medieval landscape. A series of three visits were made to monitor a series of groundwork's which included the access road which was 23m by 5.20m and between 0.20m to 1m deep. An area 27m to 22m and between 0.10m to 0.20m deep was to the north of the site was stripped of topsoil. The foundation trenches were 10m by 11m, 0.60m wide and 1m deep, a soak away 1.40m by 1.40m and 1.70m deep was also monitored. A hard 19th-20th century farm cobbled surface was identified along with a chalk was footing. No other archaeological features or artefacts were identified.
MM127	Evaluation on land east of Bempton Lane, Flamborough	EHU2109	Evaluation	2010	An archaeological evaluation in the form of a monitored topsoil strip was undertaken during groundwork associated with a new joiner's workshop and industrial units. The

MM No.	Name	HER No.	Туре	Year	Summary
					site lies within an archaeological sensitive landscape with archaeological finds dating to the prehistoric period through to the medieval period recovered from fields directly adjacent to the site. A series of visits were made to monitor the excavation of two areas. Each area was excavated using a 360 excavated fitted with a toothless ditch bucket. The topsoil and subsoil was removed to a depth of 0.25m. Trench One was approximately 31m by 24m. Light brown glacial clays with frequent irregular chalk fragments were identified. A series of modern features backfilled with rubble and concrete, tree boles were also identified. Trench two was 20m by 12.6m and 0.15m deep. Light brown glacial clays with frequent irregular chalk fragments were identified. A sherd of 12th-13th century pottery was recovered along with a small assemblage of flint scrapers and flakes from the topsoil /spoil. No archaeological features were identified.
MM128	Evaluation at Mill Hill land/Daneswood caravan park, Bridlington Road, Flamborough	EHU2285	Evaluation	2014	An archaeological evaluation by monitored topsoil strip was carried out during groundwork associated with a new access road and amenity block. The site lies adjacent to the Nationally Scheduled Monument of Danes Dyke. A single visit was made to monitor the removal of topsoil from the access road which was 40m by 11m and 0.35m of topsoil was removed. Within the base of the trench was a clay loam. A modern land drain and electricity cable trench was identified. The amenity block covered an area 20m by 6.5m and between 0.35m – 0.40m of topsoil was removed, a modern rubbish pit and root disturbance was identified. No archaeological features or artefacts were identified.
MM129	Geophysics on land west of Flaen Road, Flamborough	EHU2350	Geophysics	2013	A Geophysical Survey was carried out in response to proposals for a new housing development. The site lies to the west of Flamborough Castle which is a Nationally Designated Heritage Asset. A single visit was made to carry out both a Magnetometer and Resistivity survey over 0.5 hectares of fallow land, a Geophysical Survey grid was laid out using a GPS and the grid was tied in to the Ordnance Survey National Grid. Magnetometer Survey: Bartington Grad 601 magnetic gradiometers were used, reading were taken at 0.25m intervals on zig zag traverse's, 1m apart within 30m by 30m grid, 3600 readings were recorded in each grid. Modern ferrous anomalies attributed to large areas of magnetic disturbance can be attributed to the dumping and spreading of building debris across the site. Resistivity Survey: Areas of high and low resistance were identified; however these may be related to the normal variation in the superficial deposits across the site.
MM130	Evaluation on land west of Flaen Road, Flamborough	EHU2351	Evaluation	2014	An archaeological evaluation by trial trenching was undertaken in response to proposals for a new housing development. The site lies adjacent to Flamborough Castle which is a Nationally Designated Heritage Asset. A series of four visits were made to mechanically excavate three 20m by 2m evaluation trenches. Only one phase of activity was identified across the three trenches which was: Phase 1 Modern 20th century activity. Trench One was 22.50m by 2m and was aligned south south-east to

MM No.	Name	HER No.	Туре	Year	Summary
					north north-west. Within the base of the trench was the natural post-glacial sands, gravels and cobbles. Above this was a soft mid brown silty clay subsoil with sub angular to sub rounded gravels, then the firm dark grey brown silt clay topsoil. Trench Two was 21.35m by 2m and aligned south south-east to north north-west. Within the base of the trench was the natural glacial till, towards the southern end of the trench the natural was post glacial sands, gravels and cobbles. Above this was the firm dark grey brown silt clay topsoil, from which 14th century pottery sherds were recovered. Trench Three was 19.96m by 2m wide and aligned west south-west to east north-east. Within the bases of the trench was the post glacial sands, gravel and cobbles, above which was buried soft mid to dark brown grey silt subsoil with frequent rootlets. Then a modern dump of crushed chalk, firm orange brown clays, ceramic building material debris, plastics and other materials was identified. No archaeological features or artefacts were identified.
MM131	Watching brief at Long Acres Farm, Danes Dyke, Flamborough	EHU2379	Watching brief	2012	n archaeological watching brief was undertaken on groundwork associated with the erection of a wind turbine. The site lies within an extremely rich archaeological landscape. A single visit was made to monitor the removal of topsoil using a mechanical excavator fitted with a toothless ditching bucket. The turbine base was 5.35m by 5.40m within the bases of the trench was a light yellowish brown sandy clay natural. Cutting the natural were two east - west aligned linear / ditches. The southern undated ditch was 1.55m wide and 0.56m deep. Its primary fill was a brownish grey gritty clay silt. The secondary fill was an orangey brown silt clay. Flecks of CBM were identified within the fills. The second ditch was a land drain. Above the ditch, land drain and the natural was a dark brownish grey clay silt topsoil. The cable trench was 58m by 0.40m wide and 1.20m deep. The same deposits as identified within the turbine base were identified. No archaeological features or artefacts were identified.
MM132	Evaluation on land north of Flamborough rural workshops, Bempton Lane, Flamborough	EHU2445	Evaluation	2006	An archaeological evaluation by trial trenching and monitored topsoil stripping over areas of the site which had not already been disturbed in order to mitigate the extensive groundworks which had taken place on the development site without archaeological supervision and in breach of the planning permission. The site lies within a sensitive archaeological landscape which contains Prehistoric Heritage Assets. Seven trial trenches were machine excavated across the site along with the monitoring of topsoil stripping from various areas.
MM133	Watching brief on land south of Preston Flats, North End, Flamborough	EHU2575	Watching brief	2017	An archaeological watching brief was undertaken during groundwork associated with the erection of a dwelling. The site lies within the historic core of the medieval village of Flamborough. A series of three visits were made to monitor the mechanical excavation of the foundation trenches. The Northern Trench was 4.60m by 0.40m and 0.80m deep, within the base of the trench was a dark orange brown sand with grey streaks. Above which was a very dark grey brown topsoil with small chalk fragments. Western Trench was 7.30m by 0.70m and 1.60m deep, within the base of the trench was a dark

MM No.	Name	HER No.	Туре	Year	Summary
					orange brown sand with grey streaks. Above which was a very dark grey brown topsoil with small chalk fragments. The other foundation trenches covered an area 12.80m by 7.30m, 0.70m wide and 1.60m deep, within the base of the trench was a dark orange brown sand with grey streaks Above which was a very dark grey brown topsoil with small chalk fragments. Cutting the dark orange brown sand was a 1.60m wide and 0.90m deep undated pit. The primary fill was a very dark brown sandy silt above which was a very dark grey brown sandy silt. Two roughly worked chalk walls were identified, the east to west running wall was 4.30m long and 3.50m high and the north south running wall was 4.60m long and 2m high. These walls may represent a former cottage.
MM134	Watching brief at West Street/Lily Lane, Flamborough	EHU2731	Watching brief	2018	No summary
MM135	Watching brief at 9 Castle Crescent, Flamborough	EHU3056	Watching brief	2019	A watching brief was undertaken at 9 Castle Crescent, in response to proposed development. The site lies within the historic core of Flamborough, immediately adjacent to the medieval remains. A single visit was made to monitor the excavation of three foundation trenches forming a U shape adjoining the property. The trenches were hand excavated to 1m depth. The Eastern trench was 4.15m south; the east west trench was 6.50m long with the final trench being 5.20m long. All the trenches were 0.60m wide. A simple sequence of deposits was revealed across the site. This consisted of natural glacial till of clay, sand, cobbles and degraded stones in the lower 0.56m. Above this was a patchy band of small stones up to 0.10m thick, with overlying dark grey topsoil 0.30m thick. Above the topsoil was a layer of bedding sand and pavers approximately 140mm thick. No archaeological features or finds were identified.
MM136	Trial trench at Long Acres Farm, Danes Dyke, Flamborough	EHU3993	Trail trench	2015	No summary
MM137	Evaluation on land at Crofts Hill, Flamborough	EHU4107	Evaluation	2017	No summary
MM138	Earthwork and Geophysical Survey on land at Church Farm, Lily Lane, Flamborough	EHU3297	Survey	1998	A geophysical and earthwork survey was undertaken at Church Farm, Lily Lane, Flamborough, prior to proposed development. The site lies within an archaeologically sensitive landscape containing the medieval core of Flamborough. A series of visits was made to survey an area of earthworks using a Geoscan FM36 Fluxgate Gradiometer, with readings taken at 0.5m Intervals along 1m Traverse Length on a zigzag traverse I grid units of 20m x 20m. The results were processed using GeoQuest InSite. The survey showed several ditch type features and some possible pits. Evidence of ferrous debris and possible areas of recent burning where also identified. No further archaeological features were identified. Includes EHU3331.

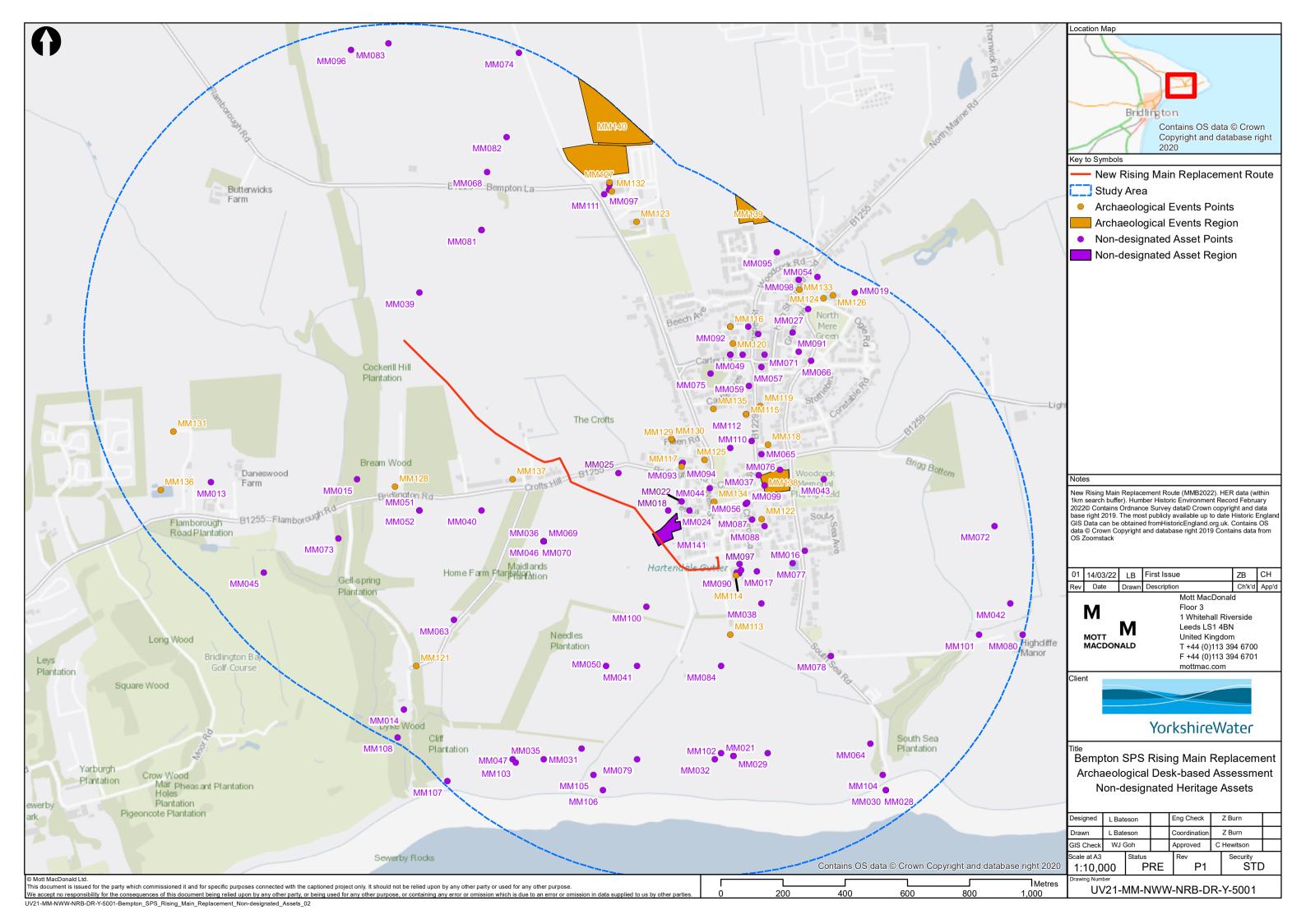
MM No.	Name	HER No.	Туре	Year	Summary
MM139	Geophysical survey on land at Thornwick Bay Holiday Village, Flamborough	EHU2998	Survey	2018	A geophysical survey was undertaken at Thornwick Bay Holiday Village, Flamborough, prior to proposed development. The site lies within an archaeologically sensitive landscape containing Prehistoric, Romano-British, Medieval and Post Medieval heritage assets. A single visit was made to survey an area of 16.5 hectares, split into three areas B, D and E. This was surveyed using a Sensys Magneto MX V3 multisenor magnetometer towed by a quadbike and eight FGM650/3 fluxgate gradiometer sensors mounted at 0.5mm intervals, with readings taken at 0.08m. The results were processed using Sensy Mon MX, DLMGPS and MagnetoARCH to create greyscales at 0.2m by 0.2m intervals, and TerraSurveyor software was used to produce continuous tone greyscale and trace plots at 0.1m by 0.1m intervals. The survey showed possible linear and circular ditches and gullies, two former field boundaries, a drain and a former stream. Traces of former ridge and furrow cultivation was detected in each of the survey areas, along with a Royal Observer Corps Bunker to the east of Area E
MM140	Geophysical Survey on land at Bempton Lane, Flamborough	EHU3333	Survey	2020	A Geophysical Survey was undertaken at Bempton Lane, Flamborough. The site lies within an archaeologically sensitive landscape containing prehistoric to Romano British heritage assets. A visit was undertaken, between 28th February & 2nd of March 2020, to survey an area of 7 hectares using a Bartington 601 Dual Fluxgate Gradiometer. Readings were taken at 0.25m intervals along 1m wide traverse, with the results processed using Terrasurveyor V3. The survey showed a 20m-by-20m enclosure in the mid-eastern part of the site, along with possible internal ditch morthern part of the site. This was possibly associated with industry. There is documented evidence for post medieval Lime kilns and chalk pits within the vicinity. A number of potential ditches were recorded on the southern part of the site. No further archaeological features were identified. This record accumulates survey investigations undertaken in both 2019 (EHU3219) and 2020 (EHU3333), as well as trail trenching undertaken in 2015 (EHU3937).

B. Drawings

B.1 UV21-MM-NWW-NRB-DR-Y-5000_Designated Heritage Assets



B.2 UV21-MM-NWW-NRB-DR-Y-50001_Non-designated Heritage Assets



B.3 Drawing D10535/02_Exploratory Hole Location Plan

Project Id: D10535

Bempton SPS Rising Main Replacement Definition

JN Bentley Ltd

Title: Exploratory Hole Location Plan

Scale: 1:14500 Drawing No: D10535/02



Legend Key

Project Title:

Client:



Dynamic Samplin



Dynamic Sampling with Rotary Core Drilling



Windowless Samplin



