

## 40.1 INTRODUCTION

40.1.1 This chapter provides a summary of information relating to the historic environment of that part of the Humber Estuary and its hinterland that will be affected by the Compensation Site. The term “historic environment” has been defined in Planning Policy Statement 5 (PPS5) as,

*‘All aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and landscaped and planted or managed flora. Those elements of the historic environment that hold significance are called heritage assets’.*

40.1.2 In practice, the scope of the historic environment (heritage assets) includes archaeological sites, wrecks, buildings, battlefields, parks and gardens, hedgerows and palaeo-environmental deposits. Many of these sites (or groups of them) that are recognised as being of national (or international) importance are “designated”; such as World Heritage Sites, protected wrecks, military remains, scheduled monuments, listed buildings, conservation areas, registered parks and gardens and registered battlefields. Other heritage assets may have significance at a national level, but are not designated. Important hedgerows, as defined under the Hedgerow Regulations, are not considered to be designated heritage assets.

40.1.3 Designated assets and other assets of high significance are generally protected from development that would materially affect their physical survival or setting. Where there are overriding reasons why development may remove or affect heritage assets of significance then appropriate means of mitigating the adverse effects are required.

40.1.4 This chapter addresses the issue of terrestrial and marine archaeology and details the approach to assessing the impacts of the proposed development on terrestrial and marine archaeological resources.

## 40.2 LEGISLATION, POLICY AND GUIDANCE

40.2.1 National cultural heritage policies (described below as “Terrestrial Archaeology”) apply only above Mean Low Water (MLW). Below this it is referred to as “Marine Archaeology” and their place is taken by the

following relevant pieces of legislation and two significant voluntary codes of practice.

### *Terrestrial Archaeology and National Policy Statements*

#### *Ancient Monuments and Archaeological Areas Act 1979*

- 40.2.2 The Ancient Monuments and Archaeological Areas Act 1979 (as amended) requires the Secretary of state to maintain a schedule of sites of national importance which receive statutory protection. Where scheduled sites are affected by development proposals there is a presumption in favour of their physical preservation. There is also a presumption against developments which have a significant impact on the integrity of the setting of scheduled monuments. Any works, other than activities receiving class consent under The Ancient Monuments (Class Consents) Order 1981 (as amended) which would have the effect of demolishing, destroying, damaging, removing, repairing, altering, adding to, flooding or covering up a Scheduled Ancient Monument require consent from English Heritage, on behalf of the Secretary of State, Department for Culture, Media and Sport.

#### *Planning (Listed buildings and Conservation Areas 1990)*

- 40.2.3 Planning (Listed buildings and Conservation Areas) Act 1990 protects buildings of national, regional, or local historical and architectural importance. Buildings designated as “Listed” are afforded protection from physical alteration or effects on their historical setting.

#### *The Hedgerow Regulations 1997*

- 40.2.4 The Hedgerow Regulations 1997 affords protection to hedgerows of historic importance. The scheme came into effect on 1 June 1997 and any hedgerow, which is defined, at that date, as being of historical or ecological importance may require consent from the local planning authority prior to removal. Although afforded protection by statute, historically important hedgerows are not considered to be “designated” assets within the definition contained in PPS5.

#### *National Policy Statement (NPS) for Ports 2011*

- 40.2.5 The NPS for ports (2011) requires the applicant to consult relevant Historic Environment Record held by regulatory authorities. Where a development site includes heritage assets with an archaeological interest the NPS requires a desk based assessment of the assets to be

undertaken and, potentially, field based surveys. The decision maker is advised

*'not (to) accept applications for consent where the extent of the impact of the proposed development on the significance of any heritage assets affected cannot be understood from the application and supporting documents'.*

### ***Planning Policy Guidance/Statements***

*Planning Policy Statement (PPS) 5: Planning for the Historic Environment 2010*

40.2.6 PPS5 is the replacement for Planning Policy Guidance (PPG) 15 (Planning and the Historic Environment, 1994) and 16 (Archaeology and Planning, 1990). A separate Guidance Note has also been published.

40.2.7 The principal objectives of the new PPS5 are:

- to deliver sustainable development in the historic environment by recognising that heritage assets are a non-renewable resource;
- to conserve assets in a manner appropriate to their significance by ensuring that decisions are based on that significance as investigated to a proportionate degree;
- to put the assets, where possible, to an appropriate and viable use consistent with their conservation;
- to recognise the assets contribution to local character and sense of place and integrate the historic environment into planning policies; and
- to contribute to an understanding of the past by ensuring that evidence is captured and made publicly available.

### ***Local Plan Policies***

*Holderness District Wide Local Plan 1999*

40.2.8 Policy Env2 states that

*'The Council will seek to preserve and enhance the setting of listed buildings by appropriate control of new development.'*

40.2.9 Policy Env3 states that

*'The Council will require that particular attention is paid to the retention of buildings of local architectural importance and where resources permit will make available grant assistance for their preservation and repair, even when such buildings are not listed and are not within designated Conservation Areas.'*

40.2.10 Policy Env24:

*'When considering planning applications for development within designated conservation areas or for proposals which affect their setting (including views into or out of those areas), the Council will require particular attention to be paid to the desirability of preserving or enhancing the character or appearance of the area. The Council will expect new buildings (including extensions) to be accompanied by fully detailed plans and will not be prepared to accept outline applications.'*

40.2.11 Policy Env28 states that

*'development proposals likely to adversely affect nationally important archaeological remains (whether scheduled or not) and their settings, will be subject to special scrutiny and will only be permitted if the proposal is in the national interest and there is no alternative. Before any development is allowed, the Council will require developers to demonstrate that adverse effects will be minimised, that commensurate efforts to preserve the remains in situ will be made and, where damage is unavoidable, that satisfactory arrangements for an appropriate programme of archaeological investigation, recording and publication exist.'*

40.2.12 Policy Env29 states that

*'development proposals likely to adversely affect locally important archaeological remains will only be permitted if the proposal meets a local need that outweighs the intrinsic importance of the remains and there is no alternative within the district or locality, as appropriate. Before any development is allowed on sites which are known or likely to contain archaeological remains, the Council will require developers to demonstrate that adverse effects will be minimised (as far as is reasonable) and, where preservation of the remains in situ is not justified, that satisfactory arrangements for an appropriate programme of archaeological investigation, recording and publication exist.'*

## *Marine Archaeology*

### *The Protection of Wrecks Act 1973*

- 40.2.13 The Protection of Wrecks Act, 1973, enables the Secretary of State to make orders to protect certain wreck sites in United Kingdom waters from unauthorised interference on account of either their historic, archaeological or artistic importance or their potentially dangerous condition.

### *The Protection of Military Remains Act 1986*

- 40.2.14 This Act makes it an offence to interfere with the wreckage of any crashed, sunken or stranded military aircraft or designated vessel without a licence. All crashed military aircraft receive automatic protection, but the Ministry of Defence (MOD) must individually designate vessels.

### *The Merchant Shipping Act 1995*

- 40.2.15 This Act states that any material brought to the surface must be declared to the Receiver of the Wreck. The Receiver aims to place all 'historical' finds (those over 100 years old) in museums or similar institutions.

### *UK High Level Marine Objectives DEFRA 2009*

- 40.2.16 The UK government high level marine objectives (*Our Seas – A Shared Resource*) outline the government wide objectives to achieve sustainable development in the marine environment. The objectives state that the marine historic environment includes '*Individual sites and assets of historic, archaeological, architectural or artistic interest, whether or not they are afforded statutory protection by heritage protection legislation*'. The objectives also promote the use of spatial planning which '*recognises the protection and management needs of marine cultural heritage according to its significance.*'

### *Marine and Coastal Access Act 2009*

- 40.2.17 This Act introduced a new system of marine planning across the UK, supported by a Marine Policy Statement adopted in March 2011, and Marine Plans that are currently in development. The new system for marine planning dovetails with terrestrial Planning Policy Statements. The Marine Policy Statement requires the consideration of seascapes and the historic environment based on the following principles:

- The historic environment should be conserved in a manner appropriate and proportionate to its significance;
- Opportunities should be taken to contribute to our knowledge and understanding of our past from the historic environment and making this publicly available, particularly if a heritage asset is to be lost;
- The absence of designation for heritage assets does not necessarily indicate lower significance and non-designated assets should be considered subject to the same policy principles as designated heritage assets;
- Developments proposals should avoid or minimise conflict with the conservation of an assets' significance;
- Developments should adopt a general presumption in favour of the conservation of designated heritage assets within an appropriate setting proportionate to its significance;
- Substantial loss or harm to designated assets should be exceptional;
- Where the loss of the whole or a material part of a heritage asset's significance is justified, suitable mitigating actions should be required to record and advance understanding of the significance of the heritage asset before it is lost.

### *Other guidance*

40.2.18 In addition to the policy framework set out above, the preparation of the assessment also considers guidance set out in the following;

- (English Heritage 2006) Ports: the impact of development on the maritime historic environment. London;
- (English Heritage 2007) Wind Energy and the Historic Environment – Guidance for developers of wind energy projects. London;
- (English Heritage 2008) Conservation Principles, Policies and Guidance for the sustainable management of the historic environment. London;
- (English Heritage 2010) Planning Policy Statement (PPS) 5: Historic Environment Planning Practice Guide.

- (English Heritage 2011a) Seeing the History in the View: A method for assessing heritage significance within views.
- (English Heritage 2011b) The Setting of Heritage Assets: English Heritage Guidance.
- (BMAPA (British Marine Aggregates Producers Association) / English Heritage 2005) Protocol for Reporting Finds of Archaeological Interest.  
[http://www.wessexarch.co.uk/files/projects/BMAPA-Protocol/protocol\\_text.pdf](http://www.wessexarch.co.uk/files/projects/BMAPA-Protocol/protocol_text.pdf);
- (COWRIE (Collaborative Offshore Wind Research into the Environment) 2007) Historic Environment Guidance for the Offshore Renewable Energy Sector.;  
[http://www.offshorewind.co.uk/Assets/archaeo\\_guidance.pdf](http://www.offshorewind.co.uk/Assets/archaeo_guidance.pdf).
- (COWRIE 2011) Offshore Geotechnical Investigations and Historic Environment Analysis: Guidance for the Renewable Energy Sector.  
<http://www.offshorewind.co.uk/Assets/final%20GEORARCH-09%20Offshore%20Geotech%20Guidance%20web.pdf>;
- (The Crown Estate 2010) Model Clauses for Archaeological Written Schemes of Investigation;
- (The Crown Estate 2010) Protocol for Archaeological Discoveries: Offshore Renewables Projects.  
<http://www.wessexarch.co.uk/projects/marine/tcerenewables/documents>

## 40.3 ASSESSMENT METHODOLOGY AND CRITERIA

### *Overview*

#### *Terrestrial and Marine Historic Environment*

- 40.3.1 The principal data acquired for the assessment of terrestrial and marine heritage assets has comprised a desk-based assessment undertaken in 2010, included here as *Annex 40.1*. The study incorporates an assessment of existing literature, databases searches and an assessment of historic mapping. The report has been augmented by assessment of historic navigation charts held by the UKHO; walkover survey of the foreshore; geophysical survey by magnetometer (*Annex 40.2*) and geoarchaeological assessment (*Annex 40.3*).

40.3.2 The extent of data searches undertaken for the historic environment has included all assets within the Compensation Site plus other relevant assets, within a c.5 km radius (*Figure 40.1*). Designated assets within a broader study area are shown in *Chapter 18 (Figure 18.2)*.

*Significance Criteria*

40.3.3 PPS5 provides no terminology for ranking the relative significance of non-designated heritage assets. It is therefore necessary to define a method for the assessment of individual heritage features. In the absence of a nationally accepted means of ranking the importance of archaeological and cultural heritage assets (other than the Secretary of State’s non-statutory criteria for the assessment of national importance – principally condition, period, rarity, group value and survival), a set of terms has been applied in order to provide a comparison of the relative importance of any cultural heritage features present on the site. The gradings are set out in *Table 40.1*. Most non-designated archaeological assets in the study areas are considered to be of local or county significance, based largely on their evidential or historical value.

**Table 40.1** *Ranking of significance of heritage assets*

Grading		Grades of Significance
A	National significance	Any designated or other asset considered to be of national significance due to its archaeological, architectural, artistic or historic interest. The asset would score high using the non-statutory criteria for assessing scheduled monuments.
B	Regional/County significance	Any asset considered to be of regional or county significance due to its archaeological, architectural, artistic or historic interest. The asset would score moderate using the non-statutory criteria for assessing scheduled monuments.
C	Local significance	Any asset considered to be of local significance due to its archaeological, architectural, artistic or historic interest. The asset would score low using the non-statutory criteria for assessing scheduled monuments.
D	Not significant	Any asset that is not considered to be of archaeological, architectural, artistic or historic interest significance.



40.3.4 In addition, where assets have been identified that are of high (generally national) significance then further assessment of the asset, and its setting, has been undertaken using the guidance for the assessment of the value of heritage assets set out in PPS5, along with Conservation Principles (English Heritage, 2008) and the guidance on heritage significance within views (English Heritage 2011a) and the setting of heritage assets (English Heritage 2011b). The assessment concentrates on those nationally important heritage assets where it is considered that the visual setting contributes to the significance of the asset, and where intrusion into those views, either into or from the asset, may have an effect on that aspect of the setting. The stages of assessment are shown in *Table 40.2*.

**Table 40.2** *Stages of assessment of the setting of Heritage Assets (after English Heritage 2011b)*

Stage	Activity	Key factors considered
Step 1	Identify which heritage assets, and their settings, may be affected by the Compensation site	Assets are included if they lie within the ZTV, (Cherry Cobb Sands site), are of high (generally national) significance and have settings that include features that could be affected by the construction and use of Compensation Site.
Step 2	Assess whether, how and to what degree these settings make a contribution to the significance of the heritage assets identified	Undertake site visits to assets to individually consider and describe their current settings. Identify those aspects of setting that will be affected by the Compensation Site.
Step 3	Assess the effects of the proposed development, whether beneficial or harmful, on the significance of the heritage assets	Using photomontages ( <i>Annex 41.3</i> ), where relevant, and site inspection.
Step 4	Explore ways maximise enhancement to avoid or minimise harm	Consider possible mitigation options.
Step 5	Make and document the decision and monitor outcome	Assess the level of effect on setting and its overall significance, as set out in <i>Table 40.6</i> .

#### 40.4 CONSULTATION

40.4.1 Consultation has been undertaken with the Archaeology Manager, Humber Archaeology Partnership (HAP), and English Heritage officers (York office).

40.4.2 The results of consultation are set out in section *Annex 2.2* of the Environmental Statement.

#### 40.5 BASELINE ENVIRONMENT

##### *Designated Heritage Assets within broad study area*

40.5.1 The locations of all designated assets within the broad study area defined for the AMEP site are shown on *Figure 18.2* and summarised by type on *Table 40.3*. This includes all designated assets that may be affected by the Compensation Site. In total there are 29 Scheduled Monuments, one Registered park, 176 grade II Listed Buildings, 30 grade II\* Listed Buildings, 27 Grade I Listed Buildings and two Conservation Areas within the 10 km radius (of the AMEP site). There are no shipwrecks designated under the Protection of Wrecks Act or the Protection of Military Remains Act within the broad study area. A full, summary gazetteer is included in the application document ref TR030001/APP/17.

**Table 40.3** *Designated heritage assets within the broad study area*

	Within 1 km	Within 5 km	Within 10 km	Totals
Scheduled Monuments	0	6	23	29
Registered Parks and garden	0	0	1	1
Grade II Listed Building	3	15	158	176
Grade II* Listed Building	0	16	14	30
Grade I Listed Building	0	5	22	27
Conservation Area	0	0	2	2
Other designation	0	0	0	0

Source: English Heritage ; East Riding of Yorkshire Local Plan; North Lincolnshire Local Plan; Northeast Lincolnshire Local Plan

- 40.5.2 There are no known aircraft remains protected under the Protection of Military Remains Act within the broad study area, however there is one reported loss of a Halifax MKIII MZ576 bomber in the south of the study area which has not yet been located. As historical locations of aircraft wrecks are notoriously inaccurate (Wessex Archaeology 2008), it is possible that remains could lie within the Compensation Site or the adjacent intertidal area.
- 40.5.3 All heritage assets within and adjacent to the Compensation Site are summarised in *Table 40.4* and shown on *Figure 40.1* and *Figure 40.4* (detail of Old Little Humber farm site).

**Table 40.4 Heritage assets within and adjacent Compensation site**

Site No	HER/NMR Reference	Easting	Northing	Form/Type	Description	Period	Designation	Significance
501	-	523092	419662	Cartographic	A single building is first shown on the Ordnance Survey map of 1824. By 1855 a small complex of buildings shown.	Post-medieval	None	C
502	81701	522000	420000	Cartographic	A system of roads connecting Keyingham with Sunk Island. Grid reference refers to a locality and appears to be inaccurate.	?Medieval	None	C
503	-	522622	420111	Air photographs/Cartographic	Small sub-rectangular features are former ponds left after reclamation	Post-Medieval	None	C
504	-	523033	419511	Air photographs/Cartographic	Small sub-rectangular features are former ponds left after reclamation	Post-Medieval	None	C
505	-	521952	420456	Fieldwalking	Remains of chalk block built groyne	Post-Medieval	None	C
506	-	522262	420078	Fieldwalking	Remains of chalk block built groyne	Post-Medieval	None	C
507	-	522545	419740	Fieldwalking	Remains of chalk block built groyne	Post-Medieval	None	C
508	-	523079	419173	Fieldwalking	Remains of chalk block built groyne	Post-Medieval	None	C
605	NMR 1459683 18430	521000	422700	Extant structure	Naval Bombing Decoy. A WW2 bombing decoy, part of a series built to deflect enemy bombing from Royal Naval installations on the Humber estuary. The site operated a 'Permanent Starfish' decoy (operated by setting alight controlled fires during an air raid to replicate a military area already targeted) and a 'QL' decoy ( a grid of muted lights set around man-made ponds to resemble the glow of	Modern	Scheduled Monument No 34704	A

Site No	HER/NMR Reference	Easting	Northing	Form/Type	Description	Period	Designation	Significance
					lights that would replicate Hull docks) In use between August 1941 and March 1942. Remains of buildings still extant and in good condition.			
606	NMR 914137 4528	523852	418766	Extant structure`	Heavy Anti Aircraft Battery Humber H9. A WW2 battery at Stone Creek. It includes the well preserved standing and buried remains of the original station complete with 4 gun emplacements and associated structures. First recorded in 1939 and abandoned in 1944.This is the best preserved example in the East Riding with nearly a full layout of the station complete. The remains of the domestic camp, although ruined, are an especially rare survival.	Modern	Scheduled Monument No 32706	A
607	166644	523686	418903	Extant structure	Weighbridge House at Stone Creek. c.1855	Post-medieval	Listed Building Grade II	A
608	166565 4783	523777	421629	Extant structure	Saltaugh Grange Farmhouse. Late C18-early C19, with C16 or earlier origins. Rebuilding work in 1986 removed C16 or earlier timber-framed walls, remnants may survive in entrance hall. Meaux Abbey established a grange at Saltaugh in the C12 and the hall and chambers of the house are mentioned in the late C14	Post-medieval	Listed Building Grade II	A
609	2673	521700	421650	Air photograph	Possible rectilinear ditched enclosure, probably of late date	Undated	None	C
610	11075	521930	422500	Extant structure	Sands Bridge. Named by the late C18,	Post-	None	C

Site No	HER/NMR Reference	Easting	Northing	Form/Type	Description	Period	Designation	Significance
					carries the road from Keyingham Marsh to Cherry Cobb sands.	medieval		
611	11072	521930	422500	Site of	Site of sluice, Sands Bridge. Before 1772 the sluice was constructed following impaired drainage caused by the formation of offshore banks in the Humber during the C18.. In 1772 Keyingham drainage authority was created and the sluice was moved further downstream.	Post-medieval	None	C
612	11802	522166	422728	Cartographic	'Brick and tile yard' shown on first-edition Ordnance Survey map of 1855	Post-medieval	None	C
613	11803	522544	422581	Cartographic	'Old cottage' marked on first edition Ordnance Survey map. Buildings first shown in that position on map of 1749	Post-medieval	None	C
614	11800	522043	422080	Cartographic	Several buildings of unknown usage shown on the first edition Ordnance Survey map of 1855	Post-medieval	None	C
615	11067	522848	421437	Extant structure	Keyingham Fleet drainage channel. The parish was mainly drained by the Fleet until it became inadequate and was straightened following an act of 1802	Post-medieval	None	C
616	11074	523423	421287	Site of	Little Dam Lane. A road from Salthaugh across Cherry Cobb sands to Sunk Island made between 1766-1785 and used until the 1830s.	Post-medieval	None	C
617	2749	523530	421573	Documentary Site of	Salthaugh Grange. A grange was established by 1153 and belonged to the Abbey of Meaux It acted as an estate centre for communities at the Meaux	Medieval	None	B

Site No	HER/NMR Reference	Easting	Northing	Form/Type	Description	Period	Designation	Significance
					granges of Tharlesthorpe to the SE (lost to the sea), Ottingham to the NE and Keyingham to the NW. The site lay on silt land reclaimed from the Humber before the 11th century and was often subject to disastrous flooding. The process of accretion was reversed in the mid 13th century when the river consumed some of the reclaimed ground and the grange was forced to move inland to the site of Salthaugh Grange Farmhouse (site 6)			
618	19501	524277	419480	Cropmark	Cropmarks NW of Stone Creek Farm, plotted from air photographs	Undated	None	C
619	7508	524585	418972	Extant structure	Stone Creek Farm	Post-medieval	None	C
620	7510	524408	418740	Cropmark	Creek, Air photo plots possibly indicate a continuation of the '3rd' stone creek.	Undated	None	C
621	7509	522521	421506	Extant structure	Sands House	Post-medieval	None	C
622	10941	523771	418922	Site of	Coastguard Station, Stone Creek. There was a coastguard station here from at least 1849 to 1923, for which a surviving row of 3 cottages was built c1860	Post-medieval-modern	None	C
623	10945	523458	418671	Site of	Stone Creek Harbour. Already in use by boats for transporting agricultural produce from the island or landing lime and coal before its improvement in the mid C19. Wharves were built soon after the road was turnpiked in 1852 and the weigh-bridge was built soon after. The	Post-medieval	None	B

Site No	HER/NMR Reference	Easting	Northing	Form/Type	Description	Period	Designation	Significance
					harbour was mainly used by Sunk Island tenants and seven fishing boats worked it in 1912. Commercial use of the creek ended in 1952.			
624	NMR 914151 18822	523524	418863	Extant structure	Pillbox. Rectangular brick and shuttered structure set into river bank. In good condition	Modern	None	B
625	11801	523437	418972	Extant structure	Stone Creek House. Marked as 'Stone Creek House P.H' with two other buildings on Ordnance Survey maps of 1855 and 1899	Post-medieval	None	C
626	UKHO 8509	523712	417678	Wreck	GOLDBELL. Records suggest the site has been salvaged and lifted.	Undated	None	C
627	UKHO 8506	523636	417468	Wreck	State: Lift	Undated	None	C
628	NMR 1357695	520200	420800	Wreck	The NEWLAND, from Riga, arrived in the Humber on 3 <sup>rd</sup> September 1828, but on the 5 <sup>th</sup> September is reported as on the Holm Sand with 5 feet water in her hold. Cargo discharging into craft. About 40 tons of hemp were saved from ship dry, the remaining part of the cargo is discharging in a damaged state. The ship fills with water every tide, and will be a wreck. Location unknown.	Post-Medieval	None	C
629	NMR 1431654	520200	420800	Wreck	2 <sup>nd</sup> September 1833 wreck of the British registered wooden sailing vessel FAIRY was reported stranded on Holme Spit during a gale, while en route from Newcastle-upon-Tyne to Gainsborough.	Post-Medieval	None	C



Site No	HER/NMR Reference	Easting	Northing	Form/Type	Description	Period	Designation	Significance
					Location unknown.			
630	NMR 1358152	520200	420800	Wreck	The ATALANTA, from Boston, was reported as totally wrecked on the sands above Hull on 19 <sup>th</sup> March 1831. Crew drowned. NB: The `sands' are not identified, there being several possible candidates, and the named location of "Offshore Killingholme", covering Foul Holme Spit, has been chosen by NMR for convenience. Location unknown.	Post-Medieval	None	C
631	-	522488	419695	Monument	Inaccessible group of short wooden posts within the channel between Cherry Cobb Sands and Foul Holme Sands. Position estimated. Possible interpretations include channel markers, remnants of fish traps or other small boat infrastructure or navigation aids.	Unknown	None	B/C
632	-	523100	419096	Monument	Inaccessible group of short wooden posts within the channel between Cherry Cobb Sands and Foul Holme Sands. Position estimated. Possible interpretations include channel markers, remnants of fish traps or other small boat infrastructure or navigation aids.	Unknown	None	B/C
633	-	522910	419396	Monument	Linear area of dumped building stone including lintels, cobbles, curb stones, wall capping stones. Stone is not associated with the sea wall or groynes. Appears to have come from older buildings, whilst other areas of dumped	Post-Medieval to Modern	None	C/D

Site No	HER/NMR Reference	Easting	Northing	Form/Type	Description	Period	Designation	Significance
					stone include reinforced concrete and modern bricks.			
634	NMR 1336159	525530	425890	Cropmark	A rectangular enclosure, defined by a broad ditch, is visible as a cropmark on air photographs (1999). Its one measurable dimension is 74m and it is centred at TA 2553 2589. Possible Iron Age or Roman date.	Iron Age/ Romano-British	None	C
635	NMR 1462832	525540	425890	Cropmark	A possible Iron Age or Roman period rectilinear enclosure is visible as cropmarks on air photographs.	Iron Age/ Romano-British	None	C
636	NMR 1462834	525100	425720	Cropmark	The southern corner of a possible Iron Age or Roman period rectilinear enclosure is visible as cropmarks on air photographs.	Iron Age/ Romano-British	None	C
637	NMR 1336122	527560	423900	Cropmark	At least two sub-rectangular enclosures aligned on a sinuous boundary are visible as ditch cropmarks on air photographs (1999). Probable Iron Age or Roman date.	Iron Age/ Romano-British	None	C
638	NMR 1336145	526700	426210	Cropmark	Two conjoined, sub-rectangular enclosures are visible as cropmarks on air photographs (1999). Their approximate dimensions, as far as is visible, are 65m by 55m and 44m by 36m. Possible Iron Age or Roman date.	Iron Age/ Romano-British	None	C
639	NMR 1462819	525800	424850	Cropmark	Two sides of a possible Iron Age or Roman period enclosure are visible as cropmarks on air photographs.	Iron Age/ Romano-British	None	C
640	NMR 1462838	526600	426200	Cropmark	Up to four Iron Age or Roman period rectilinear enclosures are visible as	Iron Age/ Romano-	None	C

Site No	HER/NMR Reference	Easting	Northing	Form/Type	Description	Period	Designation	Significance
					cropmarks on air photographs.	British		
641	NMR 1448534	527700	417300	Cropmark	Possible Iron Age or Roman rectangular enclosures and a hut circle are visible as cropmarks on air photographs.	Iron Age/Romano-British	None	C
642	NMR 1449797	526300	417300	Cropmark	An Iron Age or Roman square barrow or rectangular enclosure and a possible ditch are visible as cropmarks on air photographs.	Iron Age/Romano-British	None	C
643	NMR 1449806	527700	417300	Cropmark	Two possible prehistoric ring ditches, a possible rectangular enclosure with internal pit and other ditches or hollows of uncertain date are visible as cropmarks on air photographs.	Iron Age/Romano-British	None	C
644	NMR 81694	522000	426000	Findspot	Large numbers of pieces of coarse Romano-British pottery were found during gravel extraction.	Romano-British	None	C
645	NMR 81695	523800	426100	Findspot	A stray find of Romano-British pottery sherds of Huntcliffe type.	Romano-British	None	C
646	NMR 81691	524000	425000	Findspot	4th century AD bronze Roman coin of one of the Constantines.	Romano-British	None	C
647	NMR 81700	526780	424430	Extant structure	12th century origins, possibly earlier. A church is documented here in 1083, but it is uncertain whether one or 2 churches served the parish at that time. Between 1293 and 1323 a chantry chapel supplied with 7 monks from Meaux Abbey was installed at Ottringham church, and it may have been here. C12 origin but much rebuilt in the C13 and C14, clerestory added in the C15. Fine C14 W. tower with	Medieval	None	B

Site No	HER/NMR Reference	Easting	Northing	Form/Type	Description	Period	Designation	Significance
					C12 chevron moulded tower arch and stone broach spire. Some restoration but the building remains a good example of C14 and C15 work. There are a number of interesting fittings, including a C14 carved font, stone gospel lectern, C19 box pews and altar rails.			
648	NMR 1345268	517900	426890	Documentary Site of	Hospital of St Mary Magdalene at Newton Garth founded in 1162 by William le Gros. Originally for a master and leprous brothers, non-lepers were admitted after 1335. Suppressed circa 1547.	Medieval	None	B
649	NMR 81702	520590	423660	Earthworks	The remains of a moated site and contemporaneous adjacent earthworks. The S end of the W arm has been brick-revetted to form a washing pond for the farm. At the NW corner of the moat a wide drainage ditch continues the line of the moat N for 50m; it is interpreted as an element of the medieval site. Immediately to the E of this ditch is an embanked trackway which may have provided access to the moated site. To the N of the moat a rectangular pond may be medieval in origin but is not included in the Scheduling as it has recently been scoured out. The site was originally held by the monks from Albemarle and was a manor from	Medieval	Scheduled Monument No 21200.	A

Site No	HER/NMR Reference	Easting	Northing	Form/Type	Description	Period	Designation	Significance
					1260. In 1395 the property was conveyed to Kirkstall Abbey and held by them until the Dissolution. A brick shed and brick built air-raid shelter stand on the island.			
650	NMR 907859	522076	416688	Wreck	Remains of 1915 wreck of Norwegian schooner which foundered north of Immingham, located south of the modern Number 9A buoy, following a collision. She had just left Goole for Rouen with coal (some sources state her departure point as Kingston-upon-Hull). The wreck was later dispersed. Constructed in 1915 of steel, she was a sailing vessel with a motor engine.	Modern	None	C
651	NMR 914236	524830	417540	Monument	This site, situated on the north west side of the Sunk Island Battery, represents the pre-cursor of the pillbox. Survey in 1992 found the foundations in the form of a large concrete raft of polygonal shape. Blockhouses were placed around the perimeter of the battery as a means of defence against infantry attack. The site was in poor condition when it was surveyed, and was considered to be beyond repair	Modern	None	C
652	NMR 914213	524967	417575	Monument	Sunk Island Battery was part of the Humber estuary's coastal defence system. It was built between 1914 and 1915. The battery comprised two gun emplacements, a command post, officers'	Modern	None	C

Site No	HER/NMR Reference	Easting	Northing	Form/Type	Description	Period	Designation	Significance
					<p>quarters, mess room, hospital, domestic hutting, recreation hut, ablution block, engine room, water tower, magazine, and searchlights. It was equipped with two 6-inch breech loading Mk. VII weapons. Field defences installed at the site included ditch obstacles, pillboxes, earthwork shelters for battery personnel, infantry fire trenches and machine gun pits. It was manned by 2/I Company and 4/I Company of East Riding Royal Garrison Artillery. A Port War Signal Station and fire command post was constructed on the approach road to the battery. The guns were removed in 1919 and the site released in 1926. It was reused during the Second World War and in 1940 was fitted with a pair of 4.7-inch quick-firing guns and two searchlights for close defence. The partial remains of Sunk Island Battery survive, but in poor condition. Aerial photography from 1993 shows that the battery observation post is partially demolished and the coastal artillery searchlights are gone. However, First World War features of the site such as two gun towers and the Port War Signal Station remain.</p>			
653	NMR 1341163	520110	416760	Documentary evidence	Handley Page Halifax Mk. III heavy bomber; one of a batch of 360 delivered	Modern	None	A

Site No	HER/NMR Reference	Easting	Northing	Form/Type	Description	Period	Designation	Significance
					between March and August 1944, Squadron 10. Two engines feathered; ditched off Immingham 28 <sup>th</sup> October 1944. Location unknown.			
654	166655	520599	423629	Extant structure	Farmhouse at Old Little Humber Farm. Built c 1690-1700 with later additions. Lies within Scheduled area of Site no. 649	Post-Medieval	Listed Building II	A
655	-	52133 52350	42133 41885	Earthwork/Structure	Cherry Cobb Sands sea wall. Probably constructed in 1799; certainly by 1801	Post-Medieval	None	C

## *The Development of the Humber Estuary Following the Last Ice Age*

- 40.5.4 Following the last ice age, around 8 000 bp (before present), the low lying areas of North Lincolnshire and East Yorkshire were flooded by rising sea water, to as much as perhaps 5m above current Ordnance Datum. After c. 2 000 years, sea-level regressed and the Humber Estuary was left as a recognisable topographic entity fringed by low lying marshland giving rise to heavy, largely stone-free soils prone to water logging. A forest of alder, oak and birch developed over the glacial till.
- 40.5.5 The forest was fully established by around 6 500 bp and a lower peat developed on the forest floor during the later Mesolithic due to a change to a slightly wetter climate. A significant marine transgression during the Bronze Age laid down a thick layer of marine clay over the peat, associated with the formation of saltmarsh. A subsequent reduction in the rate of sea level rise, or a marine regression, facilitated the development of freshwater marsh. The area therefore has some potential for the presence of littoral occupation, at intervals throughout the early prehistoric period. This may be concentrated in areas where even slightly raised land (above c. 4 m OD), within or adjacent to, former marshland once offered the potential for temporary or more permanent settlement to exploit both terrestrial and marine environments. Elsewhere along the estuary there is proven potential for sites of prehistoric date, beneath alluvium and where the conditions are such that archaeological deposits (including organic remains such as wooden track ways dating from the Bronze Age to Romano-British period) remain preserved in situ.

### *The Compensation Site*

#### *Cherry Cobb Sands and Old Little Humber Farm*

- 40.5.6 The area around Cherry Cobb Sands is generally flat and low lying, with a high sea-wall protecting reclaimed land. The River Humber trends north-west to south-east with extensive intertidal mud flats bordering the sea-wall. The tidal range at Immingham is 6.4 m, from -3.0 m OD to 3.4 m OD (ie 0.9 m above CD to 7.3 m above CD).
- 40.5.7 The managed wet grassland part of the Compensation Site at Old Little Humber Farm lies inland at around 2m OD and will be developed on four existing arable fields, totalling 38.5 ha, between Newlands Lane and the South Ends and Thorney Crofts Drain approximately 2 km south of Thorngumbald. The Compensation Site will be created by, stopping up existing land drainage, re-contouring arable farmland



sown to permanent pasture to provide new habitat of functional value to wildfowl and wading birds as well as other flora and fauna. The existing ditches and hedges crossing and bordering this land will not be disturbed.

- 40.5.8 The foreshore at the Cherry Cobb Sands site comprises salt-marsh and reed bed beyond which are the mud flats of Foul Holme Sands. The land inland of the seawall, known as Cherry Cobb Sands, is low lying coastal plain, mostly lying below 2 m to 3 m OD. The shallow foreshore area off the Cherry Cobb Sands site is marked on the current Admiralty Chart (AC109) as Foul Holme Sands and the sediment described as Mud. The Sands are separated from Foul Holme Spit by Foul Holme Channel. The channel currently reaches a depth of -8.2 m OD but has an average depth of around -6 m OD. Historic charts show a much more substantial sand bank in the central part of the Humber, where Foul Holme Spit is currently, separated from the foreshore by a channel and historically marked Foul Holme Sand.
- 40.5.9 The underlying geology of the shoreline part of the study area at Cherry Cobb Sands is Burnham Chalk Formation of the Upper Cretaceous period overlain by Quaternary glacial till and tidal flat alluvium of clays and silts. Geoarchaeological assessment of cores across the Cherry Cobb Sands site revealed estuarine and marine derived sands and silts to a depth of 25 m (Allen 2010). Sediments recorded in the upper 4 m were largely reworked marine and fluvial sands, probably dating to the Medieval and post-Medieval periods, representing the development and changes of the river course within the Humber Estuary (Allen 2010).
- 40.5.10 The River Humber has a large catchment opening on to the North Sea and has been a focus of navigation throughout history. The deepwater channel of the Humber is close to the Lincolnshire shore, on the far side of the river from the Cherry Cobb Sands site. As such, whilst large amounts of shipping would have passed the vicinity of the Cherry Cobb Sands site, much of it would have been on the far side of the river separated by Foul Holme Sands/Foul Holme Spit, with only smaller vessels navigating the shallows of the Cherry Cobb Sands site prior to reclamation, the Foul Holme Channel after reclamation and the inlet at Stone Creek to the south of the Cherry Cobb Sands site. Foul Holme Sands and Foul Holme Spit were a significant navigation hazard. Documentary records of a number of wrecks recorded on the Sands indicate the possibility of larger vessels inadvertently finding themselves in the vicinity of the Cherry Cobb Sands site. In addition, it can be expected that passing vessels, deliberate or otherwise, might

have been lost in this area, whilst others may have deposited shipping debris onto the river bed either through deliberate discard or accidental loss.

40.5.11 It is possible that some maritime activity will have focussed on the local area itself, destined for or departing from the haven at Stone Creek for transport and fishing. Creeks or havens pre-dating the land reclamation at Cherry Cobb Sands have not yet been identified within the Cherry Cobb Sands site; however any which may have existed were likely to have been used by small boats. This sort of riverine activity may have resulted in wrecks and lost or discarded material, but could also include the deliberate abandonment of vessels. Local maritime activity may have resulted in various forms of infrastructure including: wharves, quays, hards, boat building and repair facilities, navigational markers and other aids.

40.5.12 Both the passing traffic and local maritime activity have a very long history, for which there is direct evidence in the surrounding area. From a navigational point of view, the narrow deepwater channel known as Whitebooth Roads currently between Foul Holme Spit and Killingholme is a pinch-point between the vast extent of navigable rivers (and later canals) serving the Midlands and Yorkshire, and the North Sea with its connections to the East Coast, Thames, English Channel, Low Countries, Baltic, Scandinavia and beyond. Documentary and archaeological evidence records the passing of Roman pilots, Viking warriors, medieval settlers, post-Medieval traders, and army, navy and air force personnel during both World Wars along the Humber in the vicinity of the Cherry Cobb Sands site.

#### *The Early Prehistoric Period*

40.5.13 The intertidal coastline at the Cherry Cobb Sands site consists of a broad terrace around -3 m to -4 m OD, dropping gently towards the Foul Holme Channel, which reaches a maximum depth of -8.2 m OD south west of the Cherry Cobb Sands site. Mesolithic deposits elsewhere on the Humber are recorded at around -9 m; however, piezo cone penetration tests at the Cherry Cobb Sands site identified only silts, sands and clays in the upper 25 m of sediment within the Cherry Cobb Sands site, representing a purely estuarine and marine environment prior to land reclamation (Allen 2010).

40.5.14 Although the earliest inhabitation of Britain stretches back at least 970 000 years (Parfitt et al 2010), the glacial tills found across the landward part of the study area, were formed during the last (Devensian) glaciation, which reached its maximum extent about 18 000

years ago. At this time the ice sheet probably covered the Compensation Site and sea level was approximately 130 m lower than today. One Palaeolithic hand axe was found over 5 km to the north of the Cherry Cobb Sands site (NMR 1300075), however as no pre-Devensian or glacially-derived deposits, which may contain re-deposited Palaeolithic artefacts, have been identified within the upper 25 m of sediment within the Compensation Site, the potential for archaeological deposits from the Lower and Middle Palaeolithic is extremely low and is not considered further.

40.5.15 The first evidence for re-occupation of northern Britain after the last Ice Age dates to around 13 000 years ago. At this time the Compensation Site would have overlooked the Humber River valley, but would have been hundreds of miles distant from the sea. There are some indications that people were using water transport during this period, particularly on rivers and inland waterways for fishing, transport and communication. However, no archaeological examples of watercraft have been found from this period in the UK.

40.5.16 There are no reports of archaeological material from the Upper Palaeolithic/ Late Glacial periods in the vicinity. Given that sea level was still much lower than current and no pre-nineteenth century terrestrial deposits have been identified within the upper 25 m of sediment in the Compensation Site, the potential for archaeological remains from this period is not considered further.

#### *Iron Age and Romano-British period*

40.5.17 No evidence of Neolithic or Bronze Age activity has been located within the vicinity of the Compensation Site. However, a number of well preserved boat finds from the Humber Basin at Ferriby, Kilnsea and Brigg (McGrail, 2004: 184) illustrate that the local population was using the Humber, potentially for fishing, fowling and transport of goods and people. These boats, both sewn-planked and logboats, were all flat bottomed and would not have required significant infrastructure. It is likely that the boats would have been launched and beached on shallow shelving shorelines, with easy access to the hinterland settlements. The sediments of the Humber foreshore have demonstrated their suitability for the preservation of prehistoric wooden boat remains, and the possibility exists that the buried deposits of the Compensation Site could preserve wrecked or abandoned vessels such as these.

40.5.18 The first suggestions of sustained human activity within the vicinity of the Compensation Site comes from a number of cropmarks thought to

represent enclosures and ditches dating to the Iron Age or Romano-British period (sites 634 to 643) on the higher land surrounding the Compensation Site (*Figure 40.1*). A small number of pottery finds (sites 644 and 645) in the vicinity and one fourth century AD Roman coin (site 646) indicate a small population in the region through the Romano-British period. At this period, the Compensation Site would still have been intertidal, but it is likely that salt and freshwater marshes, such as those still in the area today, would have provided a variety of food sources, including fish, birds, shellfish and plants to supplement the diets of communities farming the higher dry land.

- 40.5.19 The hazardous task of navigating the Humber by boat in the Roman period is shown by the employment of pilots, one of whom records his service with the Sixth Legion when he set up an altar in York (Humberside Archaeology Unit 1992: 9). It is thought that the process of transferring goods and people from seagoing ships to smaller ships and boats suitable for navigating the Humber and its tributaries would have required the use of many small harbours and ports along the estuary. A number of potential harbour locations have been suggested, but none have yet been identified in the archaeological record. Very few remains of Romano-British period boats have been found in Britain, the best examples coming from the Thames in central London (Delgado 1997), but none have been recovered from the Humber Basin.

*The Saxon period*

- 40.5.20 There is no archaeological evidence for occupation or use of the immediate coastal area around the Compensation Site in the Anglo-Saxon Period (AD 410 to 1066). Documentary evidence describes the arrival of the Angles and Frisian settlers in the area, followed by Scandinavians. Maritime links with the Baltic and Scandinavia developed and increased during this period, with Scandinavian war parties arriving by ship in the Humber followed by Viking raiders and settlers. The strong cultural and trading links developed during this period between the Humber region, Scandinavia and the Baltic formed the basis of trading patterns for ports such as York and Hull through to the nineteenth century.
- 40.5.21 Although ship building technology was continuing to develop, ships were still built with flat bottoms allowing them to be drawn up on beaches. This approach has left little evidence of the harbours and ports. Whilst it seems that settlements were concentrated on higher ground during this period, it is possible that havens such as Stone Creek would have provided a sheltered landing area for boats.

Cultural links across the North Sea are demonstrated by the boat burials at Sutton Hoo and Snape in Suffolk, which not only mirrored the Scandinavian burial tradition, but also demonstrated similar boat building traditions (McGrail 2004: 210). A tenth century ship from a tidal creek of the Thames demonstrates a continuation of Romano-British construction techniques (McGrail 2004: 218). However, no ships dating to the Anglo-Saxon period have been found in the Humber Basin.

#### *The Medieval period*

- 40.5.22 Silting up of the north side of the estuary probably occurred between the tenth and thirteenth centuries, but ended c.1256, when a forerunner of the present Spurn Head was swept away in a storm, leaving the northern Humber shoreline unprotected.
- 40.5.23 Two Medieval sites have been recorded near the Cherry Cobb Sands site. Salthaugh Grange (Site 617) was established by 1153 and belonged to the Abbey of Meaux. The grange (buildings and shoreline pastures) was abandoned during the mid thirteenth century when, after many episodes of flooding, the land was consumed by the River Humber and was relocated further inland (Site 608). The location of the lost grange is not known but it is possible that they lay within the proposed compensation area. A possible medieval road network (Site 616) has also been recorded within the area but the grid reference appears inaccurate and its exact location is unknown.
- 40.5.24 Evidence for settlement dating to the medieval period is focussed at Paull along the coast to the north west of the Compensation Site and at Ottringham and Keyingham inland to the north east, all of which are recorded in the Domesday Book. Access to these settlements would have been possible by boat, directly from the Humber for Paull and along Stone Creek to Ottringham. The moated site at Old Little Humber Farm is a significant example of seaward expansion during the period. Traces of ridge and furrow cultivation have been identified around the site (*Figure 40.4*), but none survives within the Compensation Site.
- 40.5.25 Despite documentary evidence attesting to the importance of the Humber for access to inland regions, via its tributaries, in the Medieval period (Childs, 1990), very little archaeological evidence has been found locally to illustrate the types of boats and ships in use. One example of the importance of the Humber as a navigation route includes the arrival of Harold Hardrada, King of Norway with a fleet of 300 ships in the Humber estuary in 1066, from where he fought and defeated the Earls

of Northumbria and Mercia with the aid of Tostig (brother of King Harold II of England) and Scottish allies (Humberside Archaeology Unit 1991). A second fleet was sent up the Humber by the King of Denmark in 1069 to assist a rebellion in Yorkshire against William, Duke of Normandy's claim to the English throne.

40.5.26 Maritime trade flourished in the Humber through the twelfth and thirteenth centuries with major ports at Beverley and Hedon exporting wool and cloth to London, the Low Countries and the Baltic (Childs, 1990). By 1400 Hull was the third busiest port in England, with archaeological evidence for imports of wood, iron, wool, olive oil, spices, silk, fruit and wine from Scandinavia, the Baltic, Spain, Portugal, Italy and France (Humberside Archaeology Unit, 1991: 22). In addition to this international trade, the Humber and its tributaries would have been a major route for transport and communication between settlements within the Humber basin. It is likely that in addition to the major ports, there would have been smaller local beach markets and that riverside settlements would have had access to a sheltered haven. It is possible that Stone Creek may have served as a local port or haven for boats accessing the settlements upriver of the tributaries.

40.5.27 No direct archaeological evidence for early infrastructure has been found at Stone Creek. However, the continued use of the creek to the present day illustrates the shelter such places can provide for small ships and boats. No archaeological examples of boats and ships have been located in the Humber region from the Medieval period. It is likely that there would have been a variety of vessels on the river in this period including logboats, Baltic 'cogs', Nordic and Mediterranean style cargo ships and local vernacular Humber Keels (McGrail, 2004). Although the size of cargo ships is recorded as increasing throughout the medieval period, there would still have been a need for small boats for transshipment and local travel (Childs, 1990: 23). The marine and estuarine deposits identified during geoarchaeological investigations demonstrate that the Cherry Cobb Sands site would have been intertidal flats in the Medieval period, and there is the potential for archaeological remains from boats and ships which may have become stranded or abandoned. The soft silty sands and clays of the Cherry Cobb Sands site and adjacent foreshore area are an excellent environment for the preservation of organic remains, including wooden boats and early maritime infrastructure.

- 40.5.28 Coastal erosion until the seventeenth century resulted in the site being intermittently or permanently inundated by the sea, but by c. AD1700 Cherry Cobb Sands had begun to form, and by the later eighteenth century was being exploited profitably as new land. In 1799 boring was undertaken for a 'spring', the strata of which were recorded in detail and the embankment of the sea wall (Site 655) may have taken place at around this time.
- 40.5.29 Historic mapping dated 1801 (ERA DDCC/22/56) show plans for the drainage and 'securing' of the out-marsh area for agricultural use. The channel separating Cherry Cobb Sand from Foul Holme Sand is first shown on a chart dating to 1801 (ERA DDC/22/56), whilst a later chart from c.1820 (ERA DDX/1313/2/4) shows the depth of water between the two sands at a maximum of 24 feet (7.3 m) indicating a significant and navigable channel.
- 40.5.30 The 1801 plan of Cherry Cobb Sand (ERA DDCC/22/56) shows the area of out-marsh 'which may be inclosed when the fore-shore is secured'. The chart marks four distinct lines down the foreshore at spacings and locations which suggest they might be groynes associated with the construction of a sea wall. The first edition OS map (1824) shows four short spits of land protruding from 'Cherry Cob Sands' into the foreshore area, and are interpreted as the same groynes mapped on the 1801 plan. The subsequent OS maps chart the changing vegetation or sediment cover on the foreshore with the four groynes charted in 1855, but mapped as undulations in the foreshore, rather than land as in 1824 (*Figure 40.2*). The 1892 OS map shows the prograding shoreline of Cherry Cobb Sands, with extensive foreshore areas beyond the groynes. The 1910 map shows only one of the groynes on the foreshore; two are mapped on the 1948-51 OS map; and three are charted in 1956. All four groynes are mapped in 1972-75 as the line between dry land and the foreshore, similar to how they were charted nearly 150 years previously. The 1828 and 1920 Admiralty charts for the area do not chart the groynes, but they can be identified on the current chart as undulations in the coastline. The four groynes were identified during the walkover survey (sites 505, 506, 507 and 508). The remnants of the groynes are visible on the foreshore as remnants of chalk block alignments; some are piles of rubble and others more systematically constructed (*Plates 40.1 and 40.2*). The presence of additional buried stones, or more solid ground, is indicated by the lack of reed growth along the alignment (*Plate 40.3*).

- 40.5.31 Both the OS maps and Admiralty charts record the changing nature of Foul Holme Channel between Cherry Cobb Sands and Foul Holme Sands/Foul Holme Spit, which is of interest as it provides the only river access to the Cherry Cobb Sands site. The 1828 Admiralty chart records the depth of the Channel as a maximum of 3 ½ fathoms (6.4 m). The 1892 OS map also shows a channel, although no depths are charted. By 1910 the OS map shows two small sand islands within the channel, suggesting it was silting up. Ten years later, the Admiralty Chart (1920) shows a navigation bell positioned on the southernmost point of Foul Holme Sand, marking the beginning of the shoal and the southern end of the Channel. The Channel is much less obvious and whilst it has some deeper areas it does not form a continuous clear route round Foul Holme Sands. There are two navigation beacons marked. However, both beacons are temporary Red (port) markers, and could indicate that the channel is not passable. The 1942 Admiralty chart suggests significant sediment accretion in the area as there is a large expanse of foreshore beyond Cherry Cob Sand. The foreshore area is marked as Foul Holme Sand, and a shallow inlet separates the foreshore from Foul Holme Spit. A navigation bell is positioned at the southern end of the inlet, which is impassable to the north.
- 40.5.32 The harbour at Stone Creek (site 623) was a focus for shipping in the vicinity of the Cherry Cobb Sands site, with a Coastguard Station established here between 1849 and 1923 (site 622) and the construction of wharves in the mid nineteenth century. Fishing boats are recorded as working from Stone Creek in 1912 and whilst commercial use of the creek ended in 1952, the creek still serves as a safe haven for small fishing boats today.
- 40.5.33 The quantity and types of historic shipping can sometimes be estimated through assessment of recorded wrecks and wreck events. In this stretch of the Humber, however, wrecks are primarily located in the western part of the river and to the north and south of Foul Holme Sands/ Foul Holme Spit, in the deep water channel. Due to the shallow nature of the river and channels in the area off the Cherry Cobb Sands site , it is likely that any wrecks or strandings occurring on the foreshore and in Foul Holme Channel are likely to have been small boats and unlikely to have been recorded as wrecking incidents or navigational hazards. The suggestion that the Foul Holme Channel was navigated in the past is supported by continued current usage of the channel, indicated by the presence of floats either side of the channel.
- 40.5.34 A small number of ships are recorded as wrecking on Foul Holme Sands in the early nineteenth century. At this time Foul Holme Sands



was separated from Cherry Cobb Sands by a channel, and was not in the location of the current foreshore/ intertidal area adjacent to the Cherry Cobb Sands site. Wrecks recorded on Foul Holme Sands include Newland, a cargo ship sailing from Riga wrecked in 1828 (site 628) and Fairy a wooden sailing vessel sailing from Newcastle-upon-Tyne wrecked in 1833 (site 629). A third ship, Atalanta (site 630) was a cargo ship which may also have wrecked on the Sands off the Cherry Cobb Sands site in 1831.

- 40.5.35 The soft anaerobic mud of the foreshore beyond Cherry Cobb Sand is an excellent environment for the preservation of organic remains, including boats. There is the potential for small boats to have become stranded and wrecked on the sands, and those which could not be salvaged at low water may have become buried within the soft sediments.

*The Modern period*

- 40.5.36 No maritime or aviation heritage assets are recorded within the Compensation Site dating to the twentieth century. A number of wrecks are located to the south, west and north of Foul Holme Sands, in the deep water channel. Wrecks such as the steel hulled Norwegian schooner Hvitveis (site 647) illustrate the type of shipping in the Humber during the early twentieth century, and its distance from the Compensation Site.

- 40.5.37 Any wrecks which may have occurred on the foreshore or in Foul Holme Channel in this period are likely to be small boats and unlikely to have been recorded as wrecking incidents or navigational hazards. The continued presence of boats at anchor in Stone Creek highlights the suitability of the creek as a safe haven and harbour, and it is likely to have been used throughout the twentieth century. It is also likely that the Foul Holme Channel would be used by small boats with shallow drafts. The continued usage of the channel is suggested by the presence of floats marking the sands either side of the channel. The soft anaerobic mud of the foreshore at Cherry Cobb Sand is an excellent environment for the preservation of organic remains, including boats. There is the potential for small boats to have become stranded and wrecked on the sands, and those which could not be salvaged at low water may have become buried within the soft sediments. Remains of smaller craft could be of archaeological importance as unusual examples of vernacular craft.

- 40.5.38 The Humber region was subject to air raids in both WW1 and WW2, which resulted in losses to aircraft on both sides. During WW1 the main threat was from Zeppelins, which focused raids on Hull and Goole, as well as pressing further inland. A number of defensive sites are located on Sunk Island to the south of the Cherry Cobb Sands site, including an infantry blockhouse (site 651) and battery (site 652).
- 40.5.39 The Humber region and Hull particularly, suffered significant damage during WW2 air raids. Hull was hit by 82 air raids which damaged or destroyed around 95 percent of housing. Despite the bombs and damage, the Hull dockyards continued to operate throughout the war. The area surrounding the Cherry Cobb Sands site has remains of a large number of anti-aircraft defences from this date, ranging from bombing decoys to armed batteries and pillboxes. A WW2 Naval Bombing Decoy (site 605) and Heavy Anti-Aircraft Battery (site 606) are located immediately to the north and south of the Cherry Cobb Sands site. A rectangular pillbox is set into the river bank at Stone Creek (site 624).
- 40.5.40 As a result of the numerous bombing raids throughout WW2, there is the potential for unexploded ordnance to lie within the foreshore muds off the Cherry Cobb Sands site. Many British and German aircraft were reported lost in the Humber area during the Second World War, however, none have been located in the vicinity of the Compensation Site. The closest reported loss is of a Halifax MKIII MZ576 bomber reported lost in 1944 at a position approximately 4km south west of the Cherry Cobb Sands site (site 650). It should be noted however that descriptions of lost aircraft locations are notoriously inaccurate (Wessex Archaeology 2008) and it is possible that the remains of aircraft could lie within the intertidal areas of Cherry Cobb Sands.

#### *Undated features*

- 40.5.41 A number of wooden post alignments were identified within the channel that separates Cherry Cobb Sands from Foul Holme Sands, immediately adjacent to the Cherry Cobb Sands site.
- 40.5.42 Two areas of posts were identified (sites 631 and 632) and although they were not accessible due to soft mud, both sites appeared to consist of a number of short, small wooden posts (*Plate 40.4*). Most of the posts were on the sides of the channel, and could be interpreted variously as channel markers, the remnants of fish traps or other small boat infrastructure. Due to the changing location and depth of Foul Holme Channel over the past 190 years it is difficult to date the posts, or assign any specific function to them.

40.5.43 A number of areas of dumped stone (site 633) forming a long broken linear feature were identified seaward of the sea wall on the foreshore (*Figure 40.3*). Specific stone types identified included lintels, cobbles, curb stones, wall cap stones and possibly window surrounds. Whilst much of the dumped stone seems to have come from post-Medieval or early modern buildings or walls, there are also areas of more recent concrete and brick. The stone dumps are not associated with the sea wall or groynes and cannot be assigned any specific function, though they may represent dumping or improvised coastal defence.

40.5.44 Five unidentified obstructions and foul ground sites are recorded some way to the south and north west of Foul Holme Sands, which could be ship or aviation wreckage.

*Further surveys*

40.5.45 Further surveys, which may include geoarchaeological assessment, field walking, geophysical survey and trial trenching, will be proposed to allow for a detailed programme of mitigation to be established as the detailed design is undertaken. The arrangements for the surveys will be set out in two Written Schemes of Investigation, each to be agreed with EH and HAP; one for works relating to marine interests below high water (encompassing the inter-tidal zone), and a parallel document for terrestrial heritage interests above high water where there is some uncertainty about the extent of survival of former land surfaces.

**40.6 IMPACTS**

40.6.1 The degree of change to each receptor/heritage assets is considered in text below. The assessment of overall magnitude of effect is derived using the criteria set out in *Table 40.5*.

**Table 40.5 Assessment of Overall Magnitude of Impact**

Magnitude of Change	Sensitivity of Receptor			
	National Significance	County/Regional Significance	Local Significance	Not significant
<b>High</b>	Major Significance	Moderate Significance	Moderate to Minor Significance	Minor Significance
<b>Medium</b>	Moderate Significance	Minor to Moderate Significance	Minor Significance/	Minor / No Significance
<b>Low</b>	Minor Significance	Minor Significance	Minor to No Significance	No Significance
<b>None</b>	No Significance	No Significance	No Significance	No Significance

## *Compensation Site Construction Phase*

### *Cherry Cobb Sands*

- 40.6.2 The red line boundary on shown on *Figure 40.1* is the maximum extent of the area considered for use as the Compensation Site. The current proposed extent of the works are shown on *Figure 28.1*.
- 40.6.3 Direct impacts on heritage assets from the development of the Compensation Site may arise from the reducing of levels behind the sea wall, demolition of a section of the existing sea wall, excavation of surface sediments seaward of the seawall and around the seawall breach, and possible damage by construction/ demolition plant accessing the foreshore.
- 40.6.4 Indirect impacts seaward of the seawall may arise as a consequence of erosion of the foreshore arising from the development of drainage channels between the breach and low water.
- 40.6.5 The only apparent features of archaeological interest on the foreshore in the vicinity of the seawall breach are an area of posts (631) and a groyne (507) associated with construction of the seawall. Other posts, groynes and dumped stone may be implicated if demolition / construction activity on the foreshore (e.g. access/tracking) is more extensive.
- 40.6.6 There are no known ship or boat wrecks, palaeo-land surfaces or aviation wrecks seaward of the seawall. There is, however, potential for as yet unknown features and sites to be present ranging from prehistoric land surfaces and associated sites, to hitherto unknown wrecks of boats and ships from the prehistoric to modern periods, to aviation remains. These sites, if present, could range from low to high sensitivity and, in the case of aviation remains, be subject to automatic legal protection.
- 40.6.7 As Cherry Cobb Sands has been reclaimed from the sea in the relatively recent past, it should be noted that excavation of sediments landward of the existing seawall has the potential to impact as yet unknown archaeological material typically regarded as 'marine' but now beneath dry land. Specifically, direct impacts may occur to the remains of boats, ships and associated maritime infrastructure within the reclaimed land. There are numerous examples of previously unknown but very important boat and ship sites coming to light in the course of excavation of reclaimed land, including sites such as the Bronze Age Brigg 'Raft' and Iron Age Hasholme Logboat in reclaimed land around

the Humber. Furthermore, there is some uncertainty as to whether former erosion had totally removed former (Medieval and earlier) land surfaces; should they exist there may be some superficial effects from reducing ground levels.

40.6.8 There may be some temporary impact on the appreciation by visitors (setting) of the WW2 decoy site (Site 605) during construction. This would arise principally from the noise of construction activity in a generally quiet and tranquil location. The effects will be very short-lived and considered negligible.

40.6.9 The following table summarises potential impacts on palaeo-land surfaces, maritime archaeological sites and aviation archaeology.

**Table 40.6** *Summary of identified and potential impacts during construction at Cherry Cobb Sands*

<b>Impact from /Effects On</b>	<b>Palaeo-land surfaces</b>	<b>Marine Archaeology</b>	<b>Aviation Archaeology</b>
Reducing levels behind sea wall	Possible localised survival of former land surfaces. Limited depth effect may result in minor adverse impact on site of at least county significance.	None identified	None identified
Demolition of the existing sea wall	None identified	Loss of 250m length of sea wall. Minor adverse impact on Site 655.	None identified
Excavation of sediments seaward of seawall	None identified	Removal of linear stone dump features seaward of the current seawall (Site 631). Negligible impact. Removal and/or exposure of as yet unknown boat and shipwrecks, wreckage, small features and artefacts. Possible moderate adverse impact.	Removal and/or exposure of as yet unknown aircraft wrecks, wreckage, small features and artefacts. Possible moderate/major adverse impact on site of at least county significance.
Damage by construction/demolition plant accessing the breach area	None identified	Potential for direct physical damage of the groynes by construction/demolition plant (Site 507).	None identified

<b>Impact from /Effects On</b>	<b>Palaeo-land surfaces</b>	<b>Marine Archaeology</b>	<b>Aviation Archaeology</b>
		Minor adverse impact. Possible damage to boat and shipwrecks, wreckage, small features and artefacts. Possible moderate/major adverse impact on sites of at least county significance.	
Excavation of sediments landward of seawall	None identified	Removal and/or exposure of as yet unknown boat and shipwrecks, wreckage, small features and artefacts. Possible moderate/major adverse impact on sites of at least county significance.	None identified
<b>Overall significance</b>	<b>None identified</b>	<b>Minor to Moderate Significance</b>	<b>None to Moderate Significance</b>

*Old Little Humber Farm*

40.6.10 No heritage assets are known to survive in the site. The former ridge and furrow does not survive as well-preserved surface features. Much of the site has been affected previously by pipeline construction (*Figure 40.4*).

40.6.11 The depth of surface disturbance currently proposed in the Compensation Site is considered too shallow to affect buried archaeological deposits. Impacts on any buried assets may therefore be considered negligible.

***Operational Phase***

*Cherry Cobb Sands*

40.6.12 The use of the Compensation site may have some localised adverse impacts on marine archaeology if it causes erosion to the existing foreshore by the natural development of drainage channels.

40.6.13 The construction of the new sea wall may cause a minor impact on the setting of the WW2 decoy (Site 605), by introducing a new inlet behind

the sea wall. The loss of a short portion of the sea wall does not constitute an effect on the setting.

40.6.14 The following table summarises potential impacts on maritime archaeological sites, aviation archaeology and setting.

**Table 40.7** *Summary of identified and potential impacts during operation at Cherry Cobb Sands*

<b>Impacts From/ Effects On</b>	<b>Palaeo-land surfaces</b>	<b>Marine Archaeology</b>	<b>Aviation Archaeology</b>	<b>Other heritage assets on or off site</b>
Erosion of the foreshore arising from the development of drainage channels	None identified	Removal and/or exposure of as yet unknown boat and shipwrecks, wreckage, small features and artefacts. Possible moderate/major adverse impact on sites of at least county importance.	Removal and/or exposure of as yet unknown aircraft wrecks, wreckage, small features and artefacts. Possible moderate/major adverse impact on sites of at least county importance.	None identified.
Effects on setting from construction of the new sea wall	None identified	None identified	None identified	Minor adverse effect on the setting of WW2 decoy (Site 605) of national importance.
<b>Overall significance</b>	<b>None identified</b>	<b>None identified</b>	<b>None identified</b>	<b>Negligible to minor</b>

*Old Little Humber Farm*

No impacts of operation have been identified.

**40.7** *MITIGATION MEASURES*

*Cherry Cobb Sands and Old Little Humber*

40.7.1 Detailed mitigation measures to accompany construction of elements of the Compensation Site below low water are being set out in a Written Scheme of Investigation (WSI) for terrestrial, marine and intertidal archaeology. The WSI will provide for a further phase of investigations to enable detailed design of mitigation measures, as well as an outline of the mitigation measures that will be provided. The mitigation

measures set out in the WSI will include monitoring by HAP/English Heritage and make provision for post-investigation assessment, material conservation, archaeological analysis, interpretation and publication of significant results, and preparation and deposition of a publicly-accessible archive. The WSI is subject to the agreement of HAP and English Heritage. It is anticipated that implementation of the WSI will be secured through a condition.

**40.8**            *RESIDUAL IMPACTS*

40.8.1          No residual impacts have been identified.

**40.9**            *CUMULATIVE IMPACTS*  
*Compensation Site Construction Phase*

40.9.1          No impacts have been identified





Plate 1: Photograph of Groyne within the Compensation Site (Site 505)



Plate 2: Photograph of Groyne within the Compensation Site (Site 506)

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Plate 3: Photograph of Groyne within the Compensation Site (Site 506)



Plate 4: Photograph of site 632. Wooden posts located within the channel between Cherry Cobb Sands and Foul Holme Sands seawards of the Compensation Site boundary

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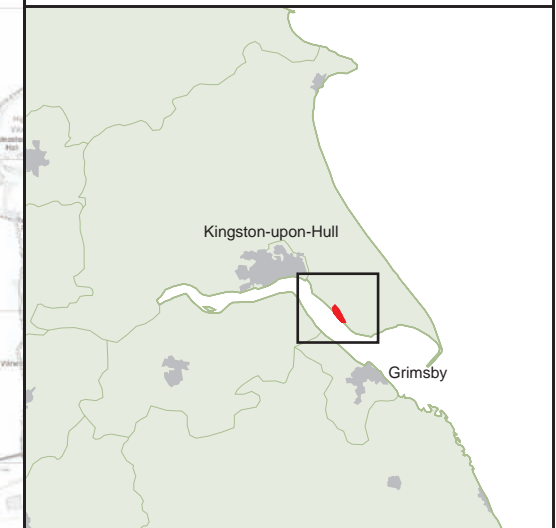
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- Site boundary
- Designated heritage asset
- Undesignated heritage asset

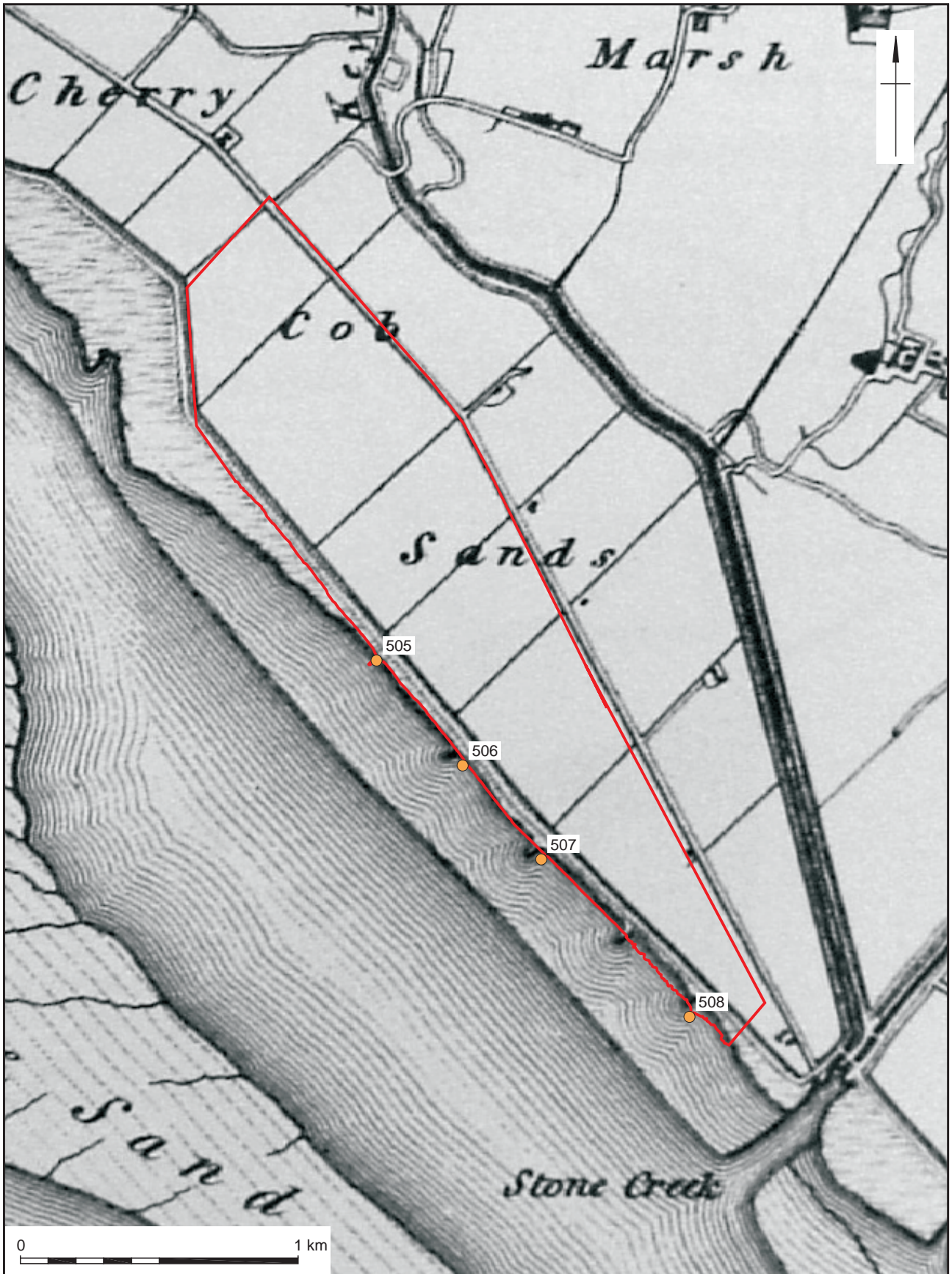


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Figure 40.1:  
 Location of recorded heritage assets within the study areas





- Site boundary
- Groyne locations

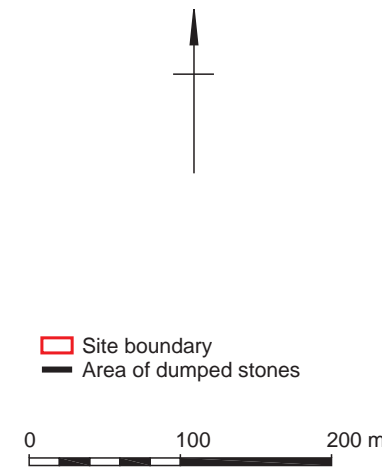


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Fig. 40.2: First Edition OS Map (1824) with the location of groynes (sites 505, 506, 507 and 508) located during walkover survey



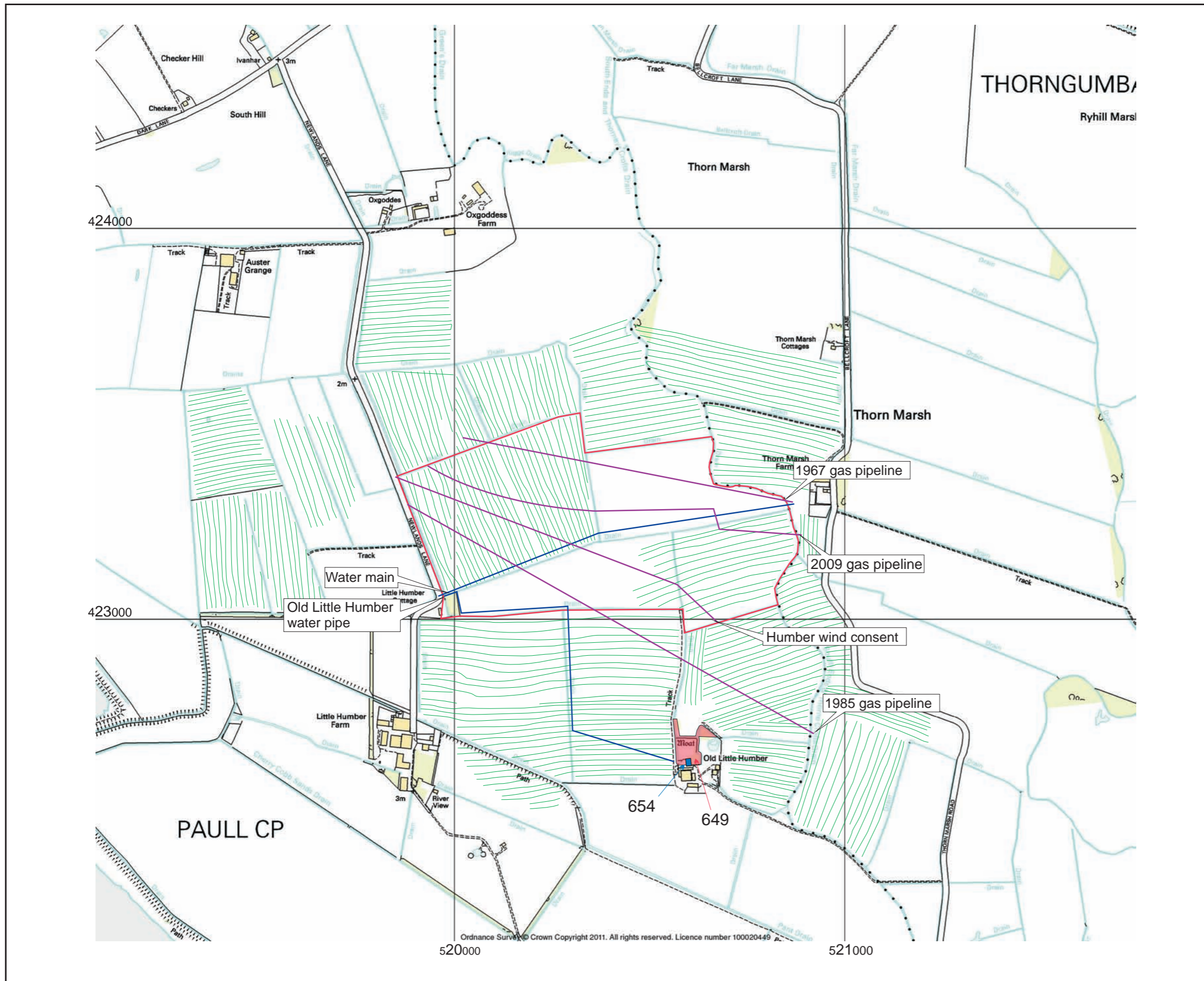


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Fig. 40.3: Location of dumped stone piles identified during walkover survey, with photographic examples of the variety of stones recorded





**AC Archaeology**

**Key**

- Application area
- Sketch transcription of ridge and furrow cultivation
- Approximate location of existing pipeline

0 250 500 m

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Fig. 40.4: Location of recorded heritage assets within 500m of Old Little Humber