

Annex 30.1

An Assessment of Alternative
Sites for Compensatory
Habitat

(Black & Veatch)



Able Marine Energy Park

An Assessment of Alternative Sites for Compensatory Habitat

May 2011

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ABLE MARINE ENERGY PARK**AN ASSESSMENT OF ALTERNATIVE SITES FOR
COMPENSATORY HABITAT****CONTENTS**

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ABLE MARINE ENERGY PARK**AN ASSESSMENT OF ALTERNATIVE SITES FOR
COMPENSATORY HABITAT****1. INTRODUCTION AND BACKGROUND****1.1 INTRODUCTION**

1.1.1 The Humber estuary comprises a number of statutory designated areas including:

- Humber Estuary Special Protection Area (SPA)
- Humber Estuary Special Area of Conservation(SAC)
- Humber Estuary Ramsar site
- Humber Estuary Sites of Special Scientific Interest (SSSI)

1.1.2 These sites are designated under international and national legislation; the SPA under the 'Birds' Directive (EU Directive 2009/147/EC) and the SAC under the 'Habitats' Directive (EU Directive 92/43/EEC). These designations protect the habitats and birds of the estuary which are of importance for nature conservation. The designated sites of the Humber estuary provide an essential resource to over 20 000 wetland birds and significant numbers of Annex 1 bird species of European importance during the breeding season, over-winter and on passage.

1.1.3 Able UK Ltd (Able) proposes to construct a Marine Energy Park (MEP) on the south bank of the Humber at Killingholme Marshes; the facility will include a new deep water quay. This will involve reclaiming some of the internationally designated subtidal and intertidal habitat within the Humber Estuary for industrial use. If the development is approved, habitat compensation will be required as a condition of the consent. Natural England has advised Able that habitat compensation should be provided in the middle estuary; this is the length between Brough and Welwick.

1.1.4 Accordingly, Black & Veatch (B&V) has undertaken an assessment of alternative sites to identify the most suitable areas for the creation of the compensatory habitat within the middle estuary.

1.2 BACKGROUND

1.2.1 There are a number of constraints and criteria which have directed the process of identification of suitable sites for habitat compensation:

- Natural England has stipulated that the compensation site should be located within the Humber middle estuary. This has limited the search to both banks of the Humber Estuary from Brough in the west to Welwick in the east.
- The Appropriate Assessment for the Draft National Policy Statement for Ports (DfT, 2009) states that 'as a general principle...development should

aim to avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives’.

- Avoidance of properties and infrastructure including, road rail and industrial areas.
- The size of the site required will be at least 52ha, based on a 1:1 ratio of the likely area of reclamation that is required as part of the MEP. The ratio of reclamation land to compensation habitat that will be required has not yet been confirmed by Natural England but it is likely to be in the order of between 1: 1 and 1: 2 (E Hawthorne 2011, *pers. comm.* 25 Feb.).

1.2.2 Whilst the quantum of compensation required is subject to discussion with Natural England, the identification of alternative sites will focus on sites above 50ha, with an assumption that up to 100ha may be required.

1.3 RELEVANT MANAGEMENT PLANS

1.3.1 The Flamborough Head to Gibraltar Point Shoreline Management Plan (SMP) provides a large-scale assessment of the risks associated with coastal processes and presents a long-term policy framework to reduce these risks to people and the environment in a sustainable manner. The SMP covers the Humber Estuary as far west as Stone Creek on the north bank and Immingham on the south bank. Reaches of the Humber Estuary upstream of these points are covered by the Humber Flood Risk Management Strategy (FRMS).

1.3.2 The Humber FRMS (Environment Agency, 2008) presents a long term plan for managing flood risk from the Humber Estuary. The strategy sets out the general approach to managing the estuary’s flood defences, but doesn’t make final decisions about the defences in a particular area. Potential sites that are suitable for future managed realignment schemes are identified in the Strategy including sites at Welwick, Keyingham and Goxhill within the Humber estuary between Brough and Welwick. Additional sites at Skeffling and Donna Nook have been identified further east.

2. METHODOLOGY AND PROCESS FOR SELECTING SITES

2.1 PROCESS OVERVIEW

2.1.1 A flow diagram of the site selection process is given in Figure 2-1. The process follows logical stages towards the identification of suitable sites. Stages 1 to 5 are described below in Sections 2.2 - 2.6.

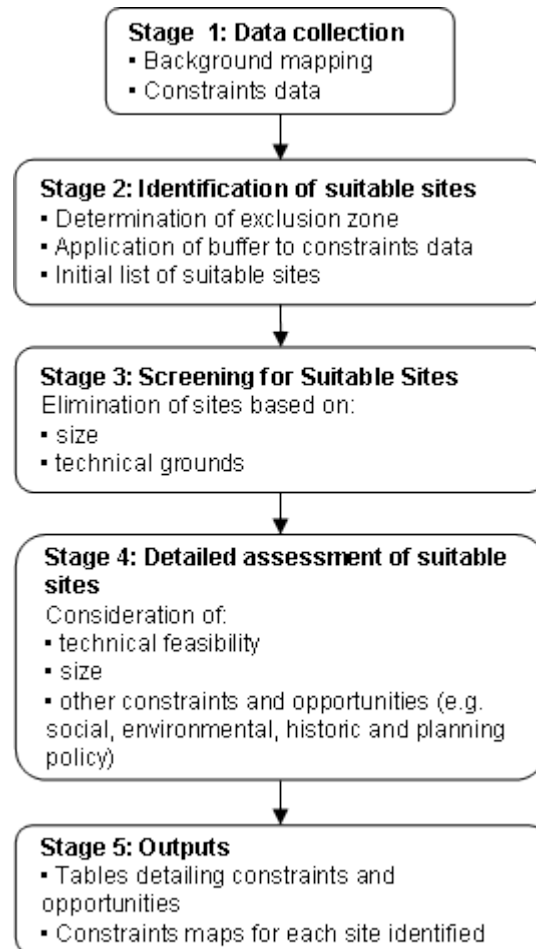


Figure 2-1: Stages in the Site Selection Process

2.2 STAGE 1: DATA COLLECTION

(a) Mapping

To enable the study to proceed, B&V obtained digital mapping data as detailed in Table 2.1. It was not considered necessary to obtain LiDAR aerial survey information for this high level assessment.

Table 2-1: Data Obtained by B&V

Product	Purpose
OS 1:50,000 scale colour raster	Background mapping for the search area
OS Street View - used under the OS Open Data Licence.	Background Mapping for Individual Site Plans.

(b) Constraints Data

2.2.1 In order to identify potential constraints, an 'exclusion zone' was digitised from the 1:50,000 colour raster. This process allowed a rapid assessment of non-suitable sites. The 'exclusion zone' dataset covers the following constraints:

- Property
- Road
- Railway
- Large drain
- Woodland or plantation
- River
- Factory or works
- Path or track providing access to a property
- Settlement
- Inland water
- Airfield
- High land above 5m AOD (Above Ordnance Datum)

2.2.2 Further constraints were derived from the available statutory, non-statutory and planning datasets from Natural England, the Environment Agency, English Heritage, East Riding of Yorkshire Council, North Lincolnshire Council and the Royal Society for the Protection of Birds (RSPB). These further constraints are not all considered to be prohibitive for the creation of a compensation area, rather they help to inform the assessment of the suitability of the site. These constraints include:

- Nature Conservation designations including international (e.g. SAC, SPA and Ramsar), national (e.g. Site of Special scientific Interest (SSSI)) and local (e.g. Local Nature Reserve (LNR)) designations.
- Historical assets and designations including scheduled monuments, listed buildings and Built Conservation Areas.
- Historic and authorised landfill sites.
- Planning policies.

(c) *Limitations of Data*

2.2.3 The constraints datasets referred to in paragraphs 2.2.1 and 2.2.2 are updated on an intermittent basis by the relevant provider. The last update to the data was on 3 August 2010.

2.3 STAGE 2: IDENTIFICATION OF SUITABLE SITES

2.3.1 Following identification of non-suitable sites, the remaining areas adjacent to the estuary but outside the exclusion zone were carried forward to the next stage.

2.3.2 In identifying potential areas for compensation habitat, a nominal 50m buffer was applied around any potential site to allow for construction of the new flood defence, drainage ditches and access.

2.4 STAGE 3: SCREENING FOR SUITABLE SITES

2.4.1 The next stage was a screening process to assess the suitability of the initial identified sites, including a high level assessment of the technical feasibility of construction, consideration of the size of the potential site and of the suitability in relation to further constraints. The remaining sites were carried through to a more detailed assessment.

2.5 STAGE 4: DETAILED ASSESSMENT OF SUITABLE SITES

2.5.1 For the detailed assessment, constraints maps were produced and the East Riding of Yorkshire Local Plan and the North Lincolnshire Local Plan was consulted to give further information about the potential constraints to the sites.

2.5.2 At this stage, other sources of information were drawn upon including: The Humber Flood Risk Management Strategy (March 2008), and the Flamborough Head to Gibraltar Point Shoreline Management Plan - Consultation Draft (November 2009).

2.5.3 Development of intertidal habitat would require land that is exposed at low water on the majority of tides, but also submerged on the majority of high tides. Within the intertidal areas the boundary between saltmarsh and mudflat habitat is not fixed, but depends on a variety of factors including the exposure of the site, elevation, slope, the frequency of inundation, and other factors (National River's Authority R&D Technical Report W208).

2.6 STAGE 5: OUTPUT

2.6.1 The outputs from stage 4 are presented in both tabular format and as figures for each suitable site. Each table provides information on the site derived from the detailed assessment in stage 4, and sets out the relevant social, environmental, historic and planning policy context (see Tables 3-1 to Table 3-11). The constraints maps show the size and shape of the site and the location of the site in relation to a number of constraints including environmental and historic designations, landfill sites, grade 1 agricultural land and the boundary of high ground (Figures 1 to 11, Appendix A).

3. DESCRIPTION OF POTENTIALLY SUITABLE SITES

3.1 SCREENING FOR SUITABLE SITES

3.1.1 A total of 18 potential sites were identified following stage 2 (Figure 3-1). Of these sites, five were screened out as they fell below the 50ha threshold (site numbers 1, 13, 16, 17 and 18). An additional two sites (Site 2 and Site 9) were excluded on predominantly technical grounds as noted below.

3.1.2 Site 2 is located behind the Paull Holme Strays managed realignment site. In order to allow enough seawater into the site to create intertidal habitat it would require modification of the existing breach at the Paull Holme Strays site. The ability to achieve this is uncertain on technical grounds. In addition the Paull Holme Strays site is still in an early stage of development and further managed realignment could compromise the aims of the existing managed realignment site. This site has therefore been discounted from further assessment in this report.

3.1.3 Site 9 has been discounted on technical and environmental grounds as the site would require cutting through a distance of approximately 500m of saltmarsh (a Natura 2000 feature) to create a channel to allow seawater into the site, while the fringe of saltmarsh fronting the other sites is much narrower. The National Ports Strategy states that the development and any mitigation should aim to avoid significant harm to biodiversity and geological conservation interests. It is therefore sensible to avoid land that is already designated as a Natura 2000 site, as development of this large area in itself would then require compensation. Given the technical uncertainty of design and the implications for the considerable loss of a Natura 2000 feature, this site has been discounted from further assessment.

3.2 DETAILED ASSESSMENT OF SUITABLE SITES

3.2.1 The remaining 11 sites have been assessed in more detail in Tables 3-1 to Table 3-11. This assessment provides high level information on the constraints that are associated with each site. The accompanying figures show the location of these constraints (see Figures 1 to 11, Appendix A). Any aspects that could be considered beneficial for managed realignment of the site are included as opportunities, for example the presence of high ground that could act as a site boundary and provide relatively scarce transitional habitat.

3.2.2 The boundary of the sites shown in Appendix A, Figures 1-11 have been set at 50m from any constraint (generally the width of the embankment), but where there is a particularly sensitive constraint a larger buffer zone has been applied, such as 100m for any commercial property and 150m for residential properties, scheduled monuments and listed buildings.

Table 3-1: Constraints and Opportunities at Site 3 (Appendix A, Figure 1)

Site Number	3
Site Name	Little Humber
Location	TA 207 225
Area	103 ha
Constraints and Opportunities	
Human/Social	
<ul style="list-style-type: none"> An isolated property is located along the edge of the site. 	
Environmental	
<ul style="list-style-type: none"> Approximately half of the seaward edge of the site is fronted by a wide band of saltmarsh which is a Natura 2000 feature. 	
Historic	
<ul style="list-style-type: none"> Approximately two-thirds of the site lies behind a Scheduled Monument which covers the saltmarsh fronting the site. 	
Technical	
<ul style="list-style-type: none"> There is a limited location where a breach could be sited due to the need to avoid a Scheduled Monument. 	
Planning Policy	
<ul style="list-style-type: none"> The whole site designated as Undeveloped Coast (ERYC Env 8, Env 9). 	

Table 3-2: Constraints and Opportunities at Site 4 (Appendix A, Figure 2)

Site Number	4
Location Reference	Cherry Cobb Sands
Location	TA 224 209
Area	157 ha
Constraints and Opportunities	
Human/Social	
<ul style="list-style-type: none"> There are isolated properties along the edge of the site. 	
Environmental	
<ul style="list-style-type: none"> The site is fronted by a narrow band of saltmarsh which is a Natura 2000 feature. There is a small historic landfill site at the far north-west corner of the site. 	
Historic	
<ul style="list-style-type: none"> There is a Scheduled monument to the north of the site, however this is unlikely to be affected by any managed realignment. 	
Technical	
<ul style="list-style-type: none"> None identified. 	
Planning Policy	
<ul style="list-style-type: none"> The whole site is designated as Undeveloped Coast (ERYC Env 8, Env 9). 	

Table 3-3: Constraints and Opportunities at Site 5 (Appendix A, Figure 3)

Site Number	5
Location Reference	Stone Creek
Location	TA 248 183
Area	151 ha
Constraints and Opportunities	
Human/Social	
<ul style="list-style-type: none"> • There are isolated properties along the edge of the site. 	
Environmental	
<ul style="list-style-type: none"> • The site is fronted by wide band of saltmarsh which is a Natura 2000 feature. 	
Historic	
<ul style="list-style-type: none"> • The site lies within a Built Conservation Area. 	
Technical	
<ul style="list-style-type: none"> • None identified. 	
Planning Policy	
<ul style="list-style-type: none"> • The whole site designated as Undeveloped Coast (ERYC Env 8, Env 9). • The whole site designated as Conservation Area (ERYC Env 24, Env 25, Env 26). 	

Table 3-4: Constraints and Opportunities at Site 6 (Appendix A, Figure 4)

Site Number	6
Location Reference	South Farm
Location	TA 266 172
Area	147 ha
Constraints and Opportunities	
Human/Social	
<ul style="list-style-type: none"> • There are isolated properties along the edge of the site. 	
Environmental	
<ul style="list-style-type: none"> • Approximately half of the site is fronted by a wide band of saltmarsh which is a Natura 2000 feature. 	
Historic	
<ul style="list-style-type: none"> • The site lies within a Built Conservation Area. 	
Technical	
<ul style="list-style-type: none"> • None identified. 	
Planning Policy	
<ul style="list-style-type: none"> • The whole site designated as Undeveloped Coast (ERYC Env 8, Env 9). • The whole site designated as Conservation Area (ERYC Env 24, Env 25, Env 26). 	

Table 3-5: Constraints and Opportunities at Site 7 (Appendix A, Figure 5)

Site Number	7
Location Reference	Hawkin's Point
Location	TA 286 173
Area	266 ha
Constraints and Opportunities	
Human/Social	
<ul style="list-style-type: none"> • There are isolated properties along the edge of the site. 	
Environmental	
<ul style="list-style-type: none"> • Approximately 70% of site is fronted by a wide band of saltmarsh which is a Natura 2000 feature. 	
Historic	
<ul style="list-style-type: none"> • Over 90% of the site lies within a Built Conservation Area. 	
Technical	
<ul style="list-style-type: none"> • None identified. 	
Planning Policy	
<ul style="list-style-type: none"> • The whole site designated as Undeveloped Coast (ERYC Env 8, Env 9). • The whole site designated as Conservation Area (ERYC Env 24, Env 25, Env 26). 	

Table 3-6: Constraints and Opportunities at Site 8 (Appendix A, Figure 6)

Site Number	8
Location Reference	Outstray Farm
Location	TA 318 187
Area	290 ha
Constraints and Opportunities	
Human/Social	
<ul style="list-style-type: none"> • There are isolated properties along the edge of the site. 	
Environmental	
<ul style="list-style-type: none"> • The site is fronted by a narrow band of saltmarsh which is a Natura 2000 feature. 	
Historic	
<ul style="list-style-type: none"> • None identified. 	
Technical	
<ul style="list-style-type: none"> • None identified. 	
Planning Policy	
<ul style="list-style-type: none"> • The whole site designated as Undeveloped Coast (ERYC Env 8, Env 9). 	

Table 3-7: Constraints and Opportunities at Site 10 (Appendix A, Figure 7)

Site Number	10
Location Reference	Skeffling
Location	TA 357 191
Area	270 ha
Constraints and Opportunities	
Human/Social	
<ul style="list-style-type: none"> • There are isolated properties near the edge of the site. 	
Environmental	
<ul style="list-style-type: none"> • The site is fronted by narrow band of saltmarsh which is a Natura 2000 feature. • The site is bounded by higher ground at the rear which would facilitate the development of natural succession. 	
Historic	
<ul style="list-style-type: none"> • None identified. 	
Technical	
<ul style="list-style-type: none"> • The site is bounded by higher ground to the rear which would benefit site design. 	
Planning Policy	
<ul style="list-style-type: none"> • The majority of the site lies within land designated as undeveloped coast (ERYC Env 8, Env 9). 	

Table 3-8: Constraints and Opportunities at Site 11 (Appendix A, Figure 8)

Site Number	11
Location Reference	Winteringham
Location	SE 941 222
Area	75 ha
Constraints and Opportunities	
Human/Social	
<ul style="list-style-type: none"> • The site is adjacent to Winteringham village and a large poultry farm with a number of properties in close proximity to the site. 	
Environmental	
<ul style="list-style-type: none"> • There is potential loss of a small area of woodland that lies within site boundary. • The site is bounded by higher ground at the rear which would facilitate the development of natural succession. 	
Historic	
<ul style="list-style-type: none"> • The site is adjacent to a Romano British Scheduled Monument. 	
Technical	
<ul style="list-style-type: none"> • The site is bounded by higher ground to the rear which would benefit site design. 	
Planning Policy	
<ul style="list-style-type: none"> • None identified. 	

Table 3-9: Constraints and Opportunities at Site 12 (Appendix A, Figure 9)

Site Number	12
Location Reference	New Holland
Location	TA 094 244
Area	206 ha
Constraints and Opportunities	
Human/Social	
<ul style="list-style-type: none"> The site is adjacent to New Holland village and an industrial works site. 	
Environmental	
<ul style="list-style-type: none"> The site is bounded by a short length of higher ground at the rear which may facilitate the development of natural succession if this formed part of the managed realignment. 	
Historic	
<ul style="list-style-type: none"> None identified. 	
Technical	
<ul style="list-style-type: none"> Site is bounded by higher ground to the rear which may benefit site design. 	
Planning Policy	
<ul style="list-style-type: none"> Part of the site including the north-east corner and a narrow band in the middle of the site is designated as NLC LC4 (Site of Importance for Nature Conservation). North-west corner of the site is designated as NLC LC9-2 (Areas of High Landscape Value). 	

Table 3-10: Constraints and Opportunities at Site 14 (Appendix A, Figure 10)

Site Number	14
Location Reference	Goxhill
Location	TA 134 243
Area	216 ha
Constraints and Opportunities	
Human/Social	
<ul style="list-style-type: none"> There are isolated properties along the edge of the potential site. 	
Environmental	
<ul style="list-style-type: none"> The site is fronted by a wide band of saltmarsh which is a Natura 2000 feature. Three agricultural fields within the site are designated as SPA, Ramsar and SSSI. These are acid grassland habitats managed by the Lincolnshire Wildlife Trust. 	
Historic	
<ul style="list-style-type: none"> None identified. 	
Technical	
<ul style="list-style-type: none"> None identified. 	
Planning Policy	
<ul style="list-style-type: none"> Small area of site is designated as NLC LC4 (Site of Importance for Nature Conservation). 	

Table 3-11: Constraints and Opportunities at Site 15 (Appendix A, Figure 11)

Site Number	15
Location Reference	Halton Marshes
Location	TA 148 219
Area	135 ha
Constraints and Opportunities	
Human/Social	
<ul style="list-style-type: none"> None identified. 	
Environmental	
<ul style="list-style-type: none"> The site is bounded by higher ground at the rear which would facilitate the development of natural succession. 	
Historic	
<ul style="list-style-type: none"> None identified. 	
Technical	
<ul style="list-style-type: none"> The site is bounded by higher ground to the rear which would benefit site design. 	
Planning Policy	
<ul style="list-style-type: none"> Whole site designated as NLC LC20 (Landscape Proposal) Whole site also designated by NLC IN1-1, IN4, IN5, IN12-6 (relating to the proposed development of this land for industry). 	

3.3 RELATION OF IDENTIFIED SITES TO EXISTING MANAGEMENT PLANS

3.3.1 Within the Flamborough Head to Gibraltar Point SMP, Policy Unit K covers from Easington Road to Stone Creek. The draft policy for this unit is for *,"hold the line with limited managed realignment. This will ensure sustainable flood protection to the majority of the floodplain assets, including the majority of agricultural land, there will be a loss of some grade 1 and 2 agricultural land; however, any managed realignment of defences will not affect property, historic environment assets or key infrastructure."*

3.3.2 The Humber FRMS (Environment Agency, 2008) identifies a number of locations that are suitable for managed realignment. These sites identified in the Humber FRMS and the corresponding sites identified in this assessment are shown in Table 3-12.

Table 3-12: Relation of potential compensation sites identified in the Humber FRMS to those sites identified in this assessment

Site identified in Humber FRMS	Corresponding site identified in this assessment	Comment
Donna Nook	None	Not relevant to this assessment as this site is in the outer estuary.
Skeffling	10 - Skeffling	Site identified in Humber FRMS is a similar size and shape to that identified in this assessment. The Environment Agency is aiming to develop this site between 2010 and 2020.
Welwick	7 - Hawkin's Point and 8 - Outstray Farm	Site identified in Humber FRMS corresponds with two sites identified in this assessment. The Environment agency is aiming to develop this site after 2020.
Keyingham	4 - Cherry Cob Sands	Site identified in Humber FRMS is a similar size and shape to that identified in this assessment. The Environment Agency is aiming to develop this site after 2030.
Goxhill	14 - Goxhill	The site identified in the Humber FRMS is smaller than the site identified in this assessment (it does not extend as far north). The Environment Agency would not plan to develop this site until after 2040.

4. CONCLUSIONS

- 4.1.1 The site selection exercise has identified 18 potential sites within the middle estuary that may be suitable for managed realignment. Consideration of the criteria for the compensation site led to screening out of five sites on the basis that they did not provide enough area to be suitable for compensation for the MEP development. A further two sites were screened out on technical grounds due to the location of these sites leading to uncertainty in the feasibility of construction.
- 4.1.2 Detailed assessment of the remaining 11 sites indicates that there are certain sites which would be more favourable as compensation sites than others, although this is not to the exclusion of other sites which still remain potentially feasible (Table 4-1).

Table 4-1: Summary of Detailed Assessment

Site	Comments
Favourable	
4 - Cherry Cobb Sands	Site is in middle estuary as requested by Natural England. Historic landfill site could be avoided.
8 - Outstray Farm	No major constraints identified, though site is just outside the middle estuary.
12 - New Holland	Site is in middle estuary. Site is bounded by higher ground at the rear. Site of Importance for Nature Conservation could be avoided.
Some constraints but still feasible	
3 - Little Humber	Limited location where breach could be sited due to Scheduled Monument which could result in difficulties with design. Site is only just over 100 ha.
5 - Stone Creek	Whole site lies within a Built Conservation Area.
6 - South Farm	Whole site lies within a Built Conservation Area.
7 - Hawkin's Point	More than 90% of the site lies within a Built Conservation Area.
10 - Skeffling	Site is bounded by higher ground at the rear, but is more than 5km away from the middle estuary.
15 - Halton Marshes	Site is subject to a Planning Application and has been identified as a prime area for industrial development. Site is bounded by higher ground at the rear and is adjacent to the MEP Site.
Constraints may make site not feasible	
11 - Winteringham	Site is 75 ha and so less than required. The site is not in the Middle Estuary as requested by Natural England. Site is adjacent to Winteringham village. Site is bounded by higher ground at the rear.
14 - Goxhill	Three agricultural fields within the site are designated as SPA, Ramsar and SSSI. Designated sites could be avoided but it would result in a much smaller compensation site (likely to be less than 50ha).

- 4.1.3 These findings are based on a high level assessment and consideration of the key issues. This has involved searching Local Plans and publicly available information as detailed in Section 2.1.
- 4.1.4 At this time no data on ground levels has been obtained. The ground levels will have an impact on the types of habitat that are likely to form following

managed realignment, which may be important in terms of a site's suitability for providing compensation. At this stage no estimate has been made in regards to the type of habitat that may form at each site. From previous similar managed realignment sites (e.g. Paull Holme Strays, Welwick and Chowder Ness) it is likely that the habitat will be a complex of mudflat and saltmarsh communities, with grassland where the site is bounded by high ground.

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APPENDICES

APPENDIX A: FIGURES

Figure 1 - Site 3

Figure 2 - Site 4

Figure 3 - Site 5

Figure 4 - Site 6

Figure 5 - Site 7

Figure 6 - Site 8

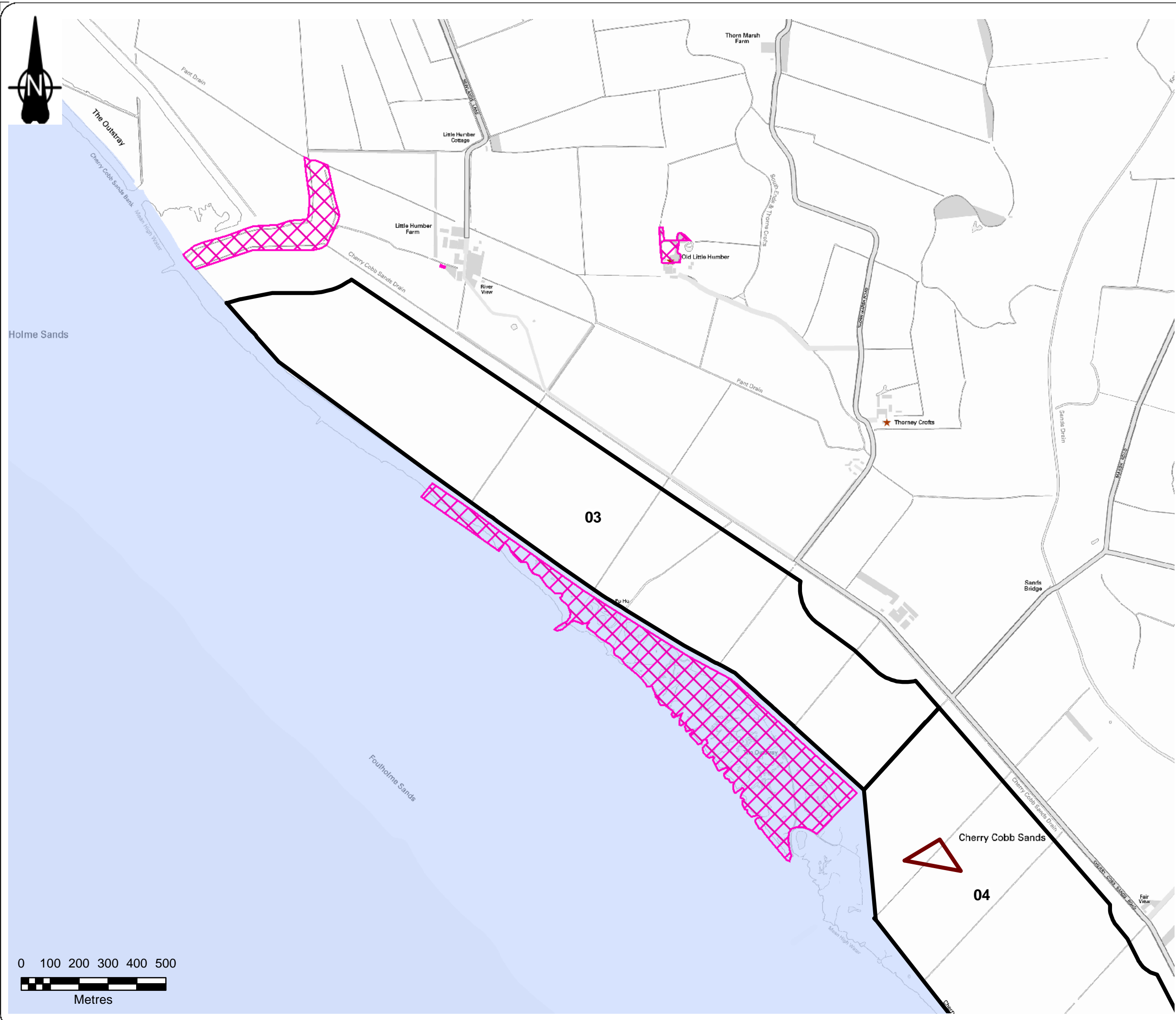
Figure 7 - Site 10

Figure 8 - Site 11

Figure 9 - Site 12

Figure 10 - Site 14

Figure 11 - Site 15

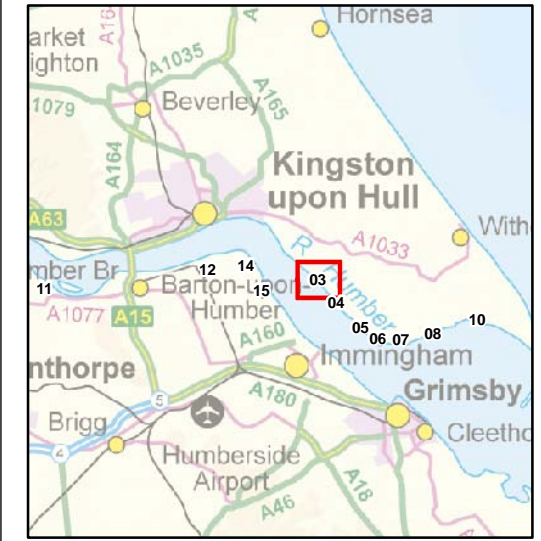


KEY

Legend

- Potential Compensation Site 03 (Area = 103 Ha)
- Humber Estuary International and National Nature Conservation Designations*
- Site of Special Scientific Interest
- Agricultural Land Classification (Grade 1)
- ▲ Boundary of High Ground (> 5m AOD)
- Authorised Landfill (Indicative)
- Historic Landfill (Indicative)
- ★ Listed Building
- Built Conservation Area
- Scheduled Monument

*Note: Humber Estuary is designated as a Ramsar Site; Special Area of Conservation; Special Protection Area and Site of Special Scientific Interest



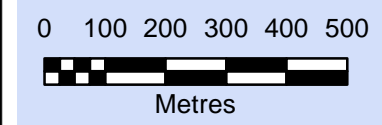
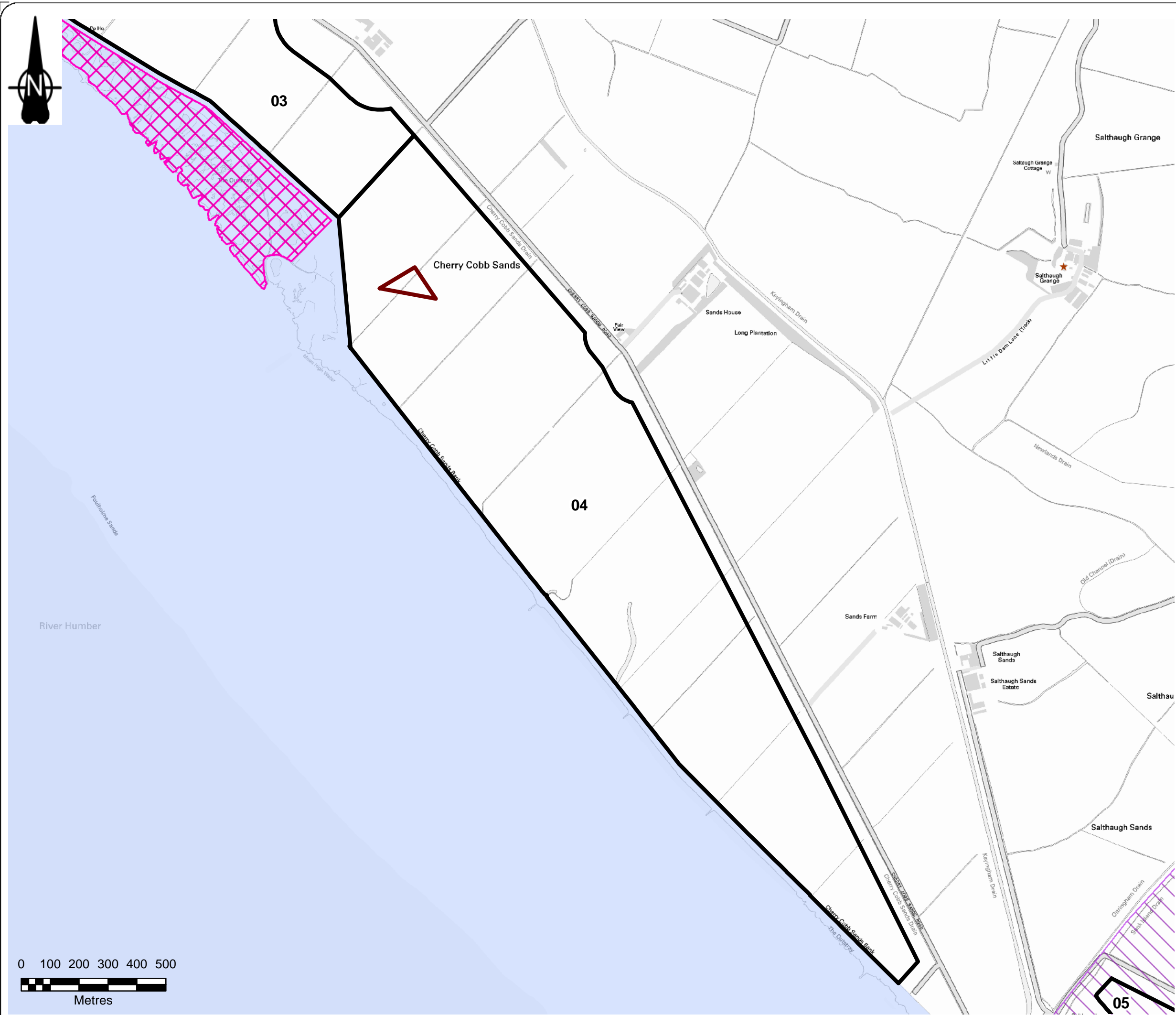
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A	05/04/2011	Preliminary Issue	AJS	LVI	DK
Rev	Date	Comments	Drw	Chk	App



Project:	COMPENSATION SITE SELECTION ASSESSMENT
Client:	ABLE UK Ltd
Title:	FIGURE 1: COMPENSATION SITE CONSTRAINTS : SITE 03

PRELIMINARY			
Scale:	Drawn	Checked	Approved
1:12,500 @A3	AJS	LVI	DK
Date	05/04/2011	05/04/2011	05/04/2011
Drawing No.	121726-9010-003		Revision: A



KEY

- Legend**
- Potential Compensation Site 04 (Area = 157 Ha)
 - Humber Estuary International and National Nature Conservation Designations*
 - Site of Special Scientific Interest
 - Agricultural Land Classification (Grade 1)
 - ▲ Boundary of High Ground (> 5m AOD)
 - Authorised Landfill (Indicative)
 - Historic Landfill (Indicative)
 - ★ Listed Building
 - Built Conservation Area
 - Scheduled Monument

*Note: Humber Estuary is designated as a Ramsar Site; Special Area of Conservation; Special Protection Area and Site of Special Scientific Interest



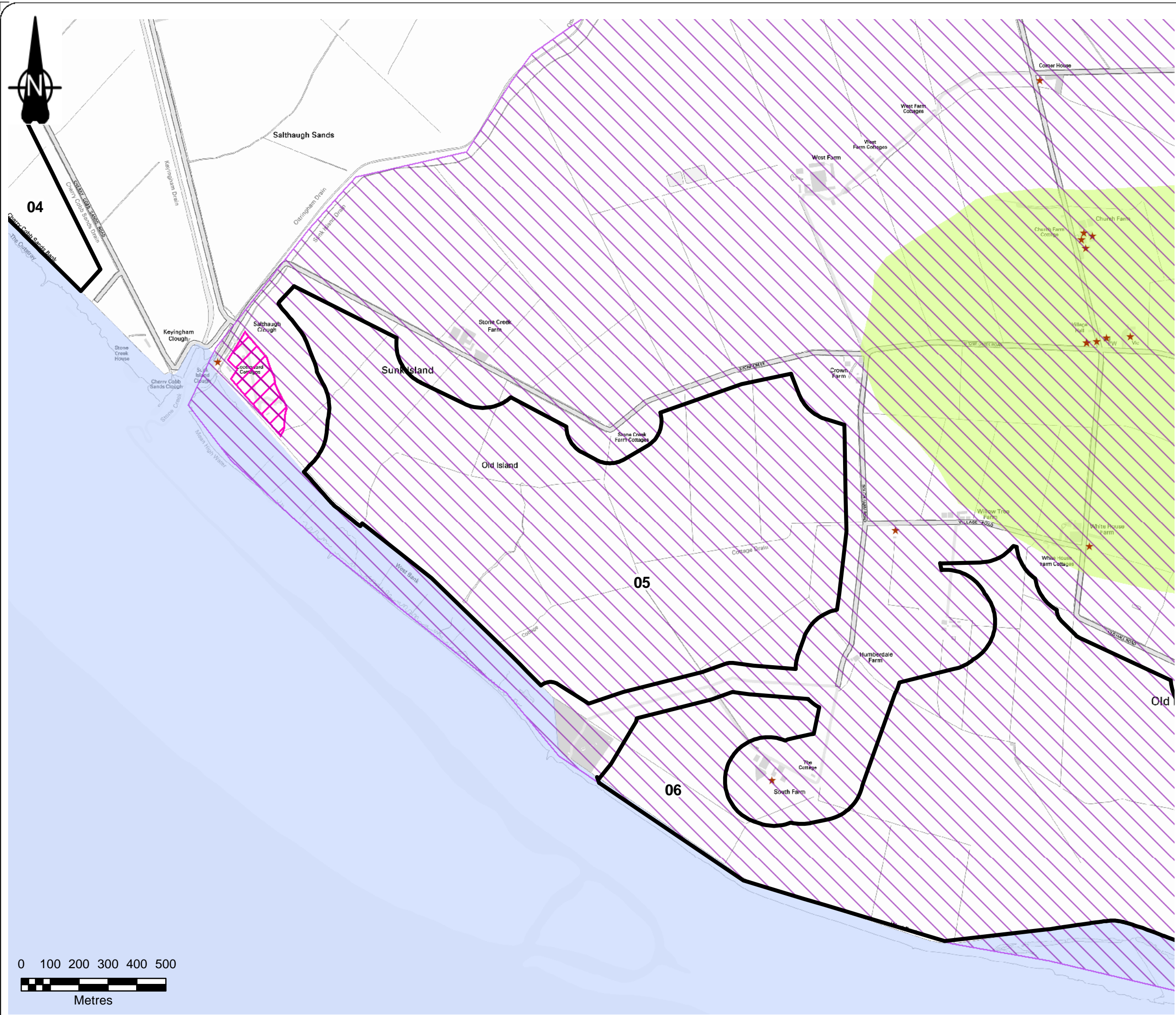
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Rev	Date	Comments	Drw	Chk	App



Project:	COMPENSATION SITE SELECTION ASSESSMENT
Client:	ABLE UK Ltd
Title:	FIGURE 2: COMPENSATION SITE CONSTRAINTS : SITE 04

PRELIMINARY			
Scale:	Drawn	Checked	Approved
1:12,500 @A3	AJS	LVI	DK
Date	05/04/2011	05/04/2011	05/04/2011
Drawing No.	121726-9010-004		Revision: A



KEY

Legend

- Potential Compensation Site 05 (Area = 151 Ha)
- Humber Estuary International and National Nature Conservation Designations*
- Site of Special Scientific Interest
- Agricultural Land Classification (Grade 1)
- Boundary of High Ground (> 5m AOD)
- Authorised Landfill (Indicative)
- Historic Landfill (Indicative)
- Listed Building
- Built Conservation Area
- Scheduled Monument

*Note: Humber Estuary is designated as a Ramsar Site; Special Area of Conservation; Special Protection Area and Site of Special Scientific Interest

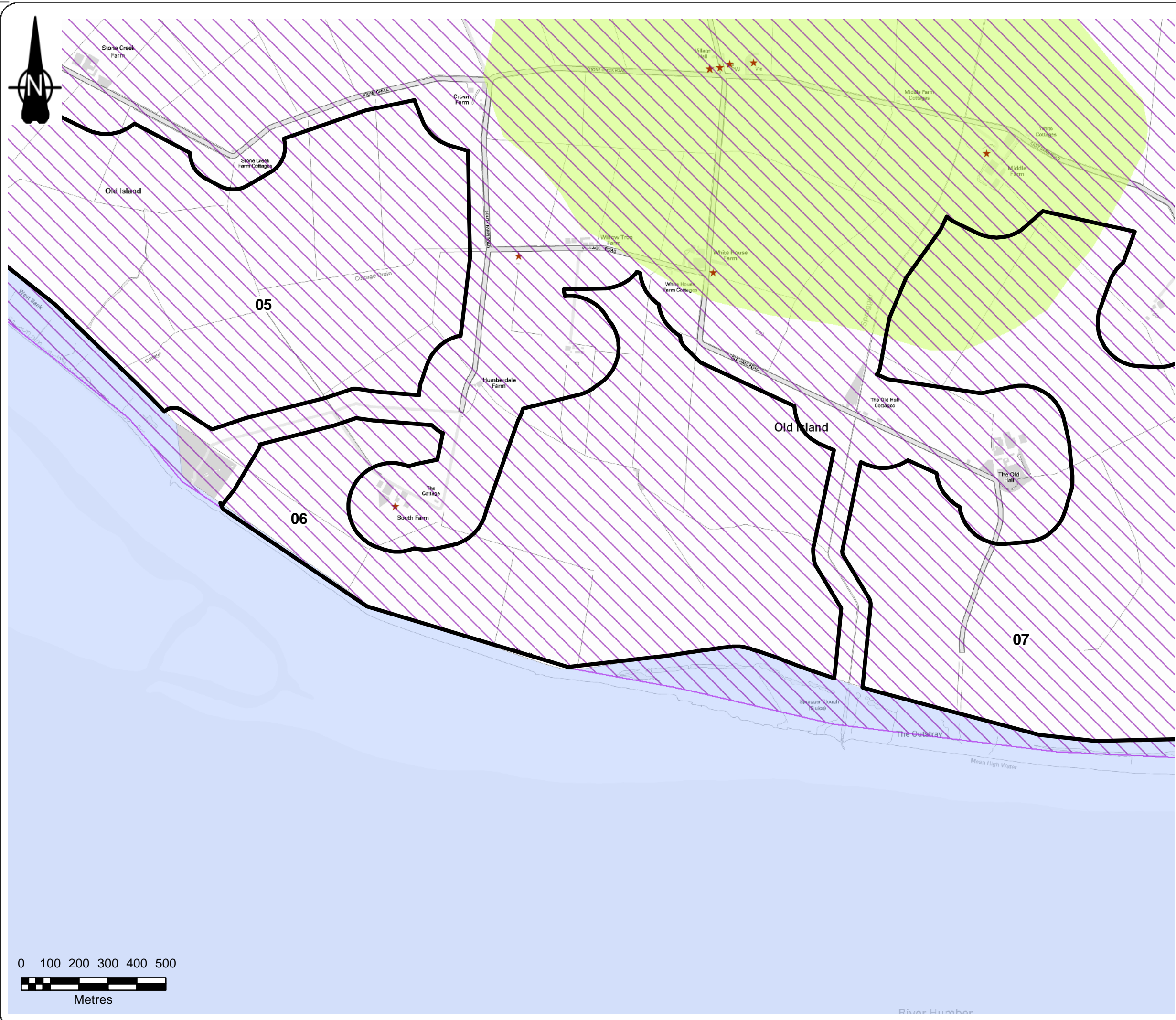


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Rev	Date	Comments	Drw	Chk	App

Project:	COMPENSATION SITE SELECTION ASSESSMENT
Client:	ABLE UK Ltd
Title:	FIGURE 3: COMPENSATION SITE CONSTRAINTS : SITE 05

PRELIMINARY			
Scale:	Drawn	Checked	Approved
1:12,500 @A3	AJS	LVI	DK
Date	05/04/2011	05/04/2011	05/04/2011
Drawing No.	121726-9010-005		Revision: A



KEY

Legend

- Potential Compensation Site 06 (Area = 147 Ha)
- Humber Estuary International and National Nature Conservation Designations*
- Site of Special Scientific Interest
- Agricultural Land Classification (Grade 1)
- Boundary of High Ground (> 5m AOD)
- Authorised Landfill (Indicative)
- Historic Landfill (Indicative)
- Listed Building
- Built Conservation Area
- Scheduled Monument

*Note: Humber Estuary is designated as a Ramsar Site; Special Area of Conservation; Special Protection Area and Site of Special Scientific Interest

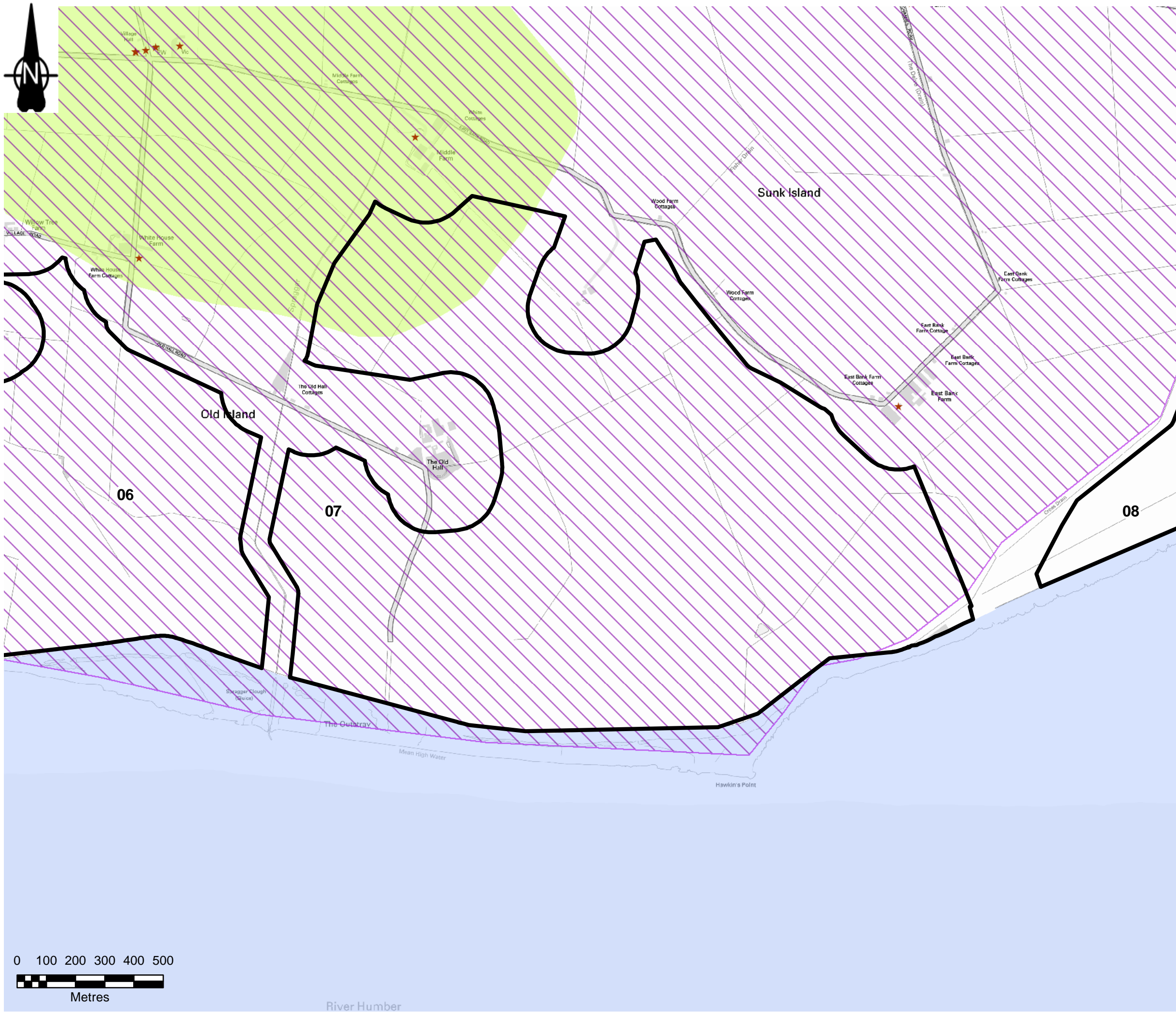


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Rev	Date	Comments	Drw	Chk	App

Project:	COMPENSATION SITE SELECTION ASSESSMENT
Client:	ABLE UK Ltd
Title:	FIGURE 4: COMPENSATION SITE CONSTRAINTS : SITE 06

PRELIMINARY			
Scale:	1:12,500 @A3	Drawn:	AJS
		Checked:	LVI
		Approved:	DK
Date	05/04/2011	05/04/2011	05/04/2011
Drawing No.	121726-9010-006		Revision: A

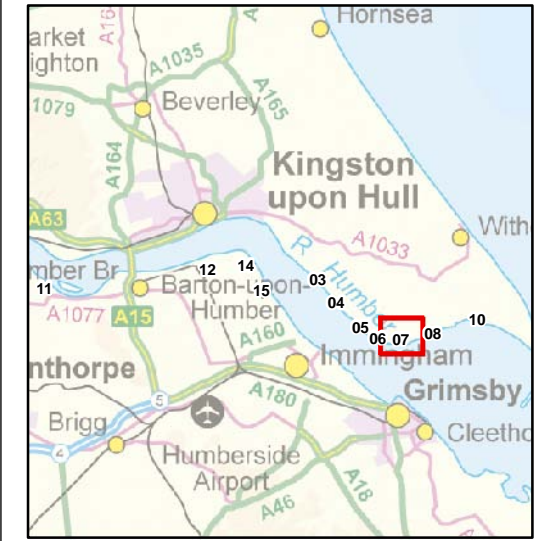


KEY

Legend

- Potential Compensation Site 07 (Area = 266 Ha)
- Humber Estuary International and National Nature Conservation Designations*
- Site of Special Scientific Interest
- Agricultural Land Classification (Grade 1)
- Boundary of High Ground (> 5m AOD)
- Authorised Landfill (Indicative)
- Historic Landfill (Indicative)
- Listed Building
- Built Conservation Area
- Scheduled Monument

*Note: Humber Estuary is designated as a Ramsar Site; Special Area of Conservation; Special Protection Area and Site of Special Scientific Interest



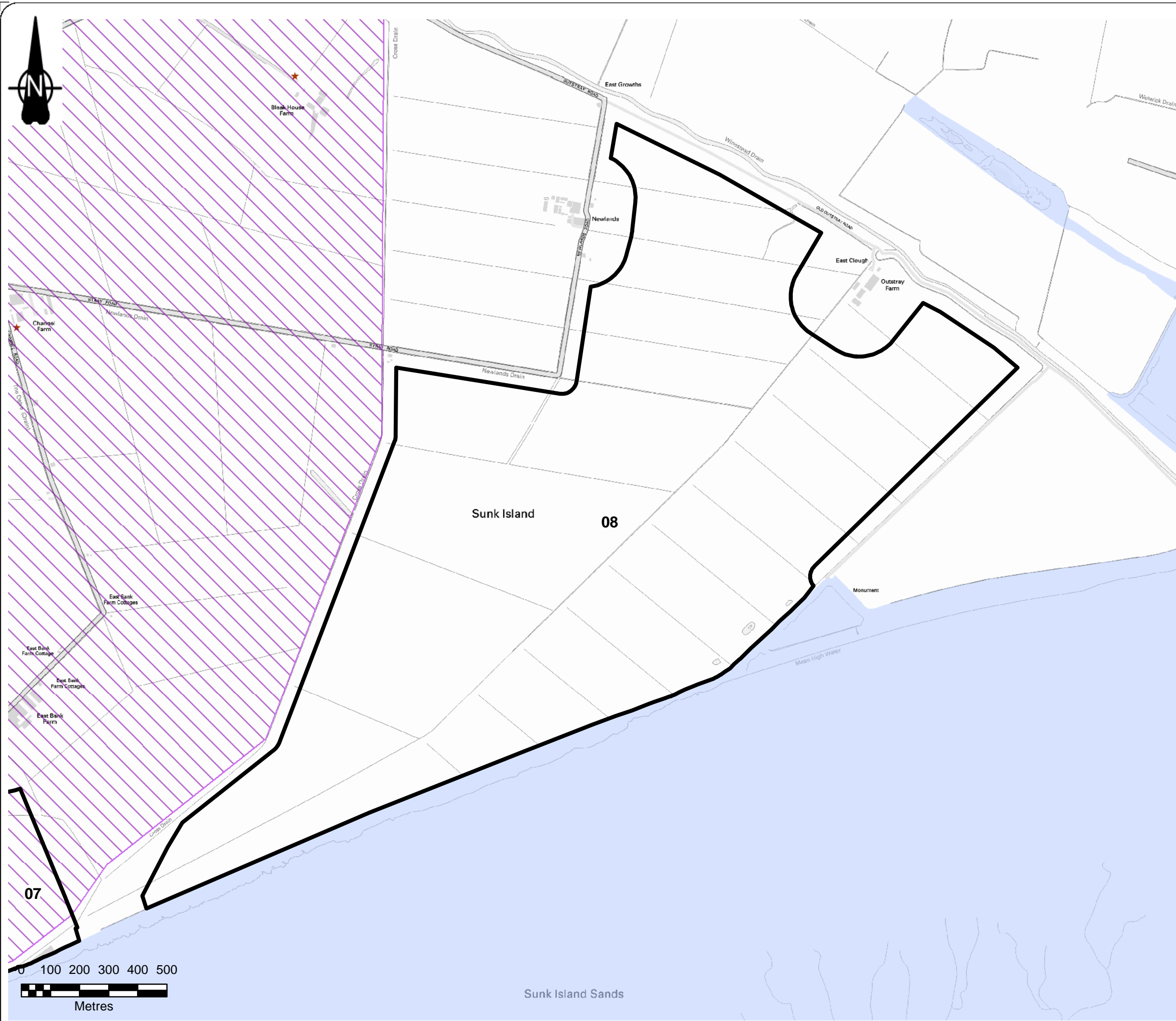
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Rev	Date	Comments	Drw	Chk	App



Project:	COMPENSATION SITE SELECTION ASSESSMENT
Client:	ABLE UK Ltd
Title:	FIGURE 5: COMPENSATION SITE CONSTRAINTS : SITE 07

PRELIMINARY			
Scale:	Drawn	Checked	Approved
1:12,500 @A3	AJS	LVI	DK
Date	05/04/2011	05/04/2011	05/04/2011
Drawing No.	121726-9010-007		Revision: A



KEY

- Legend**
- Potential Compensation Site 08 (Area = 290 Ha)
 - Humber Estuary International and National Nature Conservation Designations*
 - Site of Special Scientific Interest
 - Agricultural Land Classification (Grade 1)
 - ▲ Boundary of High Ground (> 5m AOD)
 - Authorised Landfill (Indicative)
 - Historic Landfill (Indicative)
 - ★ Listed Building
 - Built Conservation Area
 - Scheduled Monument

*Note: Humber Estuary is designated as a Ramsar Site; Special Area of Conservation; Special Protection Area and Site of Special Scientific Interest



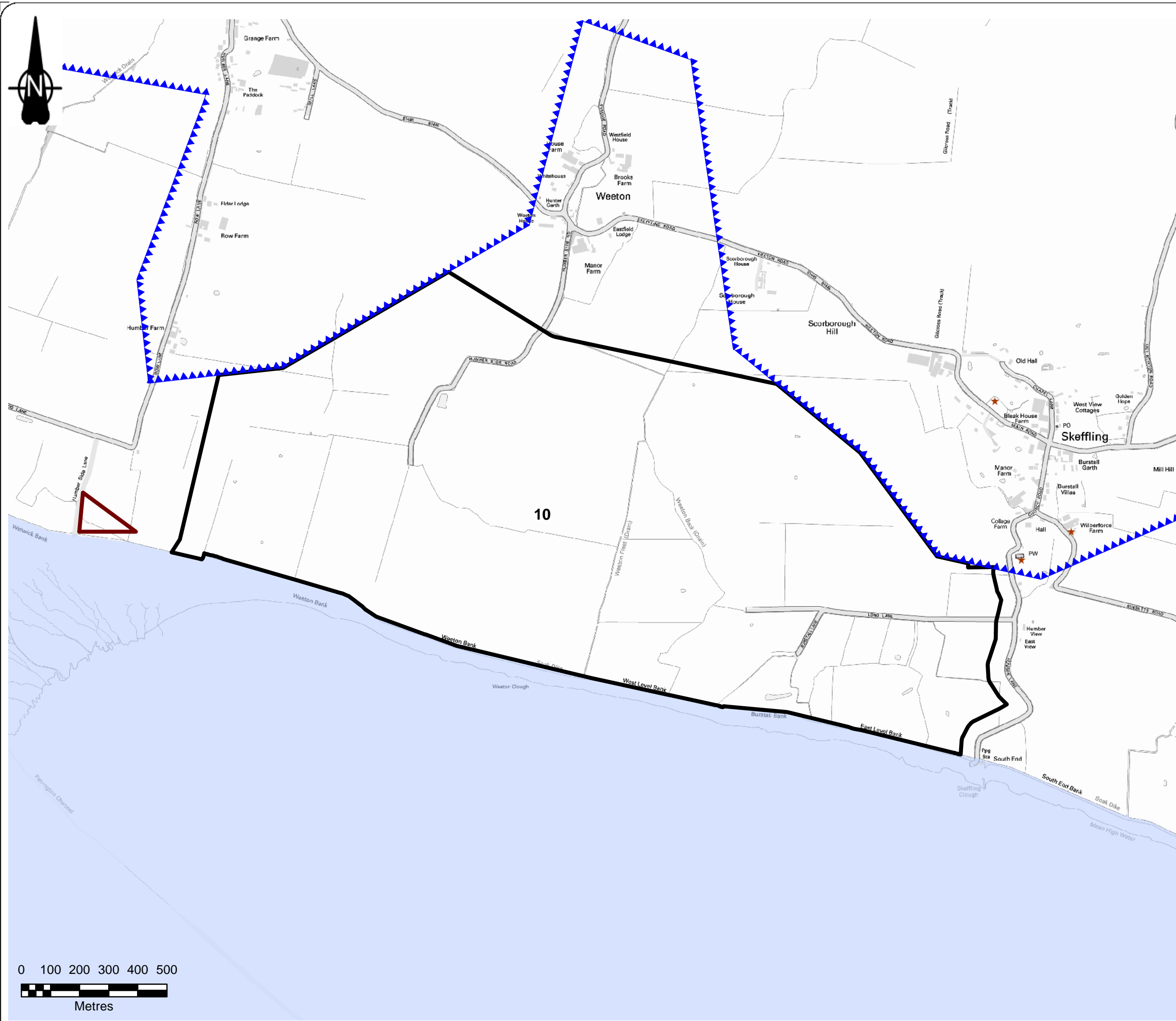
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Rev	Date	Comments	Drw	Chk	App



Project:	COMPENSATION SITE SELECTION ASSESSMENT
Client:	ABLE UK Ltd
Title:	FIGURE 6: COMPENSATION SITE CONSTRAINTS : SITE 08

PRELIMINARY			
Scale:	1:12,500 @A3	Drawn:	AJS
		Checked:	LVI
		Approved:	DK
Date	05/04/2011	05/04/2011	05/04/2011
Drawing No.	121726-9010-008	Revision:	A



KEY

Legend

- Potential Compensation Site 10 (Area = 270 Ha)
- Humber Estuary International and National Nature Conservation Designations*
- Site of Special Scientific Interest
- Agricultural Land Classification (Grade 1)
- Boundary of High Ground (> 5m AOD)
- Authorised Landfill (Indicative)
- Historic Landfill (Indicative)
- ★ Listed Building
- Built Conservation Area
- Scheduled Monument

*Note: Humber Estuary is designated as a Ramsar Site; Special Area of Conservation; Special Protection Area and Site of Special Scientific Interest



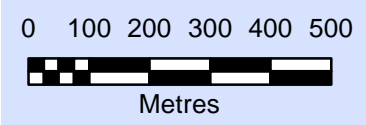
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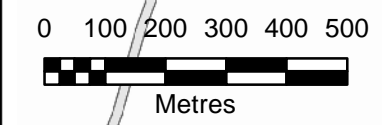
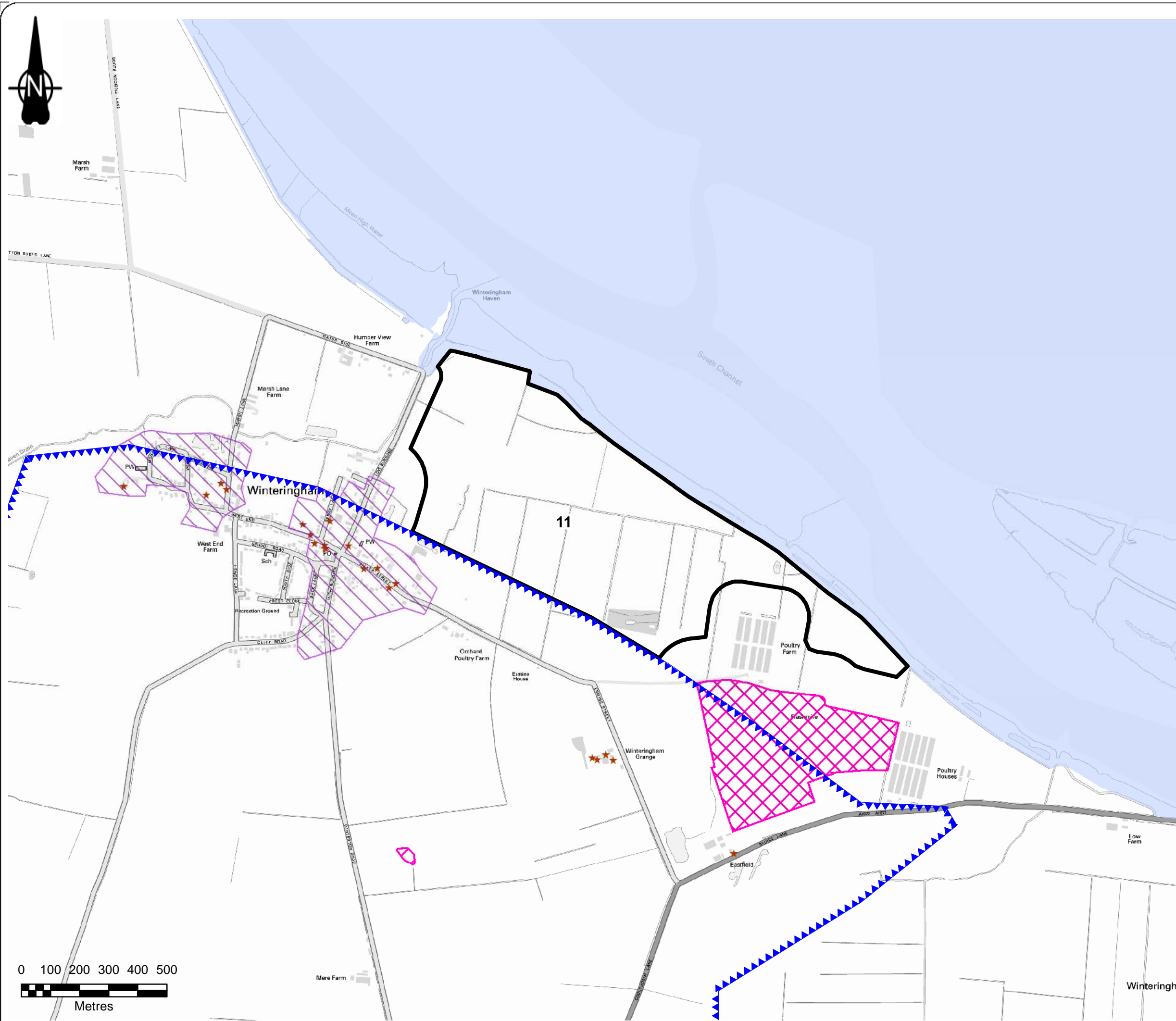
A	05/04/2011	Preliminary Issue	AJS	LVI	DK
Rev	Date	Comments	Drw	Chk	App



Project:	COMPENSATION SITE SELECTION ASSESSMENT
Client:	ABLE UK Ltd
Title:	FIGURE 7: COMPENSATION SITE CONSTRAINTS : SITE 10

PRELIMINARY			
Scale:	Drawn	Checked	Approved
1:12,500 @A3	AJS	LVI	DK
Date	05/04/2011	05/04/2011	05/04/2011
Drawing No.	121726-9010-010		Revision: A





KEY

Legend

- Potential Compensation Site 11 (Area = 75 Ha)
- Humber Estuary International and National Nature Conservation Designations*
- Site of Special Scientific Interest
- Agricultural Land Classification (Grade 1)
- Boundary of High Ground (> 5m AOD)
- Authorised Landfill (Indicative)
- Historic Landfill (Indicative)
- Listed Building
- Built Conservation Area
- Scheduled Monument

*Note: Humber Estuary is designated as a Ramsar Site; Special Area of Conservation; Special Protection Area and Site of Special Scientific Interest



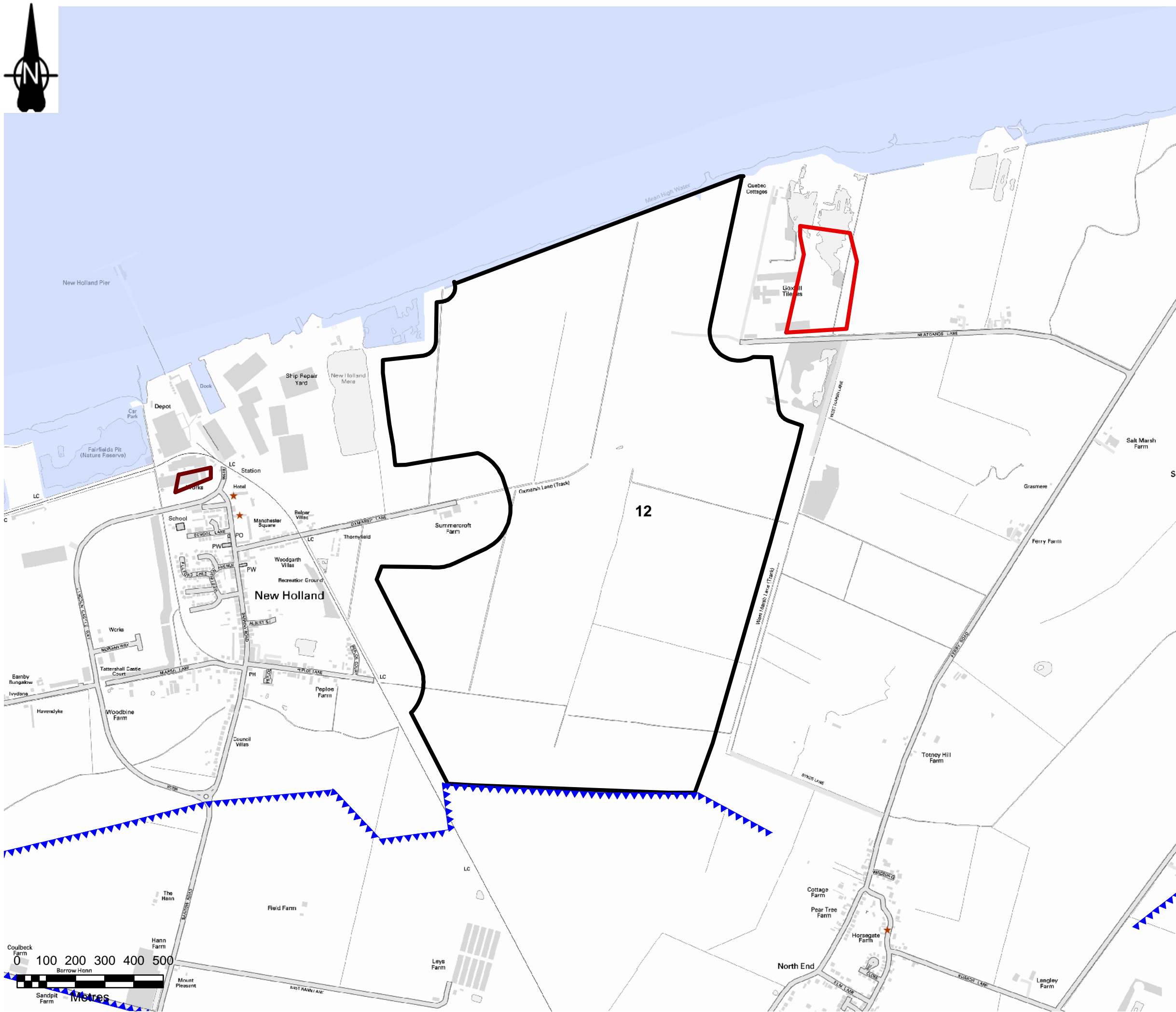
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Project:	COMPENSATION SITE SELECTION ASSESSMENT
Client:	ABLE UK Ltd
Title:	FIGURE 8: COMPENSATION SITE CONSTRAINTS : SITE 11

PRELIMINARY			
Scale:	Drawn	Checked	Approved
1:12,500 @A3	AJS	LVI	DK
Date	05/04/2011	05/04/2011	05/04/2011
Drawing No.	121726-9010-011		Revision: A



KEY

Legend

- Potential Compensation Site 12 (Area = 206 Ha)
- Humber Estuary International and National Nature Conservation Designations*
- Site of Special Scientific Interest
- Agricultural Land Classification (Grade 1)
- Boundary of High Ground (> 5m AOD)
- Authorised Landfill (Indicative)
- Historic Landfill (Indicative)
- ★ Listed Building
- Built Conservation Area
- Scheduled Monument

*Note: Humber Estuary is designated as a Ramsar Site; Special Area of Conservation; Special Protection Area and Site of Special Scientific Interest



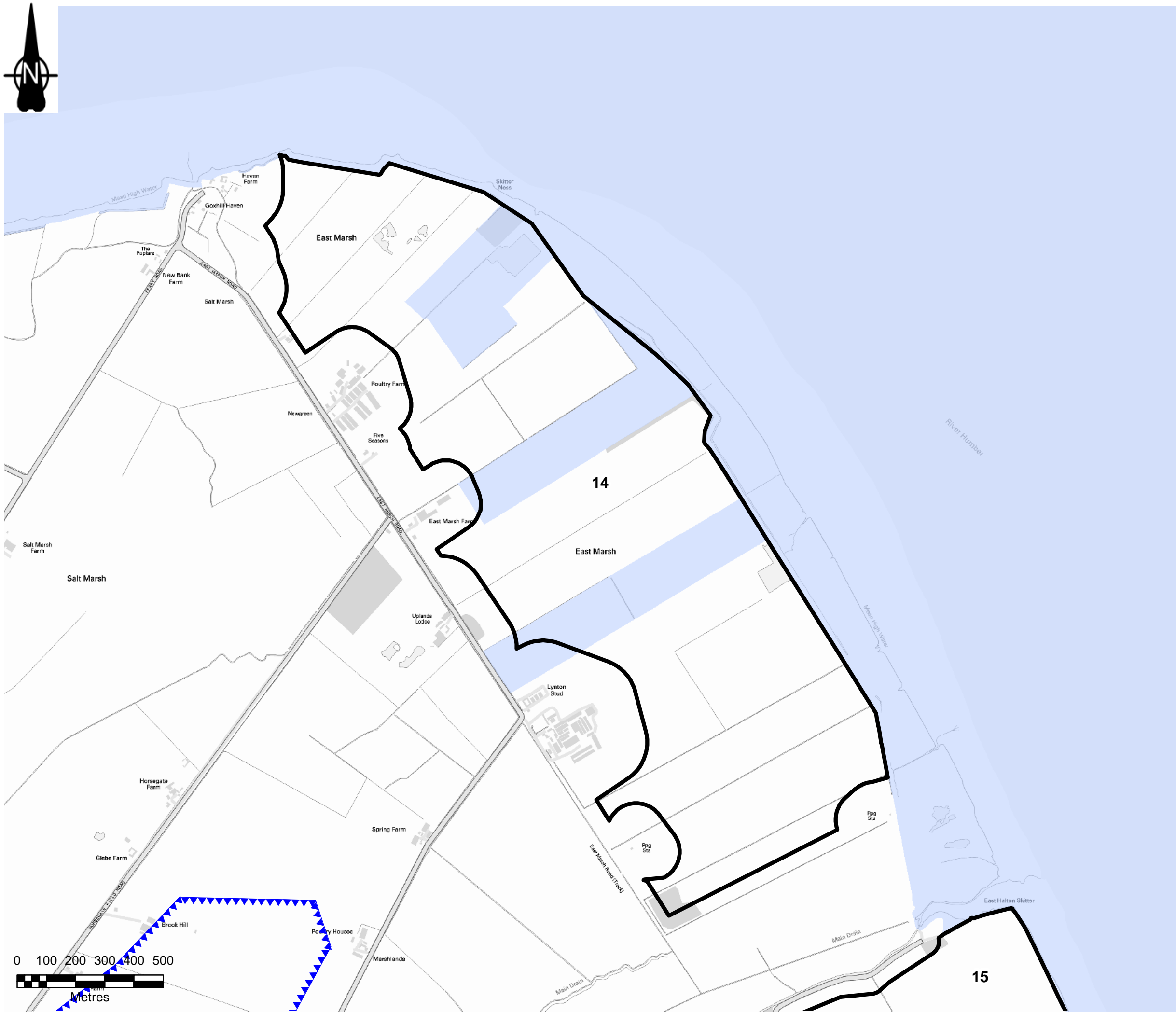
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Project:	COMPENSATION SITE SELECTION ASSESSMENT
Client:	ABLE UK Ltd
Title:	FIGURE 9: COMPENSATION SITE CONSTRAINTS : SITE 12

PRELIMINARY			
Scale:	Drawn	Checked	Approved
1:12,500 @A3	AJS	LVI	DK
Date	05/04/2011	05/04/2011	05/04/2011
Drawing No.	121726-9010-012		Revision: A

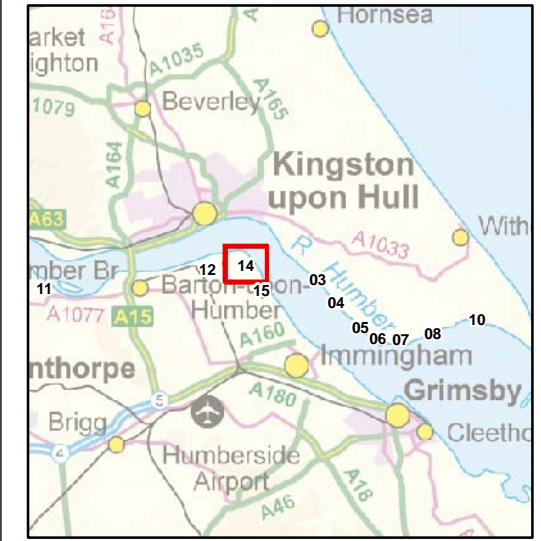


KEY

Legend

- Potential Compensation Site 14 (Area = 216 Ha)
- Humber Estuary International and National Nature Conservation Designations*
- Site of Special Scientific Interest
- Agricultural Land Classification (Grade 1)
- Boundary of High Ground (> 5m AOD)
- Authorised Landfill (Indicative)
- Historic Landfill (Indicative)
- Listed Building
- Built Conservation Area
- Scheduled Monument

*Note: Humber Estuary is designated as a Ramsar Site; Special Area of Conservation; Special Protection Area and Site of Special Scientific Interest



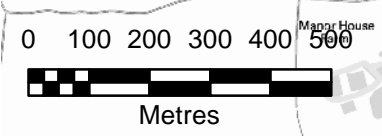
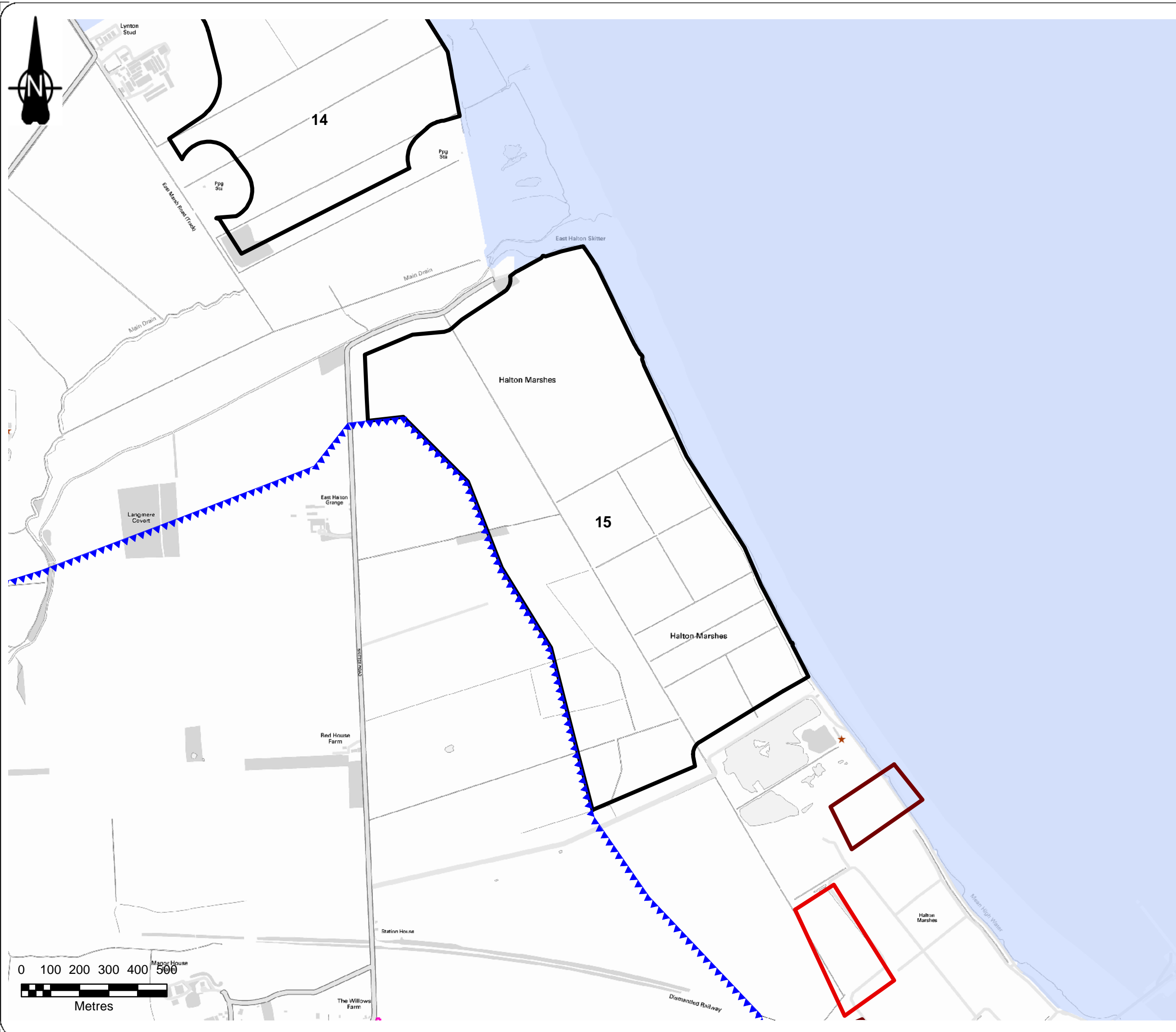
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Project:	COMPENSATION SITE SELECTION ASSESSMENT
Client:	ABLE UK Ltd
Title:	FIGURE 10: COMPENSATION SITE CONSTRAINTS : SITE 14

PRELIMINARY			
Scale:	Drawn	Checked	Approved
1:12,500 @A3	AJS	LVI	DK
Date	05/04/2011	05/04/2011	05/04/2011
Drawing No.	121726-9010-014		Revision: A

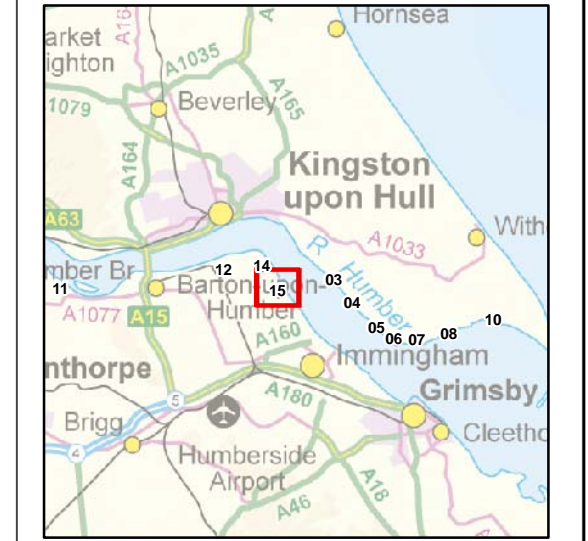


KEY

Legend

- Potential Compensation Site 15 (Area = 135 Ha)
- Humber Estuary International and National Nature Conservation Designations*
- Site of Special Scientific Interest
- Agricultural Land Classification (Grade 1)
- Boundary of High Ground (> 5m AOD)
- Authorised Landfill (Indicative)
- Historic Landfill (Indicative)
- ★ Listed Building
- Built Conservation Area
- Scheduled Monument

*Note: Humber Estuary is designated as a Ramsar Site; Special Area of Conservation; Special Protection Area and Site of Special Scientific Interest



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Rev	Date	Comments	Drw	Chk	App



Project:	COMPENSATION SITE SELECTION ASSESSMENT
Client:	ABLE UK Ltd
Title:	FIGURE 11: COMPENSATION SITE CONSTRAINTS : SITE 15

PRELIMINARY			
Scale:	Drawn	Checked	Approved
1:12,500 @A3	AJS	LVI	DK
Date	05/04/2011	05/04/2011	05/04/2011
Drawing No.	121726-9010-015		Revision: A