Archaeology South-East

ASE

Archaeological Watching Brief Report
Plum Pudding Island to Reculver Shingle Replacement
Kent, CT7 0QN

NGR: TR 24735 69210

ASE Project No: 7837
Site Code: RTP 15

ASE Report No: 2015445
OASIS ID: archaeol6-232096

By Geoff Morley

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December 2015

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Abstract

This report presents the results of an archaeological evaluation carried out by Archaeology South-East during a shingle movement exercise at Plum-Pudding Island between the 5th and 26th Oct 2015. The work was commissioned by the Environment Agency.

Two areas of peat and two, apparently pine, hitherto buried groynes were identified. None of these were impacted upon and where practical they were covered over with shingle.

CONTENTS

TABLES

FIGURES

1.0 INTRODUCTION

1.1 Site Background

1.1.1 Archaeology South-East was commissioned by the Environment Agency to undertake an archaeological watching brief during a shingle replacement scheme between Plum Pudding Island and Reculver, on the north coast of Kent, NGR: TR 24735 69210 (Figure 1).

1.2 Geology and Topography

1.2.1 The site of the works was a 4.5km length of beach front between Plum Pudding Island and Reculver. The site is a quite steeply sloping flint gravel beach which lies above the natural Quaternary Clay and Silt Tidal Flat Deposits which in turn lies above the Palaeogene Thanet Formation.

1.3 Planning Background

1.3.1 Due to the existence of a known and significant amount of archaeology on the foreshore and underneath the shingle in the area of the Northern Seawall, Simon Mason, County Archaeologist, HCGKCC, recommended that an archaeological watching brief be conducted during a shingle moving and recharging exercise at the site in order to mitigate for any potential damage that the scheme might cause.

1.4 Aims and Objectives

1.3.2 The aims and objectives of this project were to ensure that any in situ archaeology was not disturbed by the works.

1.3.3 The zones of potential archaeology included known Roman burials at the eastern end of the project, Bronze Age, Roman and medieval sites on the potential island at Coldharbour Lagoon in the middle of the old Wantsum Channel and potential remains from the Iron Age and Roman periods in close proximity to the Roman period Saxon Shore Fort of Regulbium at Reculver.

1.5 Scope of Report

1.5.1 This report details the results of the watching brief which was carried out between the 5th and 26th Oct 2015.

2.0 ARCHAEOLOGICAL BACKGROUND

2.1 Overview

2.1.1 The area between Plum Pudding Island and Reculver was, until the late medieval period, below sea level as part of the Wantsum Channel which separated the Isle of Thanet from the mainland. This channel was silted up by around the C17th. The area was highlighted for archaeological assessment because of the proximity of a number of Roman and prehistoric sites which were clustered along the line of the works, probably on the site of islands in the channel. These areas contain human remains making it even more sensitive.

2.2 Period Summaries

Prehistoric

2.2.1 The earliest sites recorded in the Kent County Council HER (KCCHER) date to the Bronze Age. This site identified by D Perkins as a Bronze Age settlement lay on a possible island in the old Wantsum Channel, now near to Coldharbour Lagoon (HER 5b).

2.2.2 In addition to this site one other undated prehistoric site lay on the line of the works. This was a cluster of 'prehistoric flints' which lay near what would probably have been the old shore line of the mainland at that time (HER 4a).

Roman

2.2.3 Unsurprisingly, Roman material was also found in this area which would have lain just outside the east gate of the Fort of Regulbium, possibly within the vicus, but maybe again on the shore line (HER 3a).

2.2.4 On the probable island in the Wantsum Channel at Coldharbour Lagoon it has been noted that human remains were found, this indicates that the Island was again in use at this time, or may have continued uninterrupted since the Bronze Age (HER 8b)

2.2.5 More Roman human remains were found the other side of the Wantsum Channel at Plum Pudding Island on Thanet, this time it is noted as a formal burial. This may have been associated with a settlement near the shoreline on the eastern edge of the Channel (HER 16b).

Migration and Early Medieval

2.2.6 Nothing from this period has been found within the works area to date. This is unusual as it is known that a monastery was formed inside the old abandoned Roman Fort in 669AD.

Medieval

2.2.7 A concentration of medieval pottery was found near this last fish weir, (HER 21b) this is may be presumed to be from the village of Gore End as are the post medieval building remains (HER 18b)

2.2.8 The medieval settlement found on the island near Coldharbour Lagoon may be a continuation of the Roman and earlier settlements (HER 9b).

Post Medieval

2.2.9 During this period the Wantsum Channel changed from a main route for shipping to a weed filled ditch, this precipitated a number of changes along the coastline. The majority of these involved the building of structures more in keeping with mainland uses such as outfall sewers (HER 4b and 1a), sluices (HER 13b and 20b) and groynes (HER 5a, 3b and 15b).

2.2.10 At this time structures were being built along this part of the coast in addition to those from the possible settlement of Gore End mentioned above (HER 18b). Further to the east of this settlement lie the remains of customs officer cottages from the C18th (HER 17b) and beyond this again lies a boathouse which was recorded on a chart in 1774 (HER 11b). Remains of two barges from this period lie off the coast near Coldharbour Lagoon, it's possible that they may have run aground on the remains of the island at this point. The barges are known as concrete barges and are wooden vessels of the post medieval or modern periods (HER 10b).

Modern

2.2.11 Archaeological remains certainly of this period are limited to WWII sites. Two sites are where pillboxes once stood (HER 2a and 12b) and the third is and anti-tank ditch recorded from Luftwaffe photos (HER 6b).

Undated

2.2.12 A series of probable fish weirs appear to have been strung out across the mouth of the Wantsum Channel. None of these fish weirs have been accurately dated, but it is probable that these belong to the MEM or medieval periods, obviously it is possible that they are earlier. The fish weirs were found at HER 6a, 1b and 2b to the west of the probable Coldharbour Lagoon settlement and another fish weir also undated was found to the east towards the old Thanet shoreline (HER 19b). It is probable that some of these fish weirs are of medieval date as 1b, at least, appears to be in the middle of one of the branches of the Wantsum Channel, possibly indicating that the channel was silting up by this time so that these could be accessed and were not in deep water.

2.2.13 Also undated on the HER were a number of coastal features such as Groynes (HER 7a). It is likely that these dated from the later medieval to post medieval period as they are more likely to be associated with a continuous coastline. Another element possibly associated with coastal defence is an undated borrow pit (HER 14b) this may be the remains of an extraction pit for an superseded coastal barrier.

2.2.14 Another element of coastal defence, but of a different kind, are the remains of a coastal battery. This was undated, but is likely to be medieval or post medieval owing to the nature of the site (HER 7b). This is on the south western side of the possible island in the Wantsum Channel, but may date to after the channel had silted up.

2.3 HER data

(Figure 1)

Figure 1 No.	HER No.	Location	Description
1b	TR 26 NW 1035	TR 24481 69428	Possible Fish Weir (Unknown Date)
2b	TR 26 NW 1036	TR 24951 69407	Possible Fish Weir (Unknown Date)
3b	TR 26 NE 1063	TR 250 694	Groynes (Post Med to Modern)
4b	TR 26 NE 1048	TR 25103 69454	Outfall Sewer (C19th -20th)
5b	TR 26 NE 139	TR 254 695	Bronze Age Settlement and Artefacts
6b	MKE97304		Anti tank Ditch (C20th)
7b	TR 26 NE 1031	TR 25252 69275	Coastal Battery (Unknown Date)
8b	TR 26 NE 161	TR 253 693	Human Remains (Roman)
9b	TR 26 NE 159	TR 253 693	Settlement (Medieval)
10b	TR 26 NE 1001		Cement Barges, Wreck (Post Med to Modern)
11b	TR 26 NE 1004	TR 2658 6921	Boat House (Post-Med C18th)
12b	TR 26 NE 1019	TR 26817 69242	Pill box (C20th)
13b	TR 26 NE 1050	TR 26948 69316	Sluice (Post-Med to Modern)
14b	TR 26 NE 1032	TR 27028 69271	Borrow Pit (Unknown Date)
15b	TR 26 NE 1064	TR 270 693	Groynes (Post Med to Modern)
16b	TR 26 NE 121	TR 2708 6934	Roman Burial.
17b	TR 26 NE 1003	TR 27080 69338	Customs Officer Cottages (Post Med C18th)
18b	TR 26 NE 1057	TR 2707 6933	Post Med Houses
19b	TR 26 NE 1009	TR 27187 69394	Fish Weir (Unknown Date)
20b	TR 26 NE 1049	TR 27207 69380	Post-Medieval to Modern Sluice
21b	TR 26 NE 133	TR 273 694	Medieval pottery
1a	TR 26 NW 1058	TR 22954 69428	Outfall Sewer (Post Med to Modern)
2a	TR 26 NW 1124	TR 2300 6950	Pillbox (C20th)
3a	TR 26 NW 1001	TR 23 69	Roman Material
4a	TR 26 NW 1020	TR 230 694	Prehistoric Flints (pre 43AD)
5a	TR 26 NW 1083	TR 232 694	Groynes (Post Med)
6a	TR 26 NW 1034	TR 23786 69472	Fish Weir (Unknown Date)
7a	TR 26 NW 1082	TR 243 694	Groynes (Unknown Date)

Table 1: Summary of HER/SMR data

3.0 ARCHAEOLOGICAL METHODOLOGY

3.1 Fieldwork Methodology

3.1.1 The agreed methodology for fieldwork involved maintaining an intermittent watching brief on the works along the coast. Monitoring would primarily focus on areas thought to be more sensitive, in general these were on the old shorelines either side of the Wantsum Channel, at Reculver and Plumpudding Island, and around the sensitive area of Coldharbour Lagoon which is the supposed location of a mid-channel island. The monitoring not only took place on areas of known archaeology, but also some visits occurred in archaeologically blank areas to ascertain whether they are 'true' absences of archaeology, and not just uninvestigated areas. The TVO team were provided with the lead archaeologist's phone number in case of unexpected discoveries, or if they had any questions during the absences.

3.1.2 The primary task at the commencement of the project was to discuss the works methodology with the TVO team agreeing the constraints. The methodology agreed upon was simple, but obviously had to be flexible to allow for changes in the methodology which arose from unexpected on site conditions. The methodology on the beach, according to archaeological priority, contained the following points:

To do no tracking on the foreshore below the base of the shingle bank, where many of the archaeological sites are located.

To track as little as possible on the upper shore (shingle and sand bank) below the storm ridge, which was to be levelled into a haul road.

To run, as far as possible, on the shingle storm banks only.

Dumping of the extracted shingle initially commenced at the eastern end of the site in denuded areas near Groyne 14 and worked backwards to the extraction area. On reaching the extraction area the works continued to the west, dumping shingle on the storm ridge on the way to form a haul road and running on this. Once the western end of the site at Reculver was reached the remaining tonnage was placed and the haul road and this extra was shaped into the final form.

3.2 Fieldwork Constraints

3.2.1 The working practice of TVO was sound and the management were very flexible in their approaches and happy to amend their working if it helped.

3.2.2 Variations to the agreed methodology occurred on a few occasions. Where this was necessary the alternatives were fully discussed and plans were agreed that enabled the project to progress but allowed the variations only in areas where the archaeology was deemed to be not at risk.

3.2.3 Where tracking outside of the initially agreed area was needed, routes were agreed upon to avoid sites of known archaeology. Potential impacts were foreseen when the dump trucks were turning, when two trucks met and one was forced to run on the shingle bank below the shingle storm ridge haul

road, and when the bulldozer had to move off the haul road to allow the dump trucks to place their material.

3.2.4 Another major variation to the original agreed methodology was that before the excavator could reach the extraction area material had to be used from the shingle storm bank itself to create ramps over the Groynes to allow access to the extraction area.

3.2.5 A suitable area which was assessed to be low risk archaeologically was chosen for this based on information on the KCCHER. The material was initially dozed up the beach to form a short haul road to allow access for the 360. This was achieved by removing only 25 -50mm at a time allowing time for the archaeologist to monitor the area. When the groyne was reached the 360 could access the area and removed more shingle and sand to form the ramp proper, again in 50mm spits. All of this was under constant monitoring. The scoops and the track marks at no time went below the imported yellow sand of the upper beach. This procedure was continued across the groynes until the extraction area was reached.

3.2.6 This methodology was repeated later when more material was required to create firmer ramps over the groynes. The requirement was for not just shingle, but sand in the mixture as the machines were sinking in the ramps created from pure shingle. The area adjacent to groyne 11 was used as it was seen to be devoid of known archaeology. Nothing aside from the top of what appeared to be a relatively recent wooden groyne was seen in this area and this was left in situ.

3.2.7 The main shingle extraction area was not known to have any archaeology present. The intermittent watching brief took in this area in the chance that unknown archaeology was present. The extraction area was composed of pure shingle and it was agreed that excavation would stop if the underlying solid geology was reached.

3.3 The Site Archive

3.3.1 The site archive is currently held at the offices of ASE and will be deposited at a suitable museum in due course. The contents of the archive are tabulated below (Table 2).

Context sheets	0
Section sheets	0
Plans sheets	0
Colour photographs	0
B&W photos	0
Digital photos	60
Context register	0
Drawing register	0
Watching brief forms	10
Trench Record forms	0

Table 2: Quantification of site paper archive

Bulk finds (quantity e.g. 1 bag, 1 box, 0.5 box 0.5 of a box)	0
Registered finds (number of)	0
Flots and environmental remains from bulk samples	0
Palaeoenvironmental specialists sample samples (e.g. columns, prepared slides)	0
Waterlogged wood	0
Wet sieved environmental remains from bulk samples	0

Table 3: Quantification of artefact and environmental samples

4.0 RESULTS

4.1 Monitoring of the Beach

4.1.1 Monitoring of the beach revealed a common stratigraphy. The top layer on the beach was composed of imported flint shingle mixed with sand. The sand in this mixture was a brighter yellow and a looser composition than that in the natural Thanet Formation below. On only three occasions was anything other than these deposits seen, the first was in a 'cliff' edge near Groyne 9 where a peat deposit was seen, this was untouched and covered over with shingle. The second were the clay elements of the Thanet Formation which were seen on the foreshore below high tide, these, also, were not impacted upon. The third was a peaty deposit which was seen at the base of the extraction zone. Work stopped when this level was reached and again, the deposit was not disturbed.

Context	Type	Interpretation	Max. Length m	Max. Width m	Deposit Thickness m
01	Layer	Imported shingle and sand	Project	Project	0.45 – 1.00+
02	Layer	Natural geology	Project	Project	-

Table 4: List of recorded contexts

4.1.2 Only two features were found during the course of the works, both were previously unexposed wooden groynes. The first was located during stripping works associated with sourcing material for creating a haul road over the Groynes. This was located just west of Groyne 11. The second was in the extraction area, only around 100m to the west of the first, and may be a part of the same system. In both cases the machine driver felt the top of the groyne as he was digging and managed to avoid any serious damage to it. In both cases the wood appeared to be a type of pine and may show that these are comparatively recent (C19th or C20th). (Figure 6)

4.1.3 No stratified finds were recovered during this project. Sea washed debris was common and included brick and peg tile amongst others. These were not seen in dense enough concentrations that they necessarily represented lost structures, but were general detritus.

5.0 DISCUSSION AND CONCLUSIONS

5.1 The general area of these works is rich in important archaeological sites, but it was through dialogue, flexibility of methodology and forward planning that nothing was seen during the shingle replacement programme. The routes of the haul roads were carefully thought out, the programme of works was well executed and the location of any intrusive activities was planned and discussed. It also helped that the depth of the shingle storm banks was far greater than had been anticipated, allowing more material to be extracted from the beach with no impact.

5.2 The works in 2015 are part of an ongoing programme with possibly another 4 seasons of work ahead. Despite the lack of findings in this season it is important to make sure that the works are as sensitively carried out in future seasons. The sensitivity of the deposits below the shingle banks was shown by a set of track marks on the foreshore which did not belong to any of the machines on site this season and must have been made in a previous work period.

5.3 If the extraction continues at a similar pace to this year, it may not be in the next season, but sooner that the location of the C18th boat house will be reached within the extraction zone, this will most certainly require an archaeological presence to ensure that it is not damaged.

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ACKNOWLEDGEMENTS

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HER Summary

HER enquiry no.						
Site code	RTP 15					
Project code	7837					
Planning reference						
Site address	Plum Pudding Island to Reculver, Kent					
District/Borough	Thanet					
NGR (12 figures)	TR 24735 69210					
Geology	Gravel					
Fieldwork type			WB			
Date of fieldwork	5th and 26th Oct 2015					
Sponsor/client	Environment Agency					
Project manager	Jon Sygrave					
Project supervisor	Geoff Morley					
Period summary						
					Post-medieval	
Project summary **(100 word max)**	A shingle movement exercise was monitored in a watching brief. Two areas of peat and two, apparently pine, hitherto buried groynes were identified. None of these were impacted upon and where practical they were covered over with shingle.					
Museum/Accession No.						

OASIS Form

OASIS ID: archaeol6-232096

Project details	
Project name	Watching brief during shingle movement between Plum Pudding Island and Reculver, Kent
Short description of the project	Archaeology South-East during a shingle movement exercise at Plum-Pudding Island between the 5th and 26th Oct 2015. The work was commissioned by the Environment Agency. Two areas of peat and two, apparently pine, hitherto buried groynes were identified. None of these were impacted upon and where practical they were covered over with shingle.
Project dates	Start: 05-10-2015 End: 26-10-2015
Previous/future work	Not known / Yes
Any associated project reference codes	RTP 15 - Sitecode
Type of project	Recording project
Site status	Heritage Coast
Current Land use	Coastland 1 - Marine
Investigation type	"Watching Brief"
Prompt	Conservation/ restoration

Project location	
Country	England
Site location	KENT THANET MINSTER Plum Pudding Island
Postcode	CT7 0QN
Study area	4 Kilometres
Site coordinates	TR 24735 69210 51.376758179368 1.22965926785 51 22 36 N 001 13 46 E Point

Project creators	
Name of Organisation	Archaeology South-East
Project brief originator	Environment Agency
Project design originator	Environment Agency

Project director/manager	JON SYGRAVE
Project supervisor	Geoff Morley
Type of sponsor/funding body	Environment Agency
Name of sponsor/funding body	Environment Agency

Project archives

Digital Archive recipient	Local Museum
Digital Archive ID	RTP 15
Digital Media available	"Images raster / digital photography","Text"
Paper Archive recipient	Local Museum
Paper Archive ID	RTP 15
Paper Media available	"Miscellaneous Material","Report"

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Watching Brief at Recilver to Plum Pudding Island, Kent
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Entered by	Dan Swift (d.swift@ucl.ac.uk)
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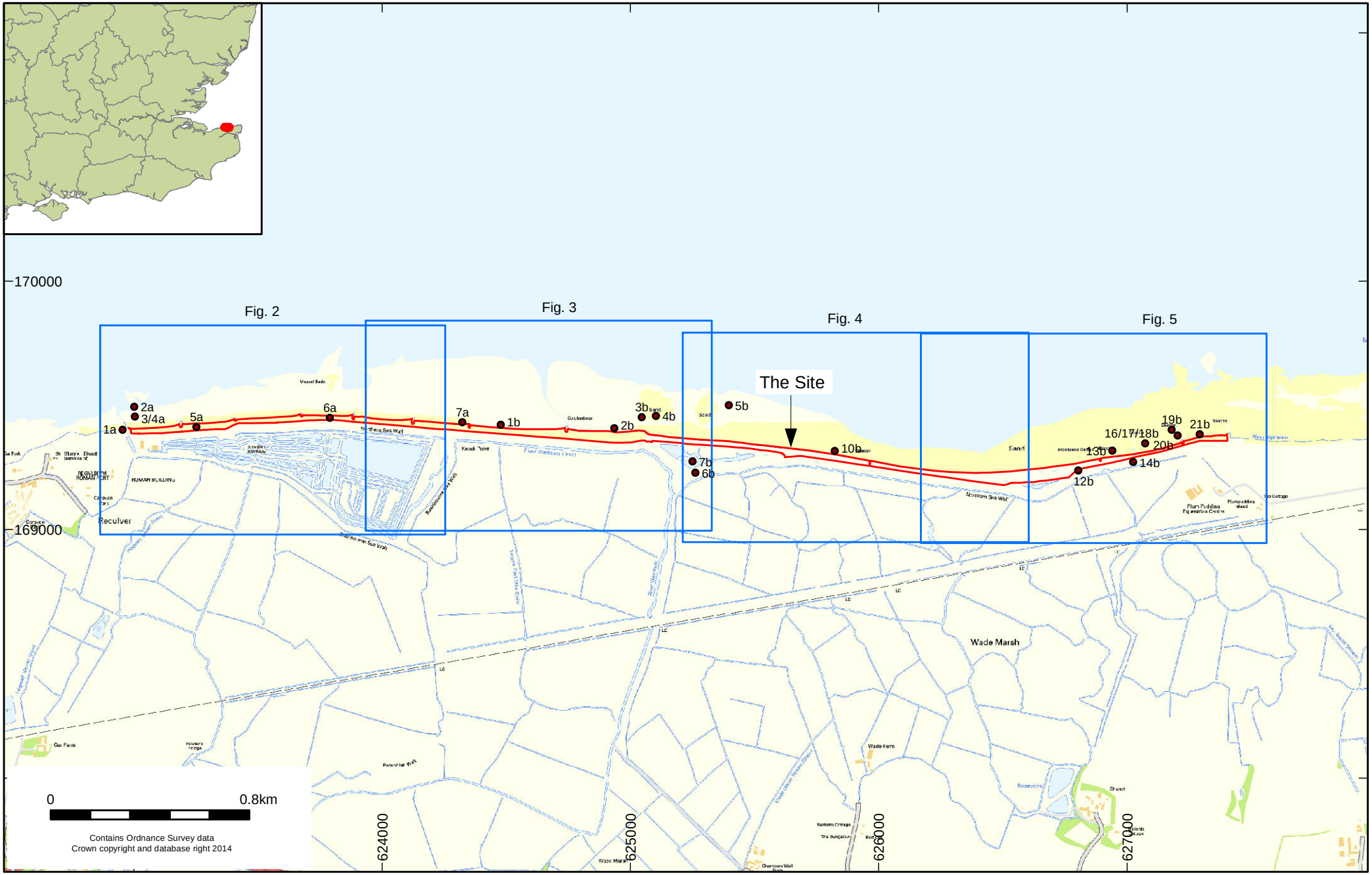
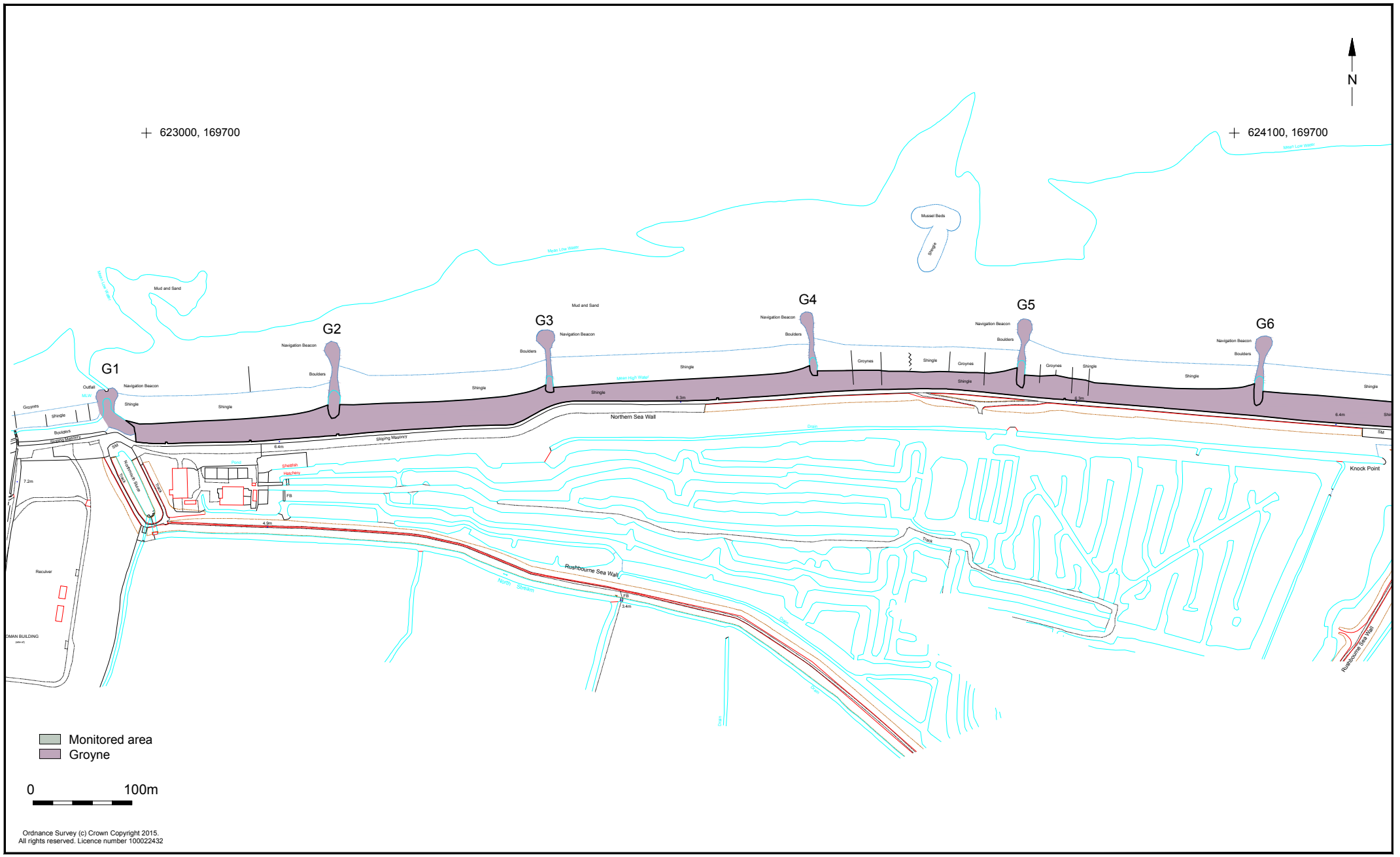


© **Archaeology South-East**		North Kent Shingle Replacement, Reculver to Plumpudding	Fig. 1
Project Ref: 7897	Dec 2015	Site location and HER data	
Report Ref: 2015445	Drawn by: JLR		



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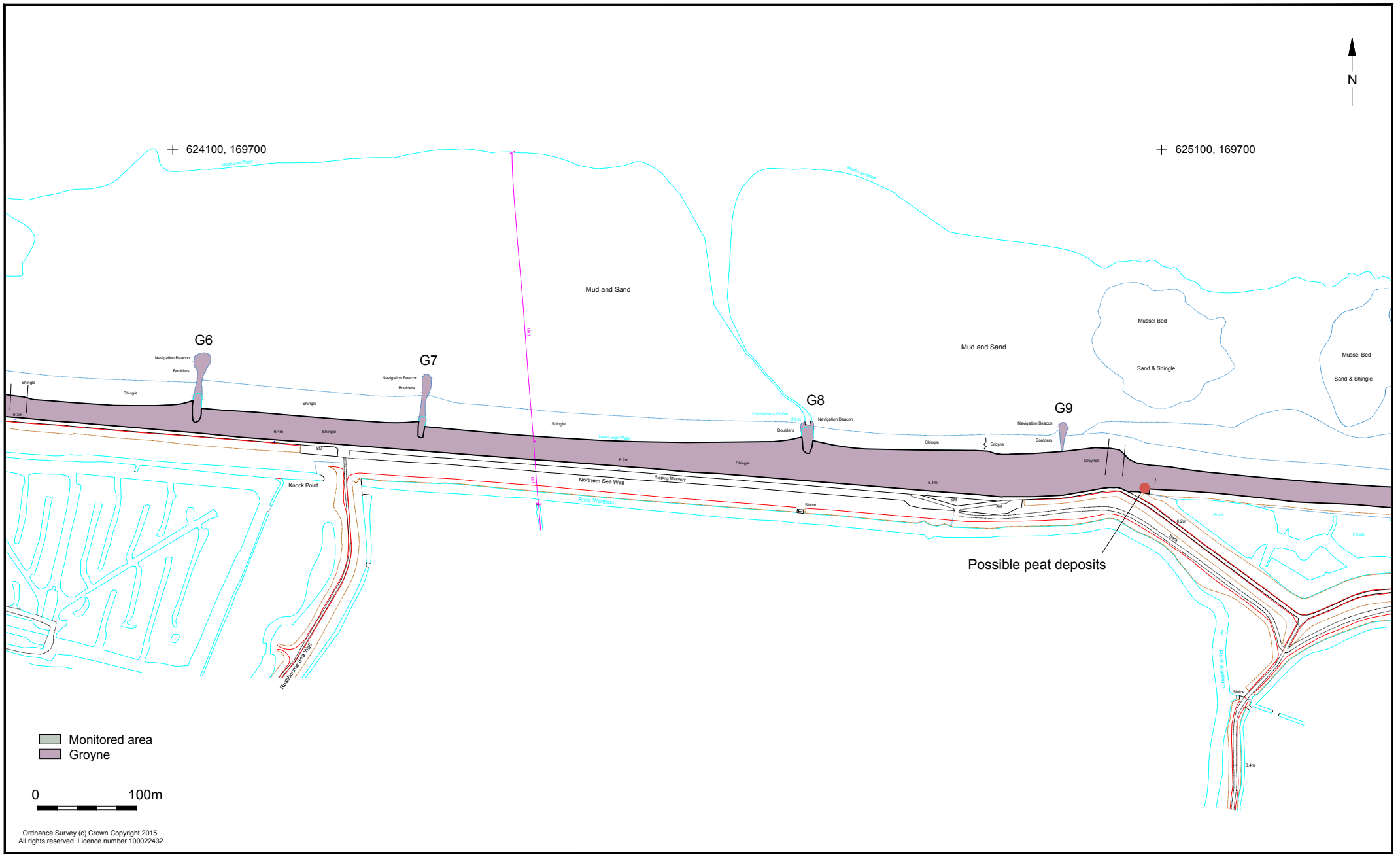
Report Ref: 2015445	Drawn by: JLR		



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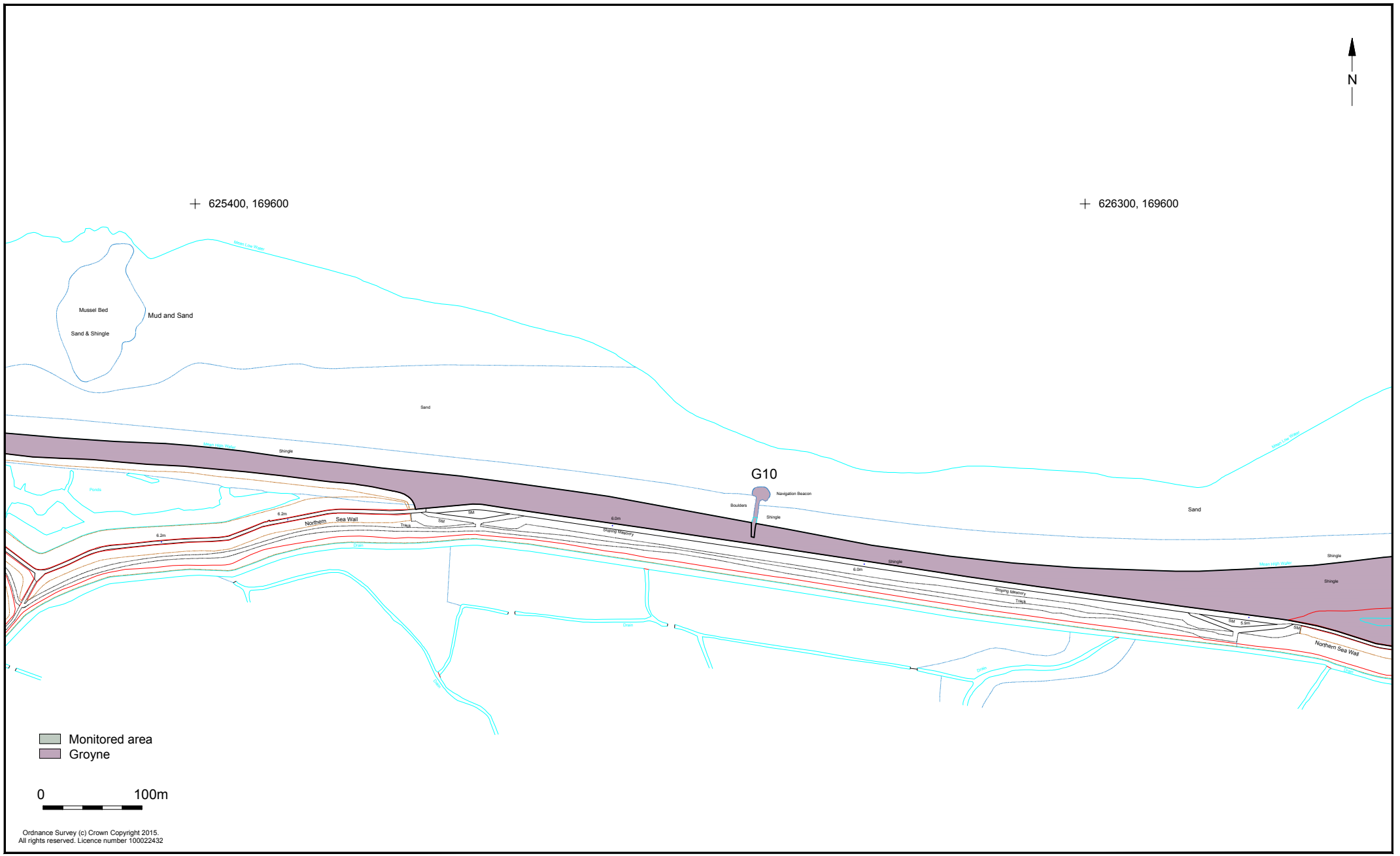
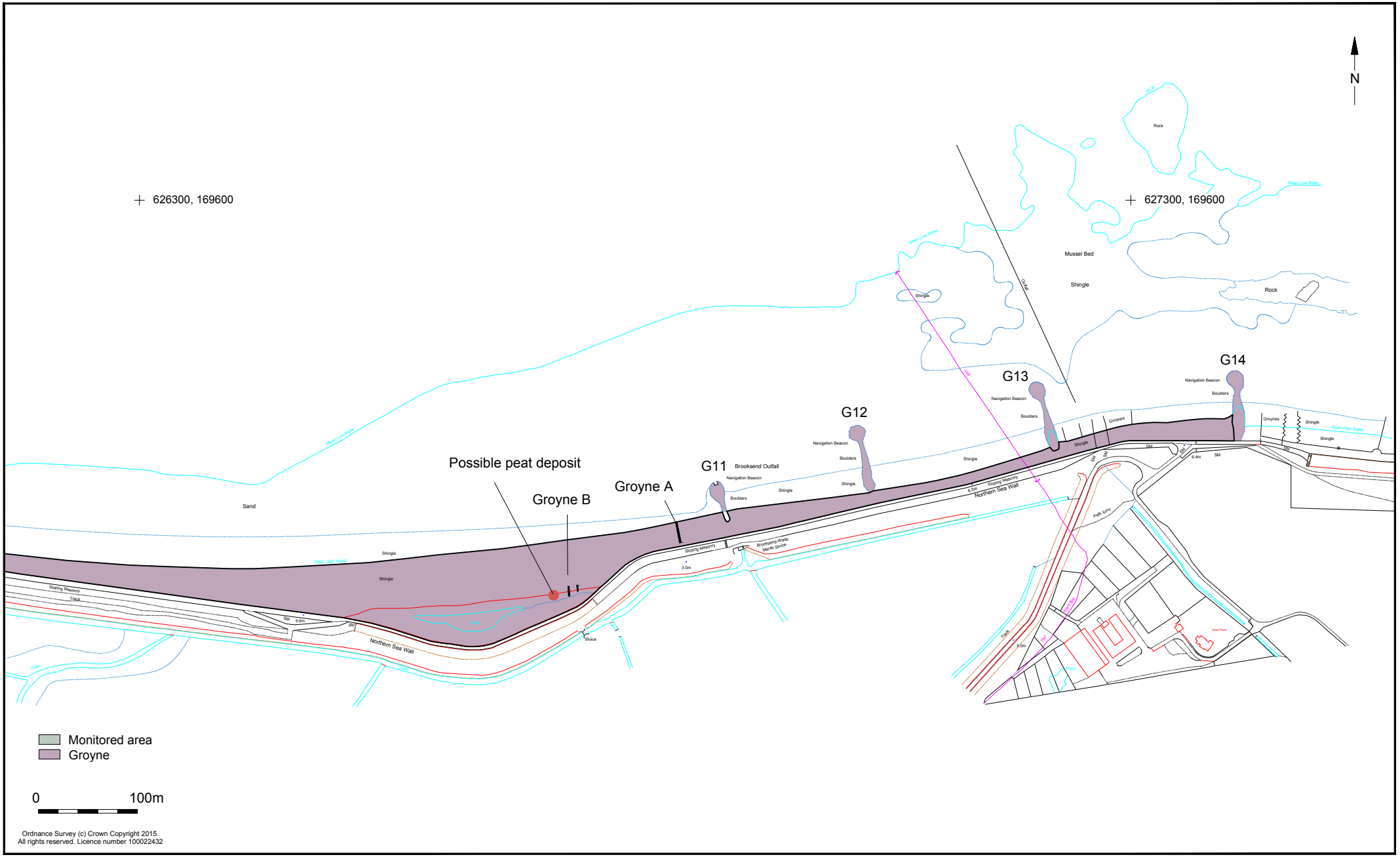
Project Ref: 7837	Dec 2015	Groynes 6-9	
Report Ref: 2015445	Drawn by: JLR		



© Archaeology South-East		North Kent Shingle Replacement, Reculver to Plumpudding	Fig. 4
Project Ref: 7837	Dec 2015	Groyne 10	
Report Ref: 2015445	Drawn by: JLR		



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Project Ref: 7837	Dec 2015	Groynes 11-14	
Report Ref: 2015445	Drawn by: JLR		

Along the length of the project, looking west

The storm ridge, looking west

Groynes found below the shingle in the extraction zone

Section through the beach deposits

Haul road created from the storm ridge

Ramping over the existing groynes to access the end of the project at Reculver

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