


<b>Survey Unit</b>	4bSU02				 CANTERBURY CITY COUNCIL
<b>Location</b>	Broadstairs				
<b>SMP Policy</b>	Hold the Line				
<b>Author</b>	RT/ HD	<b>Authorised by</b>	CF	<b>Published</b>	08/06/2018

This survey unit consists of a sand beach with a sand and rock platform foreshore. There are a series of bays backed by a chalk cliff, which is intermittently protected by a concrete sea wall. There are no groynes in this survey unit.

## 1. Introduction

<b>Date of survey</b>	09/05/2018
<b>Reason for survey</b>	Called by Thanet District Council following storm surge on 29/04/2018 and 30/04/2018 of (+0.12mOD on 29/04/2018) & (+0.56mOD on 30/04/2018) coincided with a high spring tide causing beach changes at Viking Bay.
<b>Area surveyed</b>	4b00024 to 4b00032
<b>Flood warnings</b>	No
<b>Summary of beach operations</b>	N/A
<b>Areas flooded</b>	None

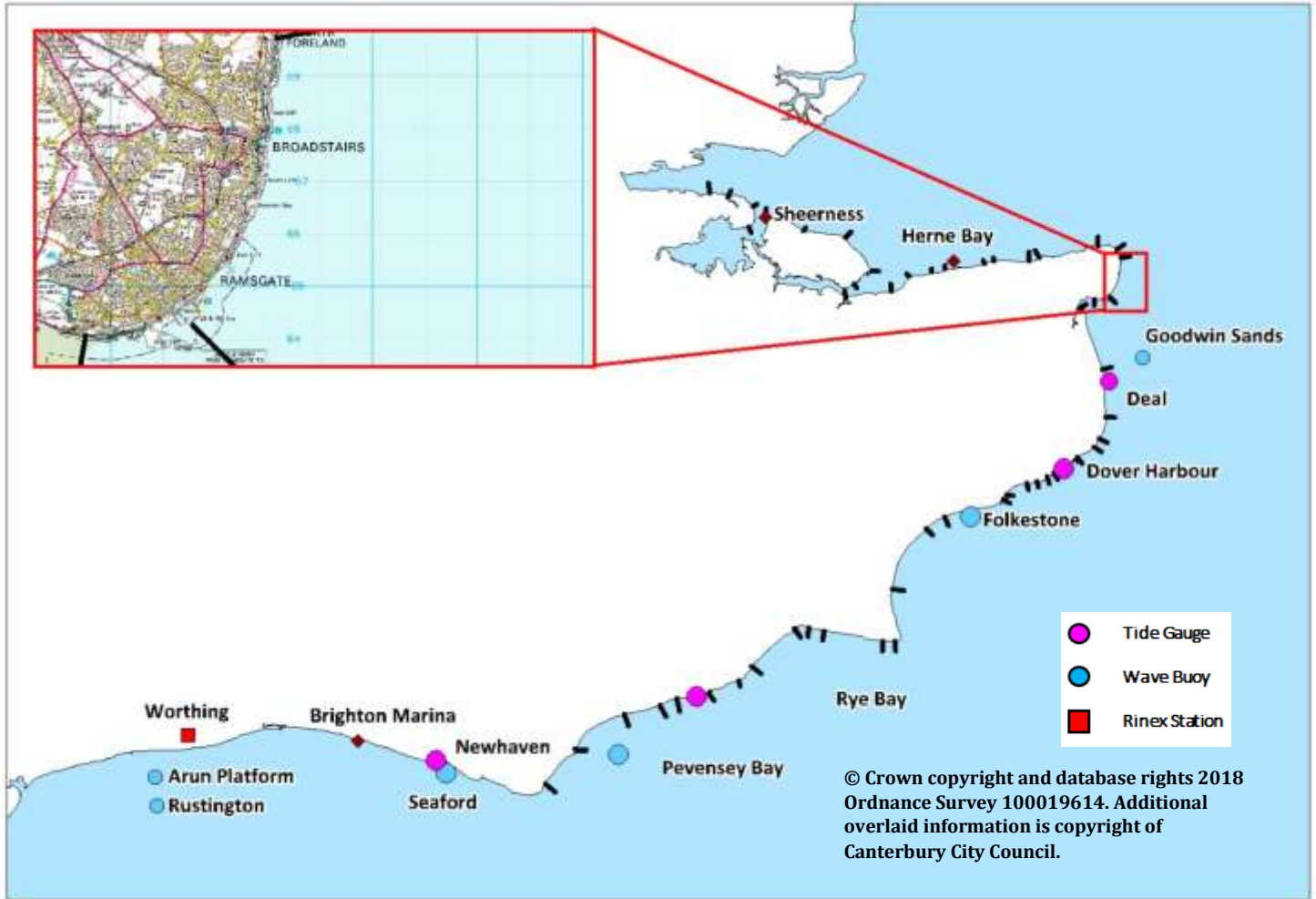
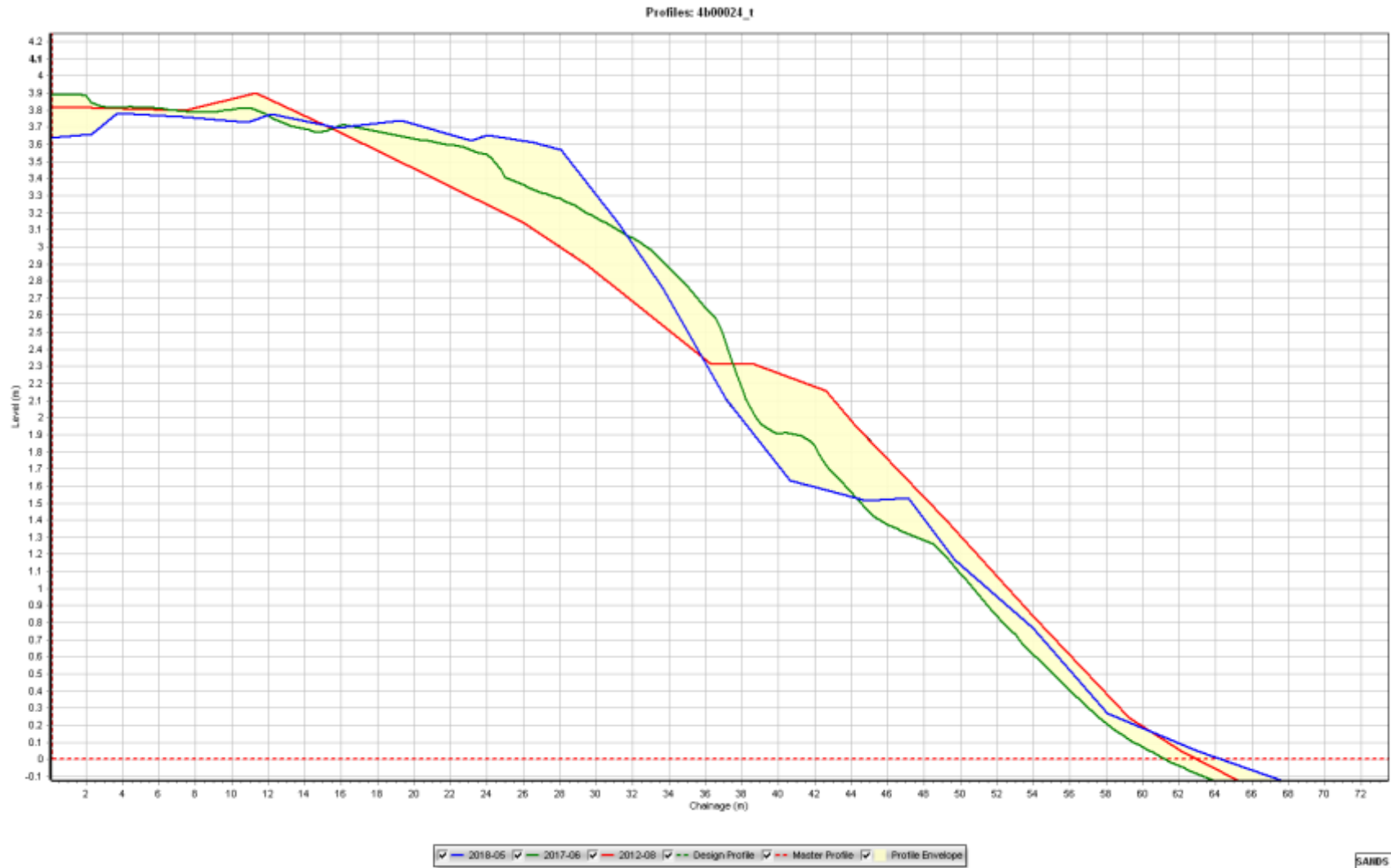
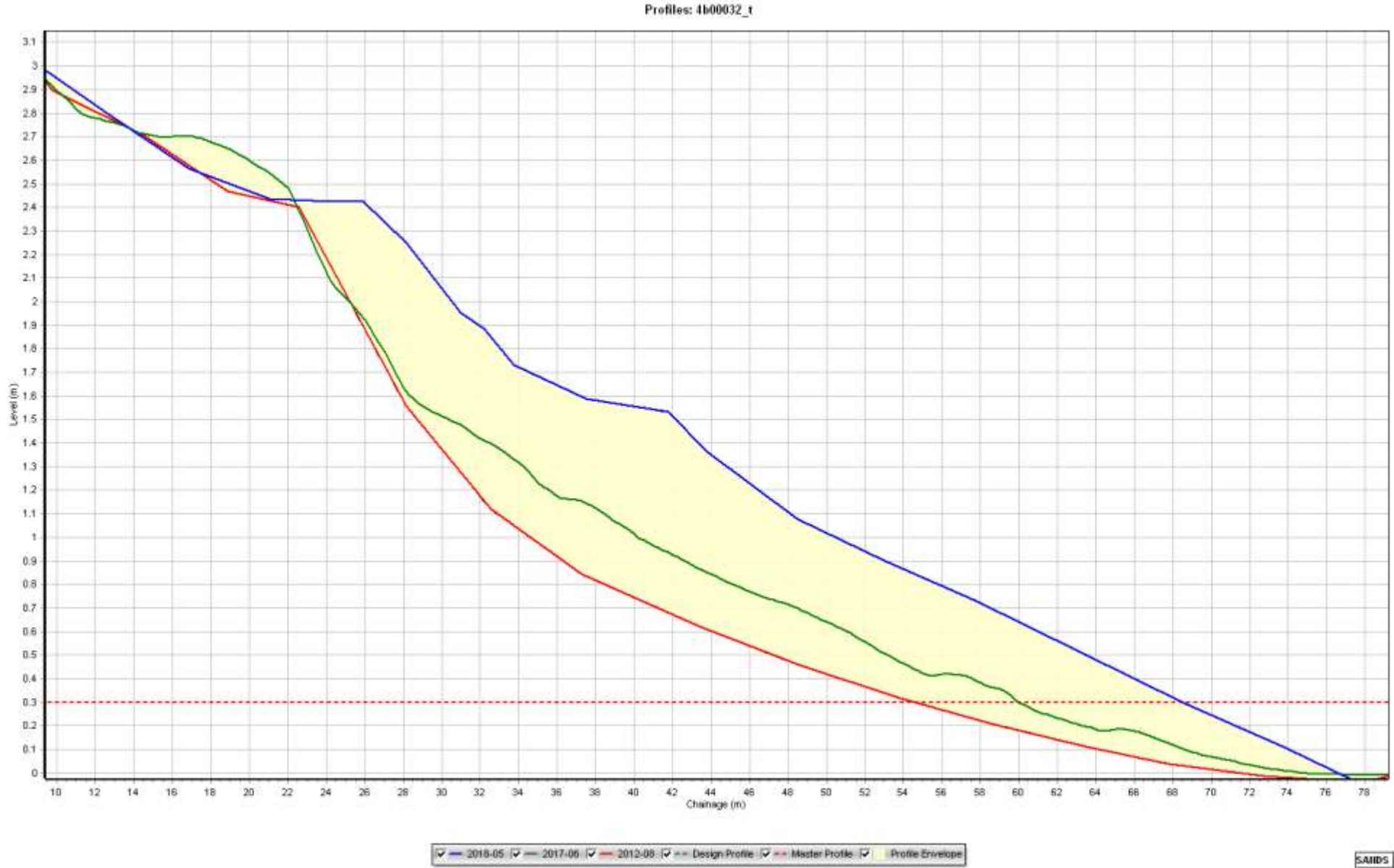


Figure 1 – Map of Tide and Wave Gauges

## 2. Survey Results

### 2.1 Post Storm Profiles





## 2.2 General Observations

General observations	
Berm reduction	The berm reduced by approx. 5m in central profiles of Viking Bay. Scour of sand on northern profiles, namely 4b00024 and 4b00024A. The surveyed profiles are at their lowest CSAs recorded since 2003. Profile 4b00032 has seen a large amount of accretion, with up to 1m change in sediment elevation between June 2017 and May 2018.
Damage assessment	No damage recorded

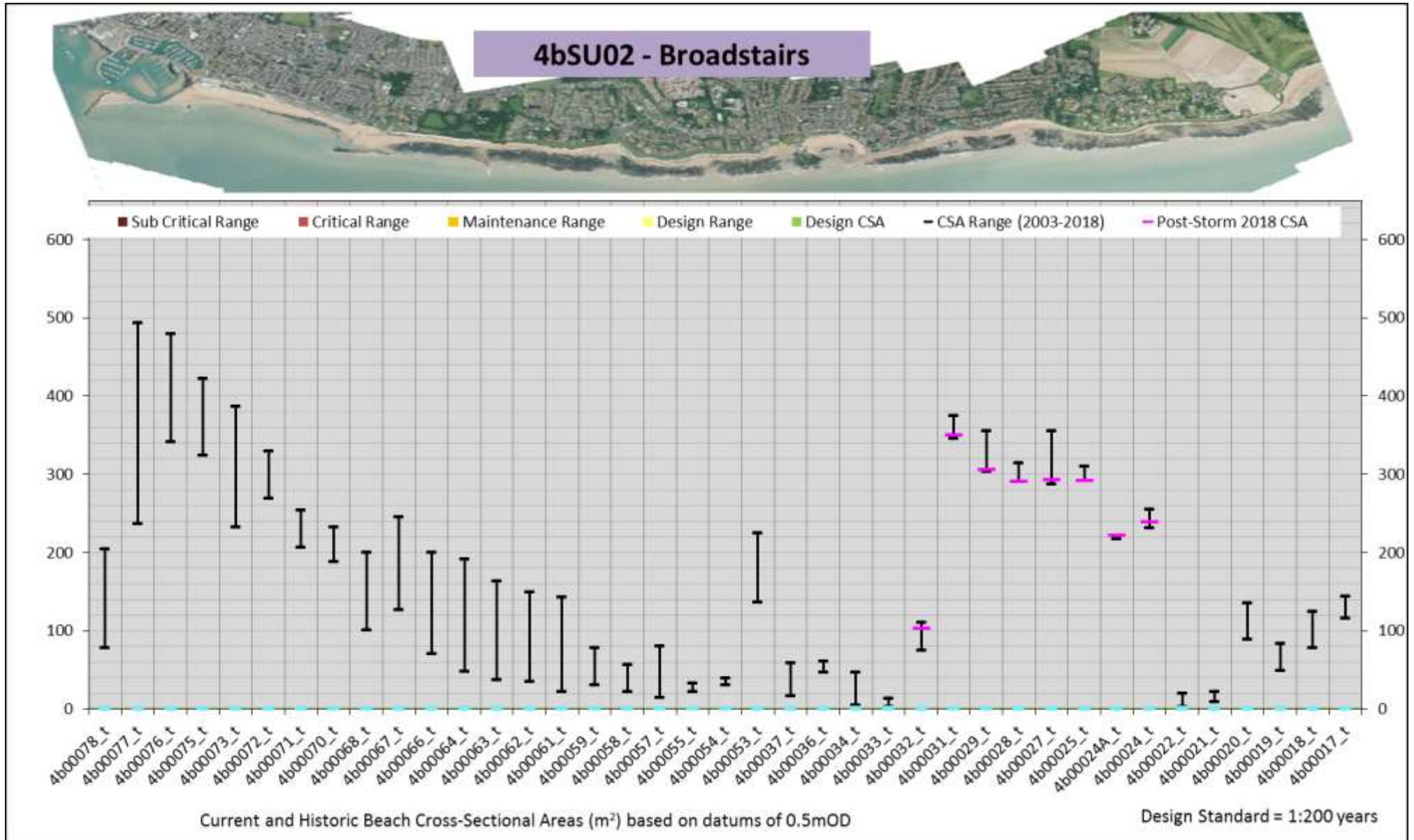


Photo 1- Profile 4b00029



Photo 2- Profile 4b00032

### 2.3 Whole Beach CSA

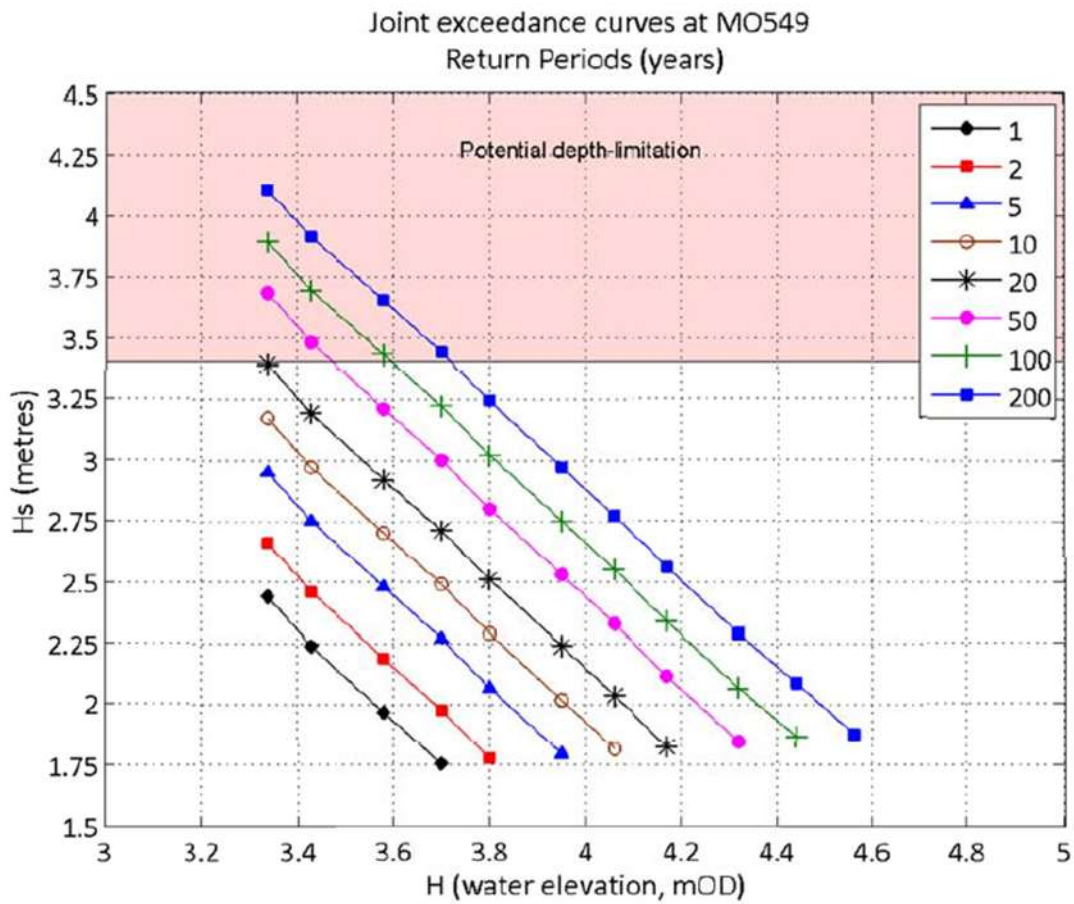


### 3. Hydrodynamics

Highest storms at Goodwin Sands	
Date	Significant Wave height (m)
13-Dec-2011	3.16
03-Jan-2012	3.00
20-Nov-2016	3.13
15-Jan-2015	2.98
07-Feb-2016	2.92
11-Nov-2010	2.81
28-Mar-2016	2.8
03-Nov-2014	2.75
08-Jan-2011	2.63
24-Dec-2010	2.6



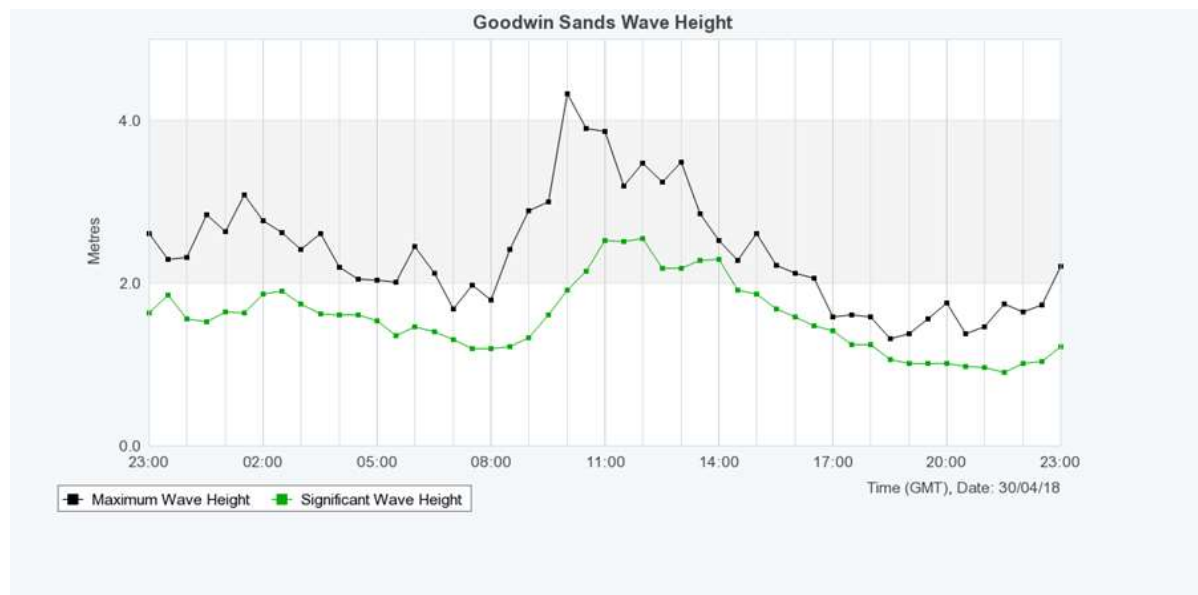
### 3.1 Joint Return Periods



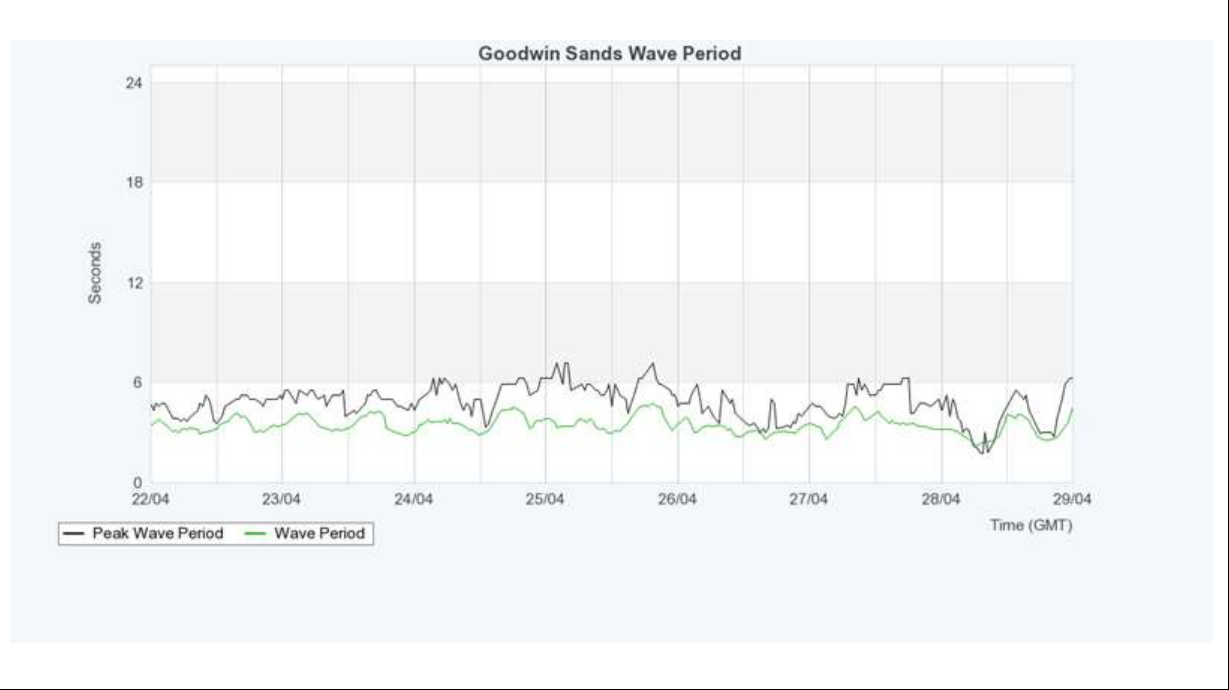
	Date/Time	Tidal elevation (mOD)	Hs (m)	Hmax (m)
At time of maximum water elevation	29/04/2018/23:00	2.88	1.63	2.61
At time of highest wave height	29/04/2018/22:30	2.75	1.56	2.71
At time of maximum water elevation	30/04/2018/11:30	3.1	2.51	3.19
At time of highest wave height	30/04/2018/10:00	2.22	1.92	4.33

### 3.2 Wave, tide and weather conditions

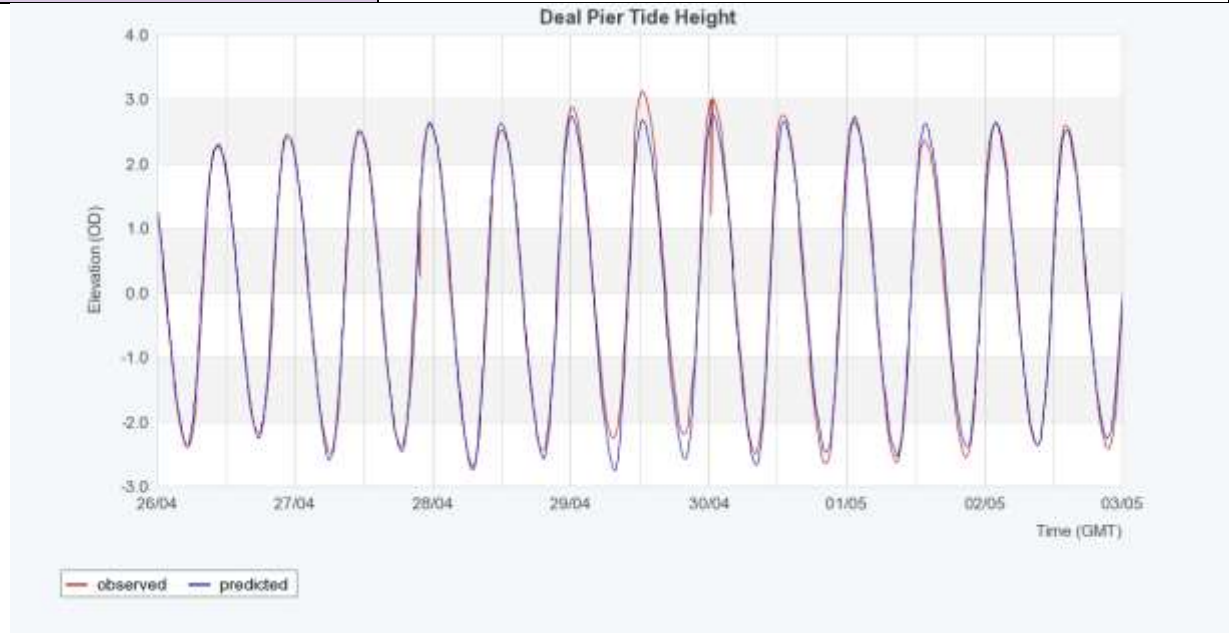
<b>Nearest wave recorder</b>	Goodwin Sands
<b>Wave height</b>	Maximum wave height reached +2.9mOD on 29/04/2018. Significant wave height reached +1.7mOD Maximum wave height reached +4.2mOD on 30/04/2018. Significant wave height reached +1.9mOD



<b>Wave period</b>	<p>The peak wave period reached 13.9 seconds on 29/04/2018 at 23:00.</p> <p>The significant wave period reached 6.1 seconds.</p> <p>The peak wave period reached 21.3 seconds at 20:30 on 30/04/2018.</p> <p>The significant wave period reached 6.8 seconds.</p>
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<b>Nearest tide gauge</b>	Deal Pier
<b>Tidal range</b>	<p>Measured at +2.88mOD on 29/04/2018.</p> <p>Measured at +3.1mOD on 30/04/2018.</p>



<b>Nearest Met Station</b>	Deal Pier
<b>Wind Speed and direction</b>	<p>The wind speed reached 24m/s and the gust speed reached 27m/s on 11/01/2017.</p> <p>The wind direction was North North Easterly on 11/01/2017.</p>

