Southeast Regional Coastal Monitoring Programme

ANNUAL SURVEY REPORT 2015

Selsey Bill to Southampton Water

AR 115

September 2015
Cover photograph: Cakeham Estate, C. Wilkinson
1. **Introduction**

Analysis presented in this Annual Report provides an overview of beach changes and wave and tidal measurements since the commencement of the Southeast Regional Coastal Monitoring Programme. The first beach surveys took place during the summer of 2003 and changes are reported until spring 2015.

Data are presented at several levels:

- Process cell summary of percentage and actual profile change from 2014 to 2015
- Process cell summary of percentage and actual profile change from 2003 to 2015
- Detailed beach profile change from 2014 to 2015
- Detailed beach profile change from 2003 to 2015
- Difference plots for Beach Management Plan sites from 2014 to 2015
- Difference plots for Beach Management Plan sites from 2008 to 2015
- Profile envelope graphs (on CD)
- Trend analysis of beach cross-sectional area (on CD)

The process cell summary maps provide an at-a-glance summary of the changes during the past year and over the longer term. It is recommended that the user should use the maps to identify areas of interest and then examine the individual profile plots and trends. Colour-coded lines highlight areas of maximum change and identify profiles which might need closer examination.

2. **Hydrodynamic data**

   a. **Waves**

   A directional Waverider buoy was deployed off Hayling Island in July 2003 and in Bracklesham Bay in August 2008. The interim wave reports are given at Annex A.

   b. **Tides**

   There are no Regional Monitoring Programme tide gauges in this area.

3. **Survey data – topographic**

Over the past year the East Solent has remained relatively stable showing only isolated pockets of change along the more dynamic and exposed sections of shoreline. In the longer term however, areas of erosion and accretion become more evident. Erosion is most notable along the Chichester frontage, along the Hayling Billy Trail and across the Gosport frontage, whilst accretion can be seen along many of the units east of Portsmouth Harbour entrance. The heavily-managed Hayling frontage shows both positive and negative change which can be attributed to the ongoing recycling and replenishment operations that are undertaken here annually. Since the managed realignment scheme at Medmerry in 2013, significant change has occurred across the unit.

Recycling events have taken place at various locations along the East Solent coastline since the monitoring programme began in 2003. These include Portsmouth, Hayling Island, Medmerry and Selsey. For the purposes of the Annual Report the recycling information is shown for areas baselined annually (5aSU06 & 5aSU07) alongside the difference plots for these sites. All deposition and extraction was carried out on the beach, with lines drawn offshore for clarity within the report. The information isn’t shown for areas which are baselined on a five yearly basis, however the volumes and location of the recycling is available on request from CCO. Full
recycling information will be provided in the next five yearly Annual Report when all locations are baselined again.

Dates of the surveys are given in Annex E and the detailed topographic survey report is given in Annex F.

Annex A  Bracklesham Bay and Hayling Island Interim Wave Reports 2014/2015
Annex B  N/A
Annex C  N/A
Annex D  N/A
Annex E  High Level Report – field data collection (SCOPAC)
Annex F  Topographic Survey Report for Selsey Bill to Southampton Water
Annex G  N/A

Explanatory Notes
### Bracklesham Bay Directional Waverider Buoy

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Buoy in situ in Bracklesham Bay. Photo courtesy of Fugro EMU Limited

#### Summary

The storms during this reporting period from July 2014 to June 2015 were of typical magnitude and frequency for the site. The largest significant wave height measured was 3.66m on 15 January 2015 and occurred close to High Water on neap tides. The second largest storm on 12 December 2014 was of similar magnitude but occurred at a 35cm higher water level due to larger tides. Most of March 2015 was calm until the last few days when two storms occurred.

#### Data Quality

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<th>Recovery rate (%)</th>
<th>Sample interval</th>
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#### Monthly Averages – 2014/15

All times are GMT

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<th>( T_p ) (s)</th>
<th>( T_z ) (s)</th>
<th>Dir. (°)</th>
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Storm Analysis

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<th>Tidal range (m)</th>
<th>Tidal surge* (m)</th>
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Distribution plots

The distribution of wave parameters are shown in the accompanying graphs of:

- Wave rose (percentage of occurrence of Direction vs. $H_s$) for all measured data
- Percentage of occurrence of $H_s$, $T_p$, $T_z$ and Direction from July 2014 to June 2015
- Monthly time series of $H_s$ (red line is 3.0 m storm threshold)
- Incidence of storms during the reporting period and for all previous years. Storm events are defined using the Peaks-over-Threshold method. The highest $H_s$ of each storm event is shown

General

The buoy was first deployed on 22 August 2008, at which time the magnetic declination at the site was 2.1° west, changing by 0.14° east per year.

Acknowledgements

The shore station is kindly hosted by Fugro EMU Limited. Tidal data were supplied by the British Oceanographic Data Centre as part of the function of the National Tidal and Sea Level Facility, hosted by the Proudman Oceanographic Laboratory and funded by DEFRA and the Natural Environment Research Council.

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* Tidal information is obtained from the nearest recording tide gauge (the National Network gauge at Portsmouth). The surge shown is the residual at the time of the highest $H_s$. The maximum tidal surge is the largest surge during the storm event.
Hayling Island Directional Waverider Buoy

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Longitude: 00° 57.424' W |

**Instrument type**

- Datawell
- Directional Waverider Mk III

**Water depth**

- ~10m CD

Buoy in situ off Hayling Island. Photo courtesy of Fugro EMU Limited

**Location of buoy (Google mapping)**

**Summary**

During this reporting period from July 2014 to June 2015, four distinct storms exceeded the 2.9m storm threshold for the site spanning autumn and winter. The largest storm reached 3.37m on 15 January 2015 with a large surge of around 0.8m, but the peak of the storm extended over low-mid tide. The third largest storm reached 2.99m but closer to high tide at a water level 1.26m higher than the earlier storms.

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General

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Southeast Regional Coastal Monitoring Programme - Phase III - Channel Coastal Observatory Topographic Surveys

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Notes:
1. Access restricted during Olympics, re-scheduled to spring 2013
2. To be done by lidar, February 2013
3. Re-scheduled due to nesting birds
4. Re-scheduled due to beach works in March 2014
5. Delayed due to access problems
6. No longer surveyed (no beach and difficult access, as approved by P Marsden)
7. Delayed by weather
Annex F – Topographic Survey Report for the East Solent

1. Introduction

Analysis has been conducted for those sites where a minimum of four surveys have been recorded. In general, changes are measured relative to the Mean Low Water Springs level, although this is not been possible for much of the historic data at many of the sites. Where possible, longer-term records from earlier programmes are also presented in the profile analysis, although historical data was often collected using significantly different survey techniques, specifications and even datums. Continuity of record has been attempted but is not always possible.

The profile envelope, along with the two most recent profiles at each profile location, are shown superimposed and relative to a Master Profile (on the accompanying CD). The Master Profile provides the basis for calculation of beach cross-section area changes. Where possible, identical depth boundaries have been used for all profiles within a Management Unit. However, even where this has not been possible, direct comparisons can be made for the beach cross sectional area at one profile over time, since the master profile is constant for each profile (Figure 1). In some instances, raising the lower depth of the Master Profile may reduce the overall cross sectional area of the profile. This may cause small changes in the beach profile to have a large impact on the percentage change. This effect has been taken into account in the analysis of change to beach profiles. The trend in cross-sectional area (CSA) is presented on the accompanying CD as a graph for each profile (Figure 2).

![Figure 1: Example Master Profile with CSA calculated from the surveyed GPS profile](image-url)
2. **Condition of process sub-cell**
The Beach Change Summary maps contain an at-a-glance condition of the whole of the East Solent with profile lines representing accretion, no change or erosion for each Management Unit. Whilst the maps displaying actual change in m$^2$ highlight the regions of erosion or accretion, it must be appreciated that given the long nature of many of the profile lines in the East Solent, large changes in actual volume may still only translate into small percentage changes in cross-sectional area. It is the opposite case for the extremely short profiles.

3. **Condition of individual Management Units**
Changes within each management unit are summarised on two maps: Beach change map (Spring to Spring) and beach change map (Baseline to Spring). Beach Change maps show the location of each beach profile, superimposed on 2013 aerial photography (note that the line may have been extended for clarity). Where possible, the annual change in cross-sectional area has been calculated from spring 2014 to spring 2015 and from baseline 2003/04/05 to spring 2015.
5aSU01: Selsey to Bracklesham Bay
**May 2014 to May 2015**
Following the engineering works undertaken within this unit there is still a fair amount of change occurring, however this change is smaller than previous years. With the exception of profile 5a00064, all profiles show change of less than 15%. Profile 5a00064, to the west of the breach, has eroded between 15 and 30%.

**Baseline May 2008 to May 2015**
Over the longer term, a general pattern of accretion in the east and erosion in the west can be seen.

5aSU02: Bracklesham Bay to Cakeham Estate
**April 2014 to May 2015**
Due to the winter replenishment at this location, the majority of the profiles have accreted over the past year by up to 15%, whereas previous years have largely shown erosion across the unit.

**Baseline June 2004 to May 2015**
In the longer term, the majority of profiles show erosion of up to 15%, with profiles in the centre of the unit accreting between 5-15%.

5aSU03: Cakeham Estate to East Head
**April 2014 to April 2015**
Across the unit, the majority of profiles have eroded over the past year. Profile 5a00189 has significantly eroded, losing 185m$^2$ of sediment, whilst profile 5a00194 has gained 208m$^2$ of sediment. Slight erosion is recorded around East Head unlike last year when profiles 5a00233 and 5a00235 accreted.

**Baseline July 2007 to April 2014**
Over the longer period, the majority of profiles have eroded with the most significant change at the east of the survey unit. There are patches of accretion which increase along the south of the spit.

**Difference Model April 2014 to April 2015**
There are patches of erosion and accretion across the unit.

**Difference Model Baseline Spring 2008 to April 2015**
Over the longer term, erosion and accretion are patchy, with more accretion further west.

5aSU06: Black Point to Inn on the Beach
**April 2014 to April 2015**
Slight accretion is recorded along the eastern coast of Hayling Island with the exception of profile 5a00260 which eroded. Around Sandy Point, profiles 5a00266a and 5a00267a have eroded between 15-30% with slight erosion recorded until profile 5a00288a. Change is then minor with higher levels of erosion at the western end of the unit.

**Baseline July 2006 to April 2015**
Over a longer time scale the annual recycling operations which take place along the frontage will account for the majority of change. Significant natural accretion is recorded around the Sailing Club with slight accretion along the eastern coast of Hayling Island. Around Sandy Point and towards the west of the survey unit accretion levels are higher with slight erosion between profiles 5a00092 and 5a00306.

**Difference Model Spring 2014 to Spring 2015**
Across the unit there are patches of erosion and accretion with erosion greatest around Sandy Point.

**Difference Model Baseline Spring 2008 to Spring 2015**
Over the longer term, erosion and accretion are patchy, with a buildup of sediment around the Sailing Club.
5aSU07: Inn on the Beach to Langstone Harbour
**April 2014 to April 2015**
Over the short term this unit generally shows a trend of slight erosion. Over the widest section of beach, between profiles 5a00381 and 5a00386, accretion of up to 30% is recorded.
**Baseline September 2006 to April 2015**
The longer term trend for this unit shows accretion with erosion along profiles 5a00406 and 5a00409 at the far west of the unit.
**Difference Model Spring 2014 to Spring 2015**
Over the past year, erosion and accretion were patchy, with a buildup of sediment around Gunner Point.
**Difference Model Baseline Spring 2008 to Spring 2015**
Over the longer term the unit has largely accreted, with patches of erosion and accretion towards the west.

5aSU08: Hayling Billy Trail
**June 2013 to June 2014**
A mixture of minor erosion or accretion is observed across the unit.
**Baseline March 2007 to June 2014**
Over the longer time period there is a trend of significant erosion. The majority of profiles have lost between 15-30% CSA since March 2007.

5aSU10: Hayling Ferry to Southsea Common
**April 2014 to April 2015**
With the exception of profiles 5a00437 and 5a00512, which show a change in CSA of between 15 and 30%, profiles have shown minor change over the past year.
**Baseline June 2007 to April 2015**
Significant erosion can be observed along the profiles around Fort Cumberland, with profiles here undergoing at least a 15% loss in cross sectional area since 2007. Across the rest of the unit the beach remains stable or shows moderate accretion.

5aSU11: Southsea Common to Old Portsmouth Harbour
**April 2014 to April 2015**
Minor change has occurred across the unit, with profiles 5a00544 and 5a00550 showing 5-15% increase in cross-sectional area.
**Baseline May 2007 to April 2015**
Similarly, over the longer period, profiles show little change with the exception of profiles 5a00544 and 5a00550 which show a 5-15% increase in CSA.

5bSU02: Fort Monckton to Browndown
**May 2014 to May 2015**
The majority of profiles have remained stable over the past year with patchy accretion along the unit and minor erosion along profile 5b00091. By Fort Gilkicker, profile 5b00073 has accreted between 15-30%.
**Baseline April/June 2003/August 2007 to May 2015**
In the longer term, change across the profiles is varied. The majority of profiles within this unit have remained stable, whilst others have eroded or accreted between 5-15%. Profile 5b00129, west of Alver Outfall, and profile 5b00154 have accreted between 15-30%; the biggest long term changes in this unit.

5bSU03: Browndown to Lee-on-Solent Airfield
**January 2014 to February 2015**
Over the past year, slight erosion has occurred in the east with minor changes towards the west of the unit, with the exception of profile 5a00212 which has eroded between 15-30%.
**Baseline June 2003 to February 2015**
Over the longer time period the central section of the unit shows moderate erosion. To the east and western ends of the unit there is a trend of accretion and stability.

**Difference Model Spring 2014 to Spring 2015**
Areas of erosion and accretion are patchy across the unit.

**Difference Model Baseline Spring 2008 to Spring 2015**
In the longer term, erosion is greatest in the centre of the unit, with patchy changes elsewhere.

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**5bSU04: Lee-on-Solent Air Field to Titchfield Haven**
**January 2014 to February 2015**
Over the past year this unit has remained stable, with slight accretion recorded along profiles 5b00246 and 5b00251 around the entrance of the sailing club.

**Baseline October 2005 to February 2015**
Over the longer time period, the majority of profiles have remained stable. Minor accretion is recorded along profiles 5b00244 and 5b00246, with erosion further west.

---

**5bSU05: Titchfield Haven to River Hamble**
**August 2014 to February 2015**
The majority of profiles in this unit are stable or show small quantities of accretion. The exception is profile 5b00356 which shows minor erosion.

**Baseline March 2003 to February 2015**
Since 2003, this unit has been largely stable. Slight erosion across the centre of the unit is apparent with a pattern of accretion in the west.

---

**5cSU02: Hamble Common Point to Hamble Oil Terminal**
**April 2014 to May 2015**
Both profiles in this unit have been stable over the past year showing less than 5% change in cross sectional area.

**Baseline April 2005 to May 2015**
Over a 10 year period, profile 5c00021 has eroded between 5-15%, whilst profile 5c00012 has remained stable.

---

**5cSU03: Hamble Oil Terminal to Ensign Industrial Park**
**April 2014 to May 2015**
This unit has remained stable over the past year.

**Baseline April 2005 to May 2015**
In the longer term, profile 5c00026 has slightly eroded whilst profile 5c00036 has remained stable.

---

**5cSU04: Ensign Industrial Park to Cliff House**
**April 2014 to May 2015**
Since 2014 this unit has remained stable.

**Baseline April 2005 to May 2015**
Profile 5c00045 has undergone a small net loss of sediment since 2003. Profile 5c00055 has remained stable.

---

**5cSU05: Cliff House to Woolston Sewage Works**
**April 2014 to May 2015**
Over the past year, most profiles lines have remained stable with slight accretion observed along profile 5c00076 and slight erosion along 5c00107.

**Baseline April 2005 to May 2015**
With the exception of profile 5c00076, which has slightly accreted, the rest of the unit has remained stable over the past 10 years.
Southeast Regional Coastal Monitoring Programme

Beach Change Summary: % change in cross-sectional area 2014 to 2015

East Solent Annual Report 2015

Selsey Bill to Southampton Water

% change in cross-sectional area

- **Accretion**
  - > 30%
  - 15 - 30%
  - 5 - 15%
  - Less than 5%

- **Erosion**
  - > 30%
  - 15 - 30%
  - 5 - 15%
  - No Change

**Line name (actual change, m²)**

eg: 5f00420 (45)

SU Boundary

Kilometers

0 1 2 4
Beach Change Summary: % change in cross-sectional area Baseline 2003 to 2015

- **Accretion**
  - > 30%
  - 15 - 30%
  - 5 - 15%

- **Erosion**
  - Less than 5%
  - 5 - 15%
  - 15 - 30%
  - > 30%

- **No Change**

**Line name (actual change, m²)**

- **SU Boundary**
Beach Change Summary: Actual change in cross-sectional area 2014 to 2015

Selsey Bill to Southampton Water
Beach Change Summary: Actual change in cross-sectional area Baseline 2003 to 2015

East Solent Annual Report 2015

Selsey Bill to Southampton Water
Southeast Regional Coastal Monitoring Programme

East Solent Annual Report 2015

% change in cross-sectional area May 2014 to May 2015 (1 of 3)

Selsey to Bracklesham Bay: 5aSU01

% change in cross-sectional area
Accretion:
- > 30 %
- 15 - 30 %
- 5 - 15 %
No Change:
- Less than 5 %
Erosion:
- 5 - 15 %
- 15 - 30 %
- > 30 %

eg: 5f00420 (45)

Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013

%S change in cross-sectional area May 2014 to May 2015 (1 of 3) Selsey to Bracklesham Bay: 5aSU01
% change in cross-sectional area May 2008 to May 2015 (1 of 3)

Selsey to Bracklesham Bay: 5aSU01

% change in cross-sectional area

- > 30%
- 15 - 30%
- 5 - 15%
- Less than 5%
- No Change
- 15 - 30%
- > 30%

eg: 5f00420 (45)

Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013
% change in cross-sectional area May 2014 to May 2015 (2 of 3)
% change in cross-sectional area May 2008 to May 2015 (2 of 3)

- **Selsey to Bracklesham Bay: 5aSU01**

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- **SU Boundary**
- **Aerial Photography: 2013**
- **East Solent Annual Report 2015**
- **Southeast Regional Coastal Monitoring Programme**
% change in cross-sectional area May 2014 to May 2015 (3 of 3)
% change in cross-sectional area May 2008 to May 2015 (3 of 3)

Selsey to Bracklesham Bay: 5aSU01
% change in cross-sectional area April 2014 to May 2015 (1 of 2)

Bracklesham to The Cakeham Estate: 5aSU02
Southeast Regional Coastal Monitoring Programme

% change in cross-sectional area April 2009 to April 2014 (1 of 2)

East Solent Annual Report 2015

Bracklesham Bay to Cakeham Estate: 5aSU02

% change in cross-sectional area

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No Change

eg: 5f00420 (45)

Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013

0 50 100 150 200 m
% change in cross-sectional area April 2014 to May 2015 (2 of 2)

Southeast Regional Coastal Monitoring Programme

East Solent Annual Report 2015

Bracklesham Bay to Cakeham Estate: 5aSU02

% change in cross-sectional area
- > 30%
- 15 - 30%
- 5 - 15%
- Less than 5%
- No Change
- 15 - 30%
- > 30%

eg: 5f00420 (45)

Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013
% change in cross-sectional area April 2009 to May 2015 (2 of 2)

Bracklesham Bay to Cakeham Estate: 5aSU02
% change in cross-sectional area April 2014 to April 2015 (1 of 3)

Cakeham Estate to East Head: 5aSU03
Southeast Regional Coastal Monitoring Programme

East Solent Annual Report 2015

% change in cross-sectional area July 2007 to April 2015 (1 of 3)

Cakeham Estate to East Head: 5aSU03

% change in cross-sectional area

- > 30%
- 15 - 30%
- 5 - 15%
- 5 - 15%
- > 30%
- Less than 5%
- No Change

eg: 5f00420 (45)

Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013

0 50 100 150 200
% change in cross-sectional area April 2014 to April 2015 (2 of 3)

Cakeham Estate to East Head: 5aSU03
% change in cross-sectional area July 2007 to April 2015 (2 of 3)

Southeast Regional Coastal Monitoring Programme

East Solent Annual Report 2015

% change in cross-sectional area

- 30 %
- 15 %
- 5 %
- Less than 5 %

No Change

Accretion

Erosion

eg: 5f00420 (45)

Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013
% change in cross-sectional area April 2014 to April 2015 (3 of 3)

Cakeham Estate to East Head: 5aSU03
% change in cross-sectional area July 2007 to April 2015 (3 of 3)

Aerial Photography: 2013

% change in cross-sectional area

- 15 - 30 %
- 5 - 15 %
- Less than 5 %
- 5 - 15 %
- > 30 %
- No Change

eg: 5f00420 (45)
Line name (actual change, m²)

SU Boundary
% change in cross-sectional area April 2014 to April 2015 (1 of 4)

Black Point to Inn on the Beach: 5aSU06
% change in cross-sectional area July 2006 to April 2015 (1 of 4)

Black Point to Inn on the Beach: 5aSU06

% change in cross-sectional area

- > 30%
- 15 - 30%
- 5 - 15%
- Less than 5%
- No Change

eg: 5f00420 (45)

Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013
Southeast Regional Coastal Monitoring Programme

East Solent Annual Report 2015

% change in cross-sectional area

SU Boundary

Aerial Photography: 2013

% change in cross-sectional area July 2006 to April 2015 (2 of 4)

Black Point to Inn on the Beach: 5aSU06
Southeast Regional Coastal Monitoring Programme

East Solent Annual Report 2015

% change in cross-sectional area April 2014 to April 2015 (3 of 4)

Black Point to Inn on the Beach: 5aSU06

% change in cross-sectional area

- > 30%
- 15 - 30%
- 5 - 15%
- Less than 5%
- No Change
- 15 - 30%
- > 30%

eg: 5f00420 (45)
Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013
% change in cross-sectional area July 2006 to April 2015 (3 of 4)

Black Point to Inn on the Beach: 5aSU06
% change in cross-sectional area April 2014 to April 2015 (4 of 4)
% change in cross-sectional area July 2006 to April 2015

 eg: 5f00420 (45)

Line name (actual change, m²)

SU Boundary

East Solent Annual Report 2015

Southeast Regional Coastal Monitoring Programme
% change in cross-sectional area September 2006 to April 2015 (1 of 2)

Inn on the Beach to Langstone Harbour: 5aSU07

% change in cross-sectional area

- > 30%
- 15 - 30%
- 5 - 15%
- Less than 5%
- 5 - 15%
- 15 - 30%
- > 30%

SU Boundary

Aerial Photography: 2013
Southeast Regional Coastal Monitoring Programme

% change in cross-sectional area April 2014 to April 2015 (2 of 2)

East Solent Annual Report 2015

Inn on the Beach to Langstone Harbour: 5aSU07
% change in cross-sectional area September 2006 to April 2015 (2 of 2)

Inn on the Beach to Langstone Harbour: 5aSU07

% change in cross-sectional area

- Accretion
  - > 30%
  - 15 - 30%
  - 5 - 15%
  - Less than 5%
- Erosion
  - > 30%
  - 15 - 30%
  - 5 - 15%
  - Less than 5%
- No Change

eg: 5f00420 (45)

Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013
Southeast Regional Coastal Monitoring Programme

% change in cross-sectional area June 2014 to May 2015 (1 of 4)

East Solent Annual Report 2015

Hayling Billy Trail: 5aSU08
% change in cross-sectional area March 2007 to May 2015 (1 of 4)

Hayling Billy Trail: 5aSU08
% change in cross-sectional area June 2014 to May 2015 (2 of 4)

No Change

Accretion

- 15 - 30 %
- 5 - 15 %
- > 30 %

Erosion

- Less than 5 %
- 5 - 15 %
- 15 - 30 %
- > 30 %

eg: 500420 (45)

Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013

Hayling Billy Trail: 5aSU08
Southeast Regional Coastal Monitoring Programme

East Solent Annual Report 2015

% change in cross-sectional area March 2007 to May 2015 (2 of 4)

Hayling Billy Trail: 5aSU08

% change in cross-sectional area

- > 30 %
- 15 - 30 %
- 5 - 15 %
- Less than 5 %
- 5 - 15 %
- 15 - 30 %
- > 30 %

No Change

Accretion

Erosion

eg: 5f00420 (45)
Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013
Southeast Regional Coastal Monitoring Programme

East Solent Annual Report 2015

% change in cross-sectional area June 2014 to May 2015 (3 of 4)

Hayling Billy Trail: 5aSU08

% change in cross-sectional area

- > 30%
- 15 - 30%
- 5 - 15%
- Less than 5%
- No Change
- Erosion
- Accretion

eg: 5f00420 (45)

Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013

0 50 100 150 200 m
% change in cross-sectional area March 2007 to May 2015 (3 of 4)

Hayling Billy Trail: 5aSU08

Southeast Regional Coastal Monitoring Programme

East Solent Annual Report 2015
% change in cross-sectional area June 2014 to May 2015 (4 of 4)

Hayling Billy Trail: 5aSU08

East Solent Annual Report 2015
% change in cross-sectional area March 2007 to May 2015 (4 of 4)

Hayling Billy Trail: 5aSU08
% change in cross-sectional area April 2014 to April 2015 (1 of 4)

East Solent Annual Report 2015

Hayling Ferry to Southsea Common: 5aSU10
% change in cross-sectional area June 2007 to April 2015 (1 of 4)

Hayling Ferry to Southsea Common: 5aSU10

Southeast Regional Coastal Monitoring Programme

East Solent Annual Report 2015

% change in cross-sectional area

- 31
- 77
15
0
- 10
- 3
- 9
- 3
- 9
- 77
- 33

Accretion:

- > 30%
- 15 - 30%
- 5 - 15%

Erosion:

- Less than 5%
- 5 - 15%
- 15 - 30%
- > 30%

No Change:

- Less than 5%
- 5 - 15%
- 15 - 30%
- > 30%

eg: 5f00420 (45)

Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013

0 50 100 150 200 m
% change in cross-sectional area April 2014 to April 2015 (2 of 4)

Hayling Ferry to Southsea Common: 5aSU10

% change in cross-sectional area

<table>
<thead>
<tr>
<th>% change</th>
<th>Colour</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 30 %</td>
<td>Blue</td>
</tr>
<tr>
<td>15 - 30 %</td>
<td>Light Blue</td>
</tr>
<tr>
<td>5 - 15 %</td>
<td>Blue</td>
</tr>
<tr>
<td>Less than 5 %</td>
<td>Red</td>
</tr>
<tr>
<td>5 - 15 %</td>
<td>Red</td>
</tr>
<tr>
<td>15 - 30 %</td>
<td>Red</td>
</tr>
<tr>
<td>&gt; 30 %</td>
<td>Red</td>
</tr>
<tr>
<td>No Change</td>
<td>Black</td>
</tr>
</tbody>
</table>

eg: 5f00420 (45)

Line name (actual change, m²)

SU Boundary
Southeast Regional Coastal Monitoring Programme

East Solent Annual Report 2015

% change in cross-sectional area June 2007 to April 2015 (2 of 4)

Hayling Ferry to Southsea Common: 5aSU10

% change in cross-sectional area
- > 30%
- 15 - 30%
- 5 - 15%
- Less than 5%
- 15 - 30%
- > 30%
- No Change

eg: 5f00420 (45)

Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013
Southeast Regional Coastal Monitoring Programme

East Solent Annual Report 2015

% change in cross-sectional area April 2014 to April 2015 (3 of 4)

Hayling Ferry to Southsea Common: 5aSU10

East Solent Annual Report 2015

% change in cross-sectional area

- > 30%
- 15 - 30%
- 5 - 15%
- < 5%
- No Change

eg: 5f00420 (45)

Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013

0 50 100 150 200 m
% change in cross-sectional area June 2007 to April 2015 (3 of 4)

Hayling Ferry to Southsea Common: 5aSU10
% change in cross-sectional area June 2007 to April 2015 (4 of 4)

- Hayling Ferry to Southsea Common: SaSU10

Aerial Photography: 2013

% change in cross-sectional area

- > 30%
- 15 - 30%
- 5 - 15%
- Less than 5%
- 15 - 30%
- > 30%
- No Change

eg: 5f00420 (45) Line name (actual change, m²)

SU Boundary
Southeast Regional Coastal Monitoring Programme

East Solent Annual Report 2015

% change in cross-sectional area

- Accretion: > 30 %, 15 - 30 %, 5 - 15 %
- Erosion: Less than 5 %, 5 - 15 %, 15 - 30 %, > 30 %
- No Change

eg: Sf00420 (45)

Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013

% change in cross-sectional area April 2014 to April 2015 (1 of 2)

Southsea Common to Old Portsmouth Harbour: 5aSU11
% change in cross-sectional area May 2007 to April 2015 (1 of 2) - Southsea Common to Old Portsmouth Harbour: 5aSU11
% change in cross-sectional area

- Less than 5%: 
- 5 - 15%: 
- 15 - 30%: 
- > 30%

Su Boundary

Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013

Southeast Regional Coastal Monitoring Programme

East Solent Annual Report 2015
% change in cross-sectional area May 2014 to May 2015 (1 of 4)

Fort Monckton to Browndown: 5bSU02

% change in cross-sectional area

- > 30%
- 15 - 30%
- 5 - 15%
- Less than 5%
- 5 - 15%
- 15 - 30%
- > 30%
- No Change

eg: 5f00420 (45)

Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013
% change in cross-sectional area April 2003/August 2007 to May 2015 (1 of 4)

Fort Monckton to Browndown: 5bSU02

Aerial Photography: 2013
% change in cross-sectional area May 2014 to May 2015 (2 of 4)

East Solent Annual Report 2015

Southeast Regional Coastal Monitoring Programme

Fort Monckton to Browndown: 5bSU02

SU Boundary

% change in cross-sectional area

- > 30%
- 15 - 30%
- 5 - 15%
- Less than 5%
- No Change
- 5 - 15%
- 15 - 30%
- > 30%

eg: 5f00420 (45)

Line name (actual change, m²)

Aerial Photography: 2013
Southeast Regional Coastal Monitoring Programme

% change in cross-sectional area April 2003 to May 2015 (2 of 4)

Aerial Photography: 2013

% change in cross-sectional area

<table>
<thead>
<tr>
<th>% Change</th>
<th>Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 30%</td>
<td>Blue</td>
</tr>
<tr>
<td>15 - 30%</td>
<td>Blue</td>
</tr>
<tr>
<td>5 - 15%</td>
<td>Blue</td>
</tr>
<tr>
<td>Less than 5%</td>
<td>Red</td>
</tr>
<tr>
<td>5 - 15%</td>
<td>Red</td>
</tr>
<tr>
<td>15 - 30%</td>
<td>Red</td>
</tr>
<tr>
<td>&gt; 30%</td>
<td>Red</td>
</tr>
<tr>
<td>No Change</td>
<td>Black</td>
</tr>
</tbody>
</table>

eg: 5f00420 (45) Line name (actual change, m²)

Fort Monckton to Browndown: 5bSU02
% change in cross-sectional area May 2014 to May 2015 (3 of 4)

Fort Monckton to Browndown: 5bSU02

Aerial Photography: 2013

% change in cross-sectional area

- > 30%
- 15 - 30%
- 5 - 15%
- Less than 5%
- 5 - 15%
- 15 - 30%
- > 30%
- No Change

eg: 5f00420 (45)

Line name (actual change, m²)

SU Boundary
% change in cross-sectional area April/June 2003 to May 2015 (3 of 4)

East Solent Annual Report 2015

Southeast Regional Coastal Monitoring Programme

Fort Monckton to Browndown: 5bSU02

% change in cross-sectional area

- > 30%
- 15 - 30%
- 5 - 15%
- < 5%
- No Change

eg: 5f00420 (45)

Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013

Channel Coastal Observatory
% change in cross-sectional area May 2014 to May 2015 (4 of 4)

Fort Monckton to Browndown: 5bSU02

Aerial Photography: 2013

% change in cross-sectional area
- Accretion
  - > 30 %
  - 15 - 30 %
  - 5 - 15 %
  - Less than 5 %
- Erosion
  - 5 - 15 %
  - 15 - 30 %
  - > 30 %
- No Change

eg: 5f00420 (45)
  Line name (actual change, m²)
% change in cross-sectional area June 2003 to May 2015 (4 of 4)

Fort Monckton to Browndown: 5bSU02

% change in cross-sectional area

- > 30%
- 15 - 30%
- 5 - 15%
- Less than 5%
- 15 - 30%
- > 30%

eg: 5f00420 (45)

Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013

0 50 100 150 200 m

Southeast Regional Coastal Monitoring Programme

East Solent Annual Report 2015
Southeast Regional Coastal Monitoring Programme

East Solent Annual Report 2015

% change in cross-sectional area January 2014 to February 2015

Browndown to Lee-on-Solent Airfield: 5bSU03

% change in cross-sectional area

- > 30%
- 15 - 30%
- 5 - 15%
- Less than 5%
- 5 - 15%
- 15 - 30%
- > 30%
- No Change

eg: 5f00420 (45)

Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013
Southeast Regional Coastal Monitoring Programme

% change in cross-sectional area June 2003 to February 2015 (1 of 2)

Browndown to Lee-on-Solent Airfield: 5bSU03

% change in cross-sectional area
- > 30%
- 15 - 30%
- 5 - 15%
- Less than 5%
- No Change

Erosion
- 5 - 15%
- 15 - 30%
- > 30%

Accretion
- 5 - 15%
- 15 - 30%
- > 30%

eg: 5f00420 (45)
Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013
% change in cross-sectional area January 2014 to February 2015 (2 of 2)

Browndown to Lee-on-Solent Airfield: 5bSU03
% change in cross-sectional area June 2003 to February 2015 (2 of 2)

Southeast Regional Coastal Monitoring Programme

Browndown to Lee-on-Solent Airfield: 5bSU03

% change in cross-sectional area

- > 30 %
- 15 - 30 %
- 5 - 15 %
- Less than 5 %
- 5 - 15 %
- 15 - 30 %
- > 30 %

eg: 5f00420 (45)

Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013
% change in cross-sectional area January 2014 to February 2015 (1 of 2)

Lee-on-Solent Airfield to Titchfield Haven: 5bSU04
% change in cross-sectional area October 2005 to February 2015 (1 of 2)

Lee-on-Solent Airfield to Titchfield Haven: 5bSU04

Southeast Regional Coastal Monitoring Programme

East Solent Annual Report 2015
% change in cross-sectional area January 2014 to February 2015 (2 of 2)

Lee-on-Solent Airfield to Titchfield Haven: 5bSU04

Southeast Regional Coastal Monitoring Programme

East Solent Annual Report 2015
% change in cross-sectional area September/October 2005 to February 2015 (2 of 2)

Lee-on-Solent Airfield to Titchfield Haven: 5bSU04

% change in cross-sectional area

- Greater than 30%
- 15 - 30%
- 5 - 15%
- Less than 5%
- No Change
- 15 - 30%
- Greater than 30%

eg: 5f00420 (45)

Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013
Southeast Regional Coastal Monitoring Programme

East Solent Annual Report 2015

% change in cross-sectional area March 2003 to February 2015

Titchfield Haven to River Hamble: 5bSU05

% change in cross-sectional area

- > 30%
- 15 - 30%
- 5 - 15%
- Less than 5%
- No Change
- 15 - 30%
- > 30%
- Erosion
- Accretion

eg: 5f00420 (45)

Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013

0 50 100 150 200 m
Southeast Regional Coastal Monitoring Programme

East Solent Annual Report 2015

% change in cross-sectional area August 2014 to February 2015 (2 of 4)

Titchfield Haven to River Hamble: 5bSU05

% change in cross-sectional area

- > 30%
- 15 - 30%
- 5 - 15%
- Less than 5%
- No Change
- 5 - 15%
- 15 - 30%
- > 30%

eg: 5f00420 (45)

Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013

0 50 100 150 200 m
Southeast Regional Coastal Monitoring Programme

East Solent Annual Report 2015

% change in cross-sectional area March 2003 to February 2015 (2 of 4)

Titchfield Haven to River Hamble: 5bSU05

% change in cross-sectional area

- > 30%
- 15 - 30%
- 5 - 15%
- Less than 5%
- No Change
- 15 - 30%
- > 30%

eg: 5f00420 (45)
Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013
% change in cross-sectional area August 2014 to February 2015 (3 of 4)

Titchfield Haven to River Hamble: 5bSU05
% change in cross-sectional area March 2003 to February 2015 (3 of 4)

Titchfield Haven to River Hamble: 5bSU05

% change in cross-sectional area

<table>
<thead>
<tr>
<th>Erosion</th>
<th>&gt; 30 %</th>
<th>15 - 30 %</th>
<th>5 - 15 %</th>
<th>Less than 5 %</th>
</tr>
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<tbody>
<tr>
<td>Accretion</td>
<td></td>
<td></td>
<td>5 - 15 %</td>
<td>15 - 30 %</td>
</tr>
<tr>
<td>No Change</td>
<td></td>
<td></td>
<td></td>
<td>&gt; 30 %</td>
</tr>
</tbody>
</table>

eg: 5f00420 (45)

Line name (actual change, m²)

SU Boundary
% change in cross-sectional area August 2014 to February 2015 (4 of 4)

Titchfield Haven to River Hamble: 5bSU05

East Solent Annual Report 2015

Southeast Regional Coastal Monitoring Programme

% change in cross-sectional area

- > 30%
- 15 - 30%
- 5 - 15%
- Less than 5%
- 5 - 15%
- 15 - 30%
- > 30%
- No Change

eg: 5f00420 (45)

Line name (actual change, m²)
% change in cross-sectional area March 2003 to February 2015 (4 of 4)

Titchfield Haven to River Hamble: 5bSU05
% change in cross-sectional area April 2014 to May 2015 (1 of 1)

Hamble Common Point to Hamble Oil Terminal: 5cSU02
Southeast Regional Coastal Monitoring Programme

East Solent Annual Report 2015

Hamble Common Point to Hamble Oil Terminal: 5cSU02

% change in cross-sectional area

- April 2005 to May 2015

- 15 - 30%
- > 30%
- Less than 5%
- 5 - 15%
- 5 - 15%
- No Change

Legends:
- SU Boundary
- Aerial Photography: 2013
Southeast Regional Coastal Monitoring Programme

% change in cross-sectional area April 2014 to May 2015

<table>
<thead>
<tr>
<th>SU Boundary</th>
<th>5cSU03</th>
</tr>
</thead>
<tbody>
<tr>
<td>% change in cross-sectional area</td>
<td>5cSU03</td>
</tr>
<tr>
<td>East Solent Annual Report 2015</td>
<td>5cSU03</td>
</tr>
<tr>
<td>Hamble Oil Terminal to Ensign Industrial Park</td>
<td>5cSU03</td>
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</table>

Aerial Photography: 2013

% change in cross-sectional area

<table>
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<tr>
<th>% change</th>
<th>Symbol</th>
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<tbody>
<tr>
<td>&gt; 30 %</td>
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<tr>
<td>15 - 30 %</td>
<td>5cSU03</td>
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<td>5 - 15 %</td>
<td>5cSU03</td>
</tr>
<tr>
<td>15 - 30 %</td>
<td>5cSU03</td>
</tr>
<tr>
<td>&gt; 30 %</td>
<td>5cSU03</td>
</tr>
<tr>
<td>Less than 5 %</td>
<td>5cSU03</td>
</tr>
</tbody>
</table>

eg: 5f00420 (45)

Line name (actual change, m²)

SU Boundary

0 50 100 150 200 m
Southeast Regional Coastal Monitoring Programme

East Solent Annual Report 2015

Ensign Industrial Park to Cliff House: 5cSU04

% change in cross-sectional area April 2014 to May 2015

- Accretion
  - > 30%
  - 15 - 30%
  - 5 - 15%
- Erosion
  - Less than 5%
  - 5 - 15%
  - 15 - 30%
  - > 30%
- No Change

eg: 5f00420 (45)

Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013
% change in cross-sectional area April 2005 to May 2015

**Ensign Industrial Park to Cliff House: 5cSU04**

<table>
<thead>
<tr>
<th>% change in cross-sectional area</th>
<th>Accretion</th>
<th>Erosion</th>
</tr>
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<tbody>
<tr>
<td>&gt; 30%</td>
<td>blue</td>
<td>red</td>
</tr>
<tr>
<td>15 - 30%</td>
<td>blue</td>
<td>red</td>
</tr>
<tr>
<td>5 - 15%</td>
<td>blue</td>
<td>red</td>
</tr>
<tr>
<td>Less than 5%</td>
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<td>red</td>
</tr>
<tr>
<td>5 - 15%</td>
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<tr>
<td>&gt; 30%</td>
<td>blue</td>
<td>red</td>
</tr>
<tr>
<td>No Change</td>
<td>blue</td>
<td>blue</td>
</tr>
</tbody>
</table>

eg: 5f00420 (45)

Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013

% change in cross-sectional area April 2005 to May 2015 (1 of 1)

Ensign Industrial Park to Cliff House: 5cSU04
## % change in cross-sectional area

<table>
<thead>
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<th>Line name</th>
<th>Actual change, m²</th>
<th>% change in cross-sectional area</th>
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</thead>
<tbody>
<tr>
<td>5cSU05</td>
<td>±50</td>
<td>±50</td>
</tr>
<tr>
<td>5cSU05</td>
<td>±100</td>
<td>±100</td>
</tr>
<tr>
<td>5cSU05</td>
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<td>±150</td>
</tr>
<tr>
<td>5cSU05</td>
<td>±200</td>
<td>±200</td>
</tr>
</tbody>
</table>

### Notes
- **Accretion**: > 30%
- **5 - 15%**
- **5 - 30%**
- **Less than 5%**
- **Erosion**: > 30%
- **15 - 30%**
- **15 - 30%**

**Example**: 5f00420 (45)

**Line name (actual change, m²)**

**SU Boundary**

**Aerial Photography: 2013**

---

% change in cross-sectional area April 2014 to May 2015 (1 of 4)  
Cliff House to Woolston Sewage Works: 5cSU05
% change in cross-sectional area April 2005 to May 2015 (1 of 4)
% change in cross-sectional area April 2014 to May 2015 (2 of 4)

Cliff House to Woolston Sewage Works: 5cSU05

% change in cross-sectional area
- > 30%
- 15 - 30%
- 5 - 15%
- Less than 5%
- No Change

eg: 5f00420 (45)
Line name (actual change, m²)

SU Boundary

Aerial Photography: 2013
% change in cross-sectional area April 2005 to May 2015 (2 of 4)

Cliff House to Woolston Sewage Works: 5cSU05

East Solent Annual Report 2015

Southeast Regional Coastal Monitoring Programme
% change in cross-sectional area April 2014 to May 2015 (3 of 4)
% change in cross-sectional area April 2014 to May 2015 (4 of 4)

Cliff House to Woolston Sewage Works: 5cSU05
% change in cross-sectional area April 2005 to May 2015 (4 of 4)

Cliff House to Woolston Sewage Works: 5cSU05

East Solent Annual Report 2015

Aerial Photography: 2013

% change in cross-sectional area

<table>
<thead>
<tr>
<th>Change</th>
<th>Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 30 %</td>
<td>Blue</td>
</tr>
<tr>
<td>15 - 30 %</td>
<td>Blue</td>
</tr>
<tr>
<td>5 - 15 %</td>
<td>Blue</td>
</tr>
<tr>
<td>Less than 5 %</td>
<td>Blue</td>
</tr>
<tr>
<td>5 - 15 %</td>
<td>Blue</td>
</tr>
<tr>
<td>15 - 30 %</td>
<td>Blue</td>
</tr>
<tr>
<td>&gt; 30 %</td>
<td>Blue</td>
</tr>
<tr>
<td>No Change</td>
<td>Black</td>
</tr>
<tr>
<td>Erosion</td>
<td>Black</td>
</tr>
</tbody>
</table>

eg: 5f00420 (45) Line name (actual change, m²)

SU Boundary
Change in elevation (Topographic Difference Model) 2008 to 2015 (2 of 3)

Cakeham Estate to East Head: 5aSU03

Change in Elevation (m)

- >= 3
- 2.5 - 3
- 2 - 2.5
- 1.5 - 2
- 1 - 1.5
- 0.5 - 1
- 0.25 - 0.5
- -0.25 - 0.25
- -0.5 - -0.25
- -1 - -0.5
- -1.5 - -1
- -2 - -1.5
- -2.5 - -2
- -3 - -2.5
- <= -3

Aerial Photography: 2013
Change in elevation (Topographic Difference Model) 2014 to 2015 (3 of 3)

Cakeham Estate to East Head: 5aSU03

Change in Elevation (m)

- >= 3
- 2.5 - 3
- 2 - 2.5
- 1.5 - 2
- 1 - 1.5
- 0.5 - 1
- 0.25 - 0.5
- 0 - 0.25
- 1 - 0.5
- 1.5 - 1
- 2 - 1.5
- 2.5 - 2
- 3 - 2.5
- <= -3

Model Extent

Aerial Photography: 2013
Southeast Regional Coastal Monitoring Programme

Change in elevation (Topographic Difference Model) 2008 to 2015 (3 of 3)

Model Extent

Change in Elevation (m)

- >= 3
- 2.5 - 3
- 2 - 2.5
- 1.5 - 2
- 1 - 1.5
- 0.5 - 1
- 0.25 - 0.5
- -0.25 - 0.25
- -0.5 - -0.25
- -1 - -0.5
- -1.5 - -1
- -2 - -1.5
- -2.5 - -2
- -3 - -2.5
- <= -3

Aerial Photography: 2013
Change in Elevation (Topographic Difference Model) 2008 to 2015 (1 of 4)

Black Point to Inn on the Beach: 5aSU06
Aerial Photography: 2013

Change in Elevation (m)

-3 to -2.5
-2.5 to -2
-2 to -1.5
-1.5 to -1
-1 to -0.5
-0.5 to -0.25
0.25 to 0.5
0.5 to 1
1 to 1.5
1.5 to 2
2 to 2.5
2.5 to 3
3 to 4

Model Extent

Change in elevation (Topographic Difference Model) 2014 to 2015 (2 of 4)
Southeast Regional Coastal Monitoring Programme

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Black Point to Inn on the Beach: 5aSU06

Change in elevation (Topographic Difference Model) 2014 to 2015 (3 of 4)

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Black Point to Inn on the Beach: 5aSU06

Change in Elevation (m)

- <= -3
- -2 - -1.5
- -1.5 - -1
- -1 - -0.5
- -0.5 - -0.25
- 0.25 - 0.5
- 0.5 - 1
- 1 - 1.5
- 1.5 - 2
- 2 - 2.5
- >= 3

Model Extent

Aerial Photography: 2013
Black Point to Inn on the Beach: 5aSU06

Change in elevation (Topographic Difference Model) 2008 to 2015 (3 of 4)
Change in elevation (Topographic Difference Model) 2014 to 2015 (4 of 4)

Black Point to Inn on the Beach: 5aSU06
Change in elevation (Topographic Difference Model) 2008 to 2015 (4 of 4)

Black Point to Inn on the Beach: 5aSU06
Southeast Regional Coastal Monitoring Programme

Change in elevation (Topographic Difference Model) 2014 to 2015 (1 of 2)

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Inn on the Beach to Langstone Harbour: 5aSU07
Southeast Regional Coastal Monitoring Programme

Change in elevation (Topographic Difference Model) 2008 to 2015 (2 of 2)

East Solent Annual Report 2015

Inn on the Beach to Langstone Harbour: 5aSU07

Change in Elevation (m)

- >= 3
- 2.5 - 3
- 2 - 2.5
- 1.5 - 2
- 1 - 1.5
- 0.5 - 1
- 0.25 - 0.5
- -0.25 - 0.25
- -1 - -0.5
- -1.5 - -1
- -2 - -1.5
- -2.5 - -2
- -3 - -2.5
- <= -3

Aerial Photography: 2013

Model Extent

0 50 100 150 200 m
Southeast Regional Coastal Monitoring Programme

Change in elevation (Topographic Difference Model) 2014 to 2015 (1 of 2)

East Solent Annual Report 2015

Browndown to Lee-on-Solent Airfield: 5bSU03

Accretion

Erosion

Change in Elevation (m)

>= 3
2.5 - 3
2 - 2.5
1.5 - 2
1 - 1.5
0.5 - 1
0.25 - 0.5
-0.25 - 0.25
-0.5 - -0.25
-1 - -0.5
-1.5 - -1
-2 - -1.5
-2.5 - -2
-3 - -2.5
<= -3

Aerial Photography: 2013

Model Extent

Channel Coastal Observatory

0 50 100 150 200 m
Southeast Regional Coastal Monitoring Programme

Change in elevation (Topographic Difference Model) 2014 to 2015 (2 of 2)

Browndown to Lee-on-Solent Airfield: 5bSU03

Accretion

Erosion

Model Extent

Change in Elevation (m)

Aerial Photography: 2013

0 50 100 150 200 m
EXPLANATORY NOTES

Change in Cross-sectional Area (CSA)

The annual change in cross-sectional area is calculated as the difference in CSA between two surveys, expressed as a percentage change compared to the earlier CSA.

\[
\frac{CSA_1 - CSA_2}{CSA_2} \times 100
\]

Eqn (1)

Where \( CSA_1 \) = most recent springtime survey and \( CSA_2 \) = spring survey previous year. Therefore, an annual change of \(-14\%\) represents erosion during the last year of 14\% of the area of last year’s survey.