Southeast Strategic Regional Coastal Monitoring Programme

ANNUAL REPORT
2005

Beachy Head to Selsey Bill

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30 September 2005
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**Author:** D. Amos

**Reference:** X:\26105_St_Monitoring\Reports\Annual_Reports\Cell_4d\2005\SDCG_Annual_Report_Apr04_May05.doc

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<th>D. Amos</th>
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1. Introduction

This Annual Report provides an analytical overview of beach changes and wave and tidal measurements since the commencement of the Southeast Strategic Regional Coastal Monitoring Programme.

The first beach surveys took place during the spring of 2003 and changes are reported until spring 2005. This provides a short time base over which beach changes have been monitored. Detailed interpretation and decision-making is not advisable on the basis of these short-term changes, since the changes may not be representative of longer-term trends. Comment is therefore limited to only those sites which show obvious (and probably real) short-term changes.

Profiled cross sectional areas have been calculated for each profile based on a ‘Master Profile’ or ‘Base profile’. In most cases this has been taken as either a line vertically down from the most landward start point of any given survey, i.e. where profiles have historically started, or if data coverage allows, a line vertically down from the backstop of the beach. This allows a common section of beach profile to be compared and a more accurate trend to be established. The lower boundary of the master profile has been set as Mean Low Water Neaps (MLWN) as appropriate for each Management Unit (MU), seawards to a point where it captures the majority of the profiles.

Before each Annual Report, work is now undertaken to check and refine this ‘Master Profile’ in order to provide an as accurate approximation of the beach cross sectional area as possible.

Data is presented at four levels:

- Process cell summary of aggregated change over one year and from the most recent survey to the baseline survey (two years) carried out in 2003.
- Management Unit overviews for beach changes over one year and from the most recent survey to the baseline survey (two years) carried out in 2003.
- Plotted time series of beach profiles
- Trend analysis of beach cross-section area

It is recommended that the user should firstly use the MU overview maps to identify areas of interest before looking more closely at the individual profile plots and trends. The MU overview provides an at-a-glance summary of changes during the past year. Colour-coded lines highlight areas of maximum change and identify profiles that might need closer examination.

It must be emphasised that this is only the second of a series of Annual Reports that will be produced throughout the duration of the programme, therefore changes identified in this report are only indicative of short-term trends. As the programme progresses, more data will become available enabling more detailed analysis to be carried out. Accordingly, this report should be considered as a preliminary assessment.
2. Hydrodynamic / Meteorological Data

a) Waves

(i) Measured waves

A Directional WaveRider buoy was deployed off Rustington in July 2003. The wave buoy report for 2004 can be found in Annex A of this report.

2004 saw four significant storms, namely:

- 08\textsuperscript{th} Jan, Hs 4.17m
- 23\textsuperscript{rd} June, Hs 3.90m
- 31\textsuperscript{st} Jan, Hs 3.87m
- 14\textsuperscript{th} Sept, Hs 3.20m

(ii) Synthetic waves

Analysis of synthetic wave time series has commenced and will be included in the 2006 Annual Report.

b) Tides

There are no Regional Monitoring Programme tide gauges within the Selsey Bill to Beachy Head area at present, but the provision of one is being investigated for the future, and is likely to use the existing tower situated off the coast of Rustington, West Sussex.

c) Meteorological data

There are currently no Regional Monitoring Programme meteorological stations within the Selsey Bill to Beachy Head area.

In future reports, analysis of the data from the Worthing Pier meteorological station will be included here. This station is currently being installed and will provide near real-time data to the channelcoast.org website by early 2006.

3. Survey Data - Topographic

Overall, the condition of sub-cell 4d can be considered as stable.

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

4. Survey Data - Bathymetric

Analysis of bathymetric data will commence in 2007, after a second baseline survey of the region has been undertaken.
5. Data Availability

Survey data is currently available from:

Worthing Borough Council
Property Services Section
Portland House
Richmond Road
Worthing
West Sussex
BN11 1HS

Tel: 01903 221376
E-mail mailto:strategic.monitoring@worthing.gov.uk

Aerial Photography is currently available for downloading via the project web site at www.channelcoast.org

All archived data is currently being uploaded to the site and will also be available for download soon.

6. Summary of Beach Surveys

Topographic Surveys

The following surveys were undertaken during the period covered by this report. All were undertaken using Aerial Photography at a scale of 1:3000 and Photogrammetry techniques to obtain profile information, except the 7th May survey that was undertaken using LIDAR.

- 7th & 8th March 2003*
- 13th July 2003 - Environment Agency ABMS Flight
- 23rd April 2004*
- 22nd August 2004 - Environment Agency ABMS Flight
- 22nd April 2005 (MU's 1 - 8B)*
- 7th May 2005 (MU's 9B - MU18B)*
- 6th June 2005 (MU 9A)*

7. Beach Analysis

Only those surveys marked with an asterisk (*) above have been used for establishing the Foreshore Change Parameter and % Change in Cross Sectional Area Maps.
8. Glossary of Terms

Beach Backstop
This maybe defined as a seawall, promenade or any other structure at the back of a beach. If no backstop structure exists, for the purposes of master profile analysis this is the perceived landward boundary of any given active beach.

Coastal Process Cell
The coast of the UK has been divided into a series of Major Coastal Cells, many with sub-cells. These sub-cells represent a practical subdivision of the coastline into lengths that follow sediment cell principles while enabling suitably sized groups to be formed to consider coastal defence issues at the strategic level. This provides the necessary framework for Operating Authorities to prepare Shoreline Management Plans (SMP’s).

Cross-Sectional Area
The cross-sectional area is the area between any given survey and the master profile.

Foreshore Change Parameter
A single number that describes whether the beach is advancing, stable or retreating and steepening, stable or flattening. A more detailed description of this parameter can be found in the Explanatory Notes.

Management Unit
A management unit is a length of shoreline with coherent characteristics in terms of natural coastal processes, land use and coastal defence.

Master Profile
The Master Profile is the boundary or datum, which any given profile is measured against. Each profile has a unique Master Profile, with a lower boundary of Mean Low Water Neaps (MLWN), that allows only the active beach cross-section of each survey to be measured and compared against other surveys.
Profile
A profile is cross-section through a beach; normal to the shoreline, where repeatable topographic, hydrographic and LIDAR surveys can be undertaken in order for changes in beach level to be observed. In the South Downs Coastal Group Region, nearly 1500, 1km profiles exist at an average spacing of 50m. Different types of profiles are surveyed at different times - interim profiles (those at 200m spacing) are surveyed in every survey, with baseline profiles (those at 50m spacing) only being surveyed when a beach management plan or repeat baseline survey is undertaken.

South Downs Coastal Group
The Coastal Group that is concerned with matters relating to the frontage between Beachy Head and Selsey Bill, or sub-cell 4d. All Coastal Groups are made up of Local Authority, County Council and other coastal stakeholders. 
http://www.sdcg.org.uk/
Rustington Directional WaveRider Buoy

Location
OS: 506331E  93784N  
WGS84: Latitude: 50°44.0365’N  Longitude: 00°29.6765’W

Water Depth
9.9m CD

Instrument Type
Datawell Directional WaveRider Buoy Mk III

Data Quality

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Tables and plots of these values, together with the minimum and maximum values and the standard deviation are available on the website.

Highest events in 2004/5

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<th>T_z</th>
<th>Dir.</th>
<th>Water level elevation (OD)</th>
<th>Tidal stage (hours re. HW)</th>
<th>Tidal range (m)</th>
<th>Tidal surge* (m)</th>
<th>Max. surge* (m)</th>
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* Tidal information is obtained from the nearest recording tide gauge (the National Network gauge at Newhaven). The surge shown is the residual at the time of the highest $H_s$. The maximum tidal surge is the largest positive surge during the storm event.
## Annex A

### Interim Wave Report

### Rustington 2004/5

#### Highest events in 2004/5

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**Distribution plots**

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

- Wave rose (Direction vs. $H_s$) from April 2004 to March 2005
- Percentage of occurrence of $H_s$, $T_p$, $T_z$ and Direction from April 2004 to March 2005
- Monthly time series of significant wave height (the red line is the storm threshold)
- Incidence of storms during the reporting period and all previous years. Storms are defined using the Peaks-over-Threshold method. The highest $H_s$ of each storm is shown.

### Summary

Unusually, the highest waves of the period occurred in June 2004, with an isolated storm, lasting nearly 48 hours. In contrast, the latter half of October saw an extended period of waves above 2.5m. The winter period was relatively quiet (particularly November 2004, February and March 2005) and although January 2005 experienced one storm, the month as a whole was significantly less stormy than January 2004.

The storm waves were predominantly from SSW or SW and, although $T_z$ was consistently around 5-6s, peak period ($T_p$) increased with the higher waves.

The highest waves in the largest storms tended to occur at or around High Water, although the storm surge at the time of highest waves did not exceed 0.3m and in most cases was negligible. The largest surge during the storm periods was 0.6m and, for the storms listed in the table, the maximum surges occurred mid-tide.

### Acknowledgements

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.
Direction vs. $H_s$ for April 2004 to March 2005
(this reporting year)

Direction vs. $H_s$ for July 2003 to June 2005
(all data)
Hs at Rustington Apr 2004 to Mar 2005
Annex E - High Level Report – Year 3 Field Data Collection - SDCG
### Regional Coastal Monitoring - High Level Reporting - 2004/5 (Year 3)

#### Field data collection - SDCG

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<th>Aerial Survey No. 2 (Oct)</th>
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**Key:**
- **Completed**
- **Pending**
- **Overdue**
- **Not required**

**Notes:**
Completion date is the date of receipt of data by the Lead Authority.
"Pending" refers to data which has been collected in the field, but is being processed.

**Reasons for late/missing delivery:**
1. Undertaken via LIDAR on 7th May 2005
2. 
3. 

Page 1 of 1 Field data - SDCG 26/09/2005
EXPLANATORY NOTES

1. Foreshore Change Parameter

The advantage of this parameter is that a single number (ranging from +6 to −6) gives an indication of whether the beach is advancing or retreating and whether it is steepening or flattening. It was used in FutureCoast to indicate the medium-term trend in beach evolution on a strategic basis.

The rationale behind the Parameter is that the most healthy state a beach can be in is to be advancing at the Mean High Water mark and at the Mean Low Water level and for the gradient to be flattening (beach steepening being generally associated with broadly erosive or regressive conditions).

There are three components to the Parameter:

- Upper beach – can be either advancing, retreating or no change
- Lower beach – can be either advancing, retreating or no change
- Gradient between upper beach and lower beach – can be either steepening, flattening or no change (referred to as “no rotation”)

These three components are derived directly from SANDS (profile analysis by chainage). The beach levels are Mean High Water (MHW) and Mean Low Water (MLW). For one profile line, the analysis finds the chainage at which MHW and MLW occur for every completed survey and also calculates the change in chainage between surveys. In this way, a time series of advance or retreat of MHW and MLW can be derived. Also as part of this analysis SANDS calculates the gradient between MHW and MLW and changes in gradient through time.

For SCRMP analysis, the two surveys used are the most recent springtime survey and the spring survey the previous year. This is because the beach is, theoretically, at its lowest volume in the spring.

The beach profile is then classified into one of 13 categories (see Table 1). Note that whilst +6 and −6 are considered the most and least healthy conditions respectively for a beach, some of the intermediate stages are not necessarily a true ranking in order.

For most beaches, suitable thresholds to be used in calculation of Foreshore Change Parameter are:

- Change in chainage <= 0.25 m is regarded as No Movement
- Change in gradient <= 0.05 is regarded as No Rotation

However, there may be local variations to these thresholds, particularly for flat, wide beaches.

1 Calculated as the average of MHWS and MLWS and the average of MLWS and MLWS. These levels have been selected as appropriate for SCRMP analysis; other levels can be chosen.
<table>
<thead>
<tr>
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<th>MHW</th>
<th>MLW</th>
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<tr>
<td>- 6</td>
<td>Retreat</td>
<td>Retreat</td>
<td>Steepening</td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Classification of beach profile - Foreshore Change Parameter
2. 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.

\[
\frac{CSA_1 - CSA_2}{CSA_2} \times 100 \quad \text{Eqn (1)}
\]

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.
Annex F - Topographic Survey Report
Annex F - Topographic Survey Report

Background

Data collected since March 2003 has been collected in accordance with the National Specification for Surveying Services issued by the Environment Agency and adopted for all surveys undertaken as part of the Strategic Regional Monitoring Programme.

The Strategic Regional Monitoring Programme in the South Downs Coastal Group region has programmed 2 Aerial Flights per year, during March and October each year. In addition to these flights the Environment Agency, as part of their contribution to the programme, carry out the ABMS Flight in July / August each year.

The autumn flight has proved to be difficult to achieve due to tidal, light and weather working windows not coinciding. During the period covered by this report no October flights have been undertaken.

In anticipation that this scenario is likely to occur again, alternative methods for data collection over this timeframe are being investigated in liaison with the SDCG Project Partners.

Within the South Downs Coastal Group area only management units 4d-MU2, 4d-MU2A, 4d-MU-3, 4d-MU5, 4d-MU8B & 4d-MU-15B are designated ‘Beach Management’ sites. In addition to the two profile surveys undertaken per year, these sites have an extra Beach Management Plan (or repeat baseline) survey undertaken in conjunction with the ABMS flight. Additional profiles at a 50m spacing are collected, as is enough data to allow 0.5m contours to be generated by the survey contractor.

Condition of the South Downs Coastal Group Frontage (Selsey Bill to Beachy Head)

Analysis of the data between Spring 2004 and Spring 2005 shows that, in general there was a net loss of 5.2% of actual beach volume, across the entire region. For the period between Spring 2003 and Spring 2005 there was a net loss of 1.4% of actual beach volume, across the entire region.

Further details can be seen in the Beach Change maps that follow this report.

Condition of Individual Management Units

General

Analysis of the profiles has been carried out using the spring 2003, spring 2004 and spring 2005 surveys. This analysis has been used in producing the Beach Change Summary Sub-cell and Management Unit maps, which are sorted by Management Unit then year, in the pages following this report.

As mentioned above, the surveying methods used make it difficult to reach the minimum specified level of Mean Low Water Springs (MLWS). Therefore, for the Foreshore Change Parameter calculations, only the beach between Mean High
Water (MHW) and Mean Low Water Neaps (MLWN) have been considered, this does however only establish an overall trend for the upper beach, rather than the entire beach system.

The cross-sectional area trends and calculations, beach profile plots and Foreshore Change Parameter calculations for the analysed profiles can be found on the enclosed CD in the 'Analysis \ Topo' directory, under ‘CSA_Charts’, 'CSA_Data', 'Profile_Charts' and 'FCP_Calcs' respectively for each Management Unit.

Green text below highlights areas of accretion, whilst red text highlights areas of erosion.

**Unit 1 - Selsey Bill to Church Norton**
Between April 2004 and April 2005 the unit was generally stable with a slight net loss of beach cross sectional area of 2.8%; the largest gain was at profile 4d01426 where the cross sectional area increased by 26.7%. The largest decrease of 12.2% occurred at profile 4d01446.

There are small losses and gains along the entire frontage.

Between March 2003 and April 2005 the unit was generally stable with a net gain of beach cross sectional area of 3.4%; the greatest gain was an increase of 21.2% at profile 4d01468 with the greatest loss being a localised decrease of 10.4% at profile 4d01439.

The majority of losses occurred in the vicinity of profile 4d01439.

**Unit 2 - Church Norton to Pagham Harbour**
Between April 2004 and April 2005 the unit was generally stable with a slight net loss of beach cross sectional area of 3.4%; the greatest gain was an increase of 7.7% at profile 4d01414 with the greatest loss being a decrease of 24% at profile 4d01415 - mainly on the lower foreshore.

Losses and gains have occurred throughout the management unit over this period with the most significant losses occurring between 4d01406 and 4d01412, ranging from 1% to 7%.

Between March 2003 and April 2005 the unit was generally stable with a slight net loss of beach cross sectional area of 2%; the highest gain was an increase of 10.1% at profile 4d01405 with the greatest loss being a decrease of 16.5% at profile 4d01412.

Losses and gains have occurred throughout the management unit over this period with the most significant losses occurring between 4d01407 and 4d01413, ranging from 1.7% to 16.5%.
Unit 2A - Pagham Harbour to Pagham
Between April 2004 and April 2005 the unit was eroding with a net loss of beach cross sectional area of 6.8%; the greatest gain was an increase of 3.7% at profile 4d01391 with the greatest loss being a decrease of 13.2% at profile 4d01400.

The majority of the losses have been recorded at the southern end of this management unit.

Between March 2003 and April 2005 the unit was eroding with a net loss of beach cross sectional area of 7.3%; the greatest gain was an increase of 16.7% at profile 4d01395 with the greatest loss being a decrease of 24.8% at profile 4d01397.

The majority of the losses have been recorded at the southern end of this management unit.

Unit 3 - Pagham to West Bognor Regis
Between April 2004 and April 2005 the unit was generally stable with a slight net loss of beach cross sectional area of 3.1%; the highest gain was an increase of 0.3% at profile 4d01363 with the greatest loss being a decrease of 6.5% at profile 4d01375.

All profiles recorded losses, except profile 4d01363, as mentioned above.

Between March 2003 and April 2005 the unit was generally stable with a slight net loss of beach cross sectional area of 2.6%; the highest gain was an increase of 2% at profile 4d01362 with the greatest loss being a decrease of 7.4% at profile 4d01375.

Only minor gains and losses were recorded in this management unit over this period.

Unit 4 - West Bognor Regis to Elmer
Between April 2004 and April 2005 the unit was eroding with a net loss of beach cross sectional area of 8.5%; the greatest gain was an increase of 12% at profile 4d01346 with the greatest loss being a significant decrease of 31.2% at profile 4d01318.

Losses have occurred throughout the management unit over this period with the most significant occurring between 4d01295 and 4d01331, ranging from 6% to 31.2%.

Between March 2003 and April 2005 the unit was eroding with a net loss of beach cross sectional area of 10.2%; the greatest gain was an increase of 9.8% at profile 4d01334 with the greatest loss being a decrease of 29% at profile 4d01314.

Losses have occurred throughout the management unit over this period with the most significant occurring between 4d01300 and 4d01318, ranging from 3.6% to 29%.
**Unit 5 - Elmer**

Between April 2004 and April 2005 the unit was eroding with a net loss of beach cross sectional area of 7.3%; the greatest gain was an increase of 2.4% at profile 4d01202 with the greatest loss being a decrease of 24.9% at profile 4d01170.

All profiles recorded losses except profile 4d01202, as mentioned above.

Between March 2003 and April 2005 the unit was eroding with a net loss of beach cross sectional area of 10.3%; the greatest gain was an increase of 2% at profile 4d01206 with the greatest loss being a significant decrease of 25.8% at profile 4d01170.

All profiles recorded losses except profile 4d01206, as mentioned above, over this period.

**Unit 6 - Elmer to Littlehampton Harbour Mouth**

Between April 2004 and April 2005 the unit was generally stable with a net loss of beach cross sectional area of 4.8%; the greatest gain was an increase of 7.1% at profile 4d01125 with the greatest loss being a decrease of 17.2% at profile 4d01117.

Losses have occurred throughout the management unit over this period, with the most significant occurring between 4d01108 and 4d01121, ranging from 4.5% to 17.2%, and between 4d01144 and 4d01148, ranging from 12.5% to 15%.

Between March 2003 and April 2005 the unit was eroding with a net loss of beach cross sectional area of 8.5%; the greatest gain was a localised increase of 4.8% at profile 4d01087 with the greatest loss being a significant decrease of 28.3% at profile 4d01117.

Losses have occurred throughout the management unit over this period, with the most significant occurring between 4d01111 and 4d01128, ranging from 2.4% to 28.3%, and between 4d01144 and 4d01148, ranging from 22.5% to 26.5%.

**Unit 7 - Littlehampton Harbour Mouth to Rustington**

Between April 2004 and April 2005 the unit was eroding with a net loss of beach cross sectional area of 7.1%; the greatest gain was an increase of 0.5% at profile 4d01047 with the greatest loss being a decrease of 14.7% at profile 4d01070.

All profiles recorded losses except profile 4d01047, as mentioned above.

The most significant of which occurred between 4d01053 and 4d01079, ranging from 5.2% to 14.7%.

Between March 2003 and April 2005 the unit was generally stable with a slight net loss cross sectional area of 1%; the highest gain was an increase of 25.1% at profile 4d01077 with the greatest loss being a decrease of 13.1% at profile 4d01063.
Gains have occurred mostly at the western end of this management unit over this period, with most other profiles showing losses.

Unit 8A - Rustington to Goring-by-Sea
Between April 2004 and April 2005 the unit was eroding with a net loss of beach cross sectional area of 5.5%; the greatest gain was an increase of 4.2% at profile 4d00961 with the greatest loss being a decrease of 16.8% at profile 4d00940.

Gains, albeit small ones have mostly occurred in the vicinity of 4d00961 over this period, with the majority of other profiles showing losses.

Between March 2003 and April 2005 the unit was generally stable with a slight net loss of beach cross sectional area of 3.4%; the greatest gain was an increase of 36.1% at profile 4d00911, with the greatest loss being a decrease of 21.5% at profile 4d00907.

Mostly losses with some gains have occurred throughout the management unit over this period.

Unit 8B - Goring-by-Sea to Lancing
Between April 2004 and April 2005 the unit was generally stable with a slight net loss of beach cross sectional area of 2.7%; the greatest gain was an increase of 28.1% at profile 4d00763, with the greatest loss being a decrease of 14.3% at profile 4d00826.

Between March 2003 and April 2005 the unit generally stable with a slight net loss of beach cross sectional area of 1.6%; the greatest gain was an increase of 39.5% at profile 4d00763, with the greatest loss being a decrease of 14.5% at profile 4d00770.

It should be noted that when the April 2005 survey was flown shingle placement for Phase 3 of the Shoreham to Lancing Scheme was ongoing - the large gain at profile 4d00763 can be attributed to a shingle stockpile that formed part of these works.

A newsletter detailing this scheme can be found at the back of this report, before the Management Unit Summary Maps.

Unit 9A - Lancing to Shoreham Harbour (Western Arm)
Between April 2004 and June 2005 the unit was accreting with a net gain of beach cross sectional area of 13.7%; the greatest gain was an increase of 91.5% at profile 4d00736, with the greatest loss being a decrease of 4.4% at profile 4d00698.

Losses, albeit small ones have only occurred between 4d00664 and 4d00710 over this period, with all other profiles showing gains.

Between March 2003 and June 2005 the unit was accreting with a net gain of beach cross sectional area of 18.9%; the greatest gain was an increase of 82.1% at profile 4d00733, with the greatest loss being a decrease of 4.6% at profile 4d00698.

Only profiles just east of profile 4d00698 and just west of the Shoreham Harbour Arm recorded losses over this period. The majority of profiles recorded gains.
It should be noted that Phase 2 of the Shoreham to Lancing Scheme was ongoing during 2004 with completion in September, hence the large increases in beach volumes along this frontage.

A newsletter detailing this scheme can be found at the back of this report, before the Management Unit Summary Maps.

**Unit 9B - Shoreham Harbour (Eastern Arm) to Aldrington**

Between April 2004 and May 2005 the unit was generally stable with a net loss of beach cross sectional area of 3.7%; the greatest gain being an increase of 10.7% at profile 4d00620, with the greatest loss being a decrease of 17.3% at profile 4d00617.

Most losses occurred to profiles on the west of this frontage, from 4d00596 to 4d00639, with the exception of profile 4d00620, as mentioned above.

Between March 2003 and May 2005 the unit was generally stable with a slight net gain of beach cross sectional area of 0.7%; the greatest gain being an increase of 20.3% at profile 4d00590, with the greatest loss being a decrease of 20.9% at profile 4d00614.

Losses and gains have occurred throughout the management unit over this period.

**Unit 10 - Aldrington to Brighton Marina (Western Arm)**

Between April 2004 and May 2005 the unit was generally stable with a slight net loss of beach cross sectional area of 2%; the greatest gain was an increase of 13.3% at profile 4d00528 with the greatest loss being a decrease of 21.3% at profile 4d00485.

Losses and gains have occurred throughout the management unit over this period.

With the most significant losses occurring between 4d00470 and 4d00485, ranging from 1.5% to 21.3%.

Between March 2003 and May 2005 the unit was generally stable with a net gain of beach cross sectional area of 3.4%; the highest being an increase of 40.3% at profile 4d00494, with the greatest loss being a decrease of 24.4% at profile 4d00485.

Losses and gains have occurred throughout the management unit over this period.

**Unit 12 - Brighton Marina (Eastern Arm) to Saltdean**

Between April 2004 and May 2005 the unit was eroding with a net loss of beach cross sectional area of 9.5%; the greatest gain being an increase of 29.3% at profile 4d00331, with the greatest loss being a decrease of 33.2% at profile 4d00407, mainly in the intertidal zone.

Significant losses have also occurred at the following profiles over this period:

- 4d00411 - 27%
- 4d00409 - 27.2%
most of the losses occurred in the west of the frontage between 4d00373 and 4d00417, ranging from 13.2% to 33.2%.

Between March 2003 and May 2005 the unit was stable with a slight net gain of beach cross sectional area of 3.4%; the greatest being an increase of 54.6% at profile 4d00395, with the greatest loss being a decrease of 21.6% at profile 4d00376.

Losses and gains have occurred throughout the management unit over this period, with the most significant losses occurring in the west of the frontage between 4d00373 and 4d00417, ranging from 13.2% to 33.2%.

It should be noted that during the period covered by this report the Brighton Marina to Ovingdean sea defence scheme has been ongoing along the length of this management unit to install a new rock revetment and seawall, protecting the cliffs and A259 coast road behind. This work was completed in autumn 2004.

A leaflet detailing this scheme can be found at the back of this report, before the Management Unit Summary Maps.

**Unit 13A - Telscombe Cliffs**

Between April 2004 and May 2005 the unit was eroding with a net loss of beach cross sectional area of 10.6%; the smallest loss was a decrease of 1.3% at profile 4d00317, with the greatest loss being a decrease of 23% at profile 4d00327.

All profiles in this management unit recorded losses over this period.

Between March 2003 and May 2005 the unit was eroding with a net loss of beach cross sectional area of 7.9%; the greatest gain being an increase of 9% at profile 4d00317, with the greatest loss being a decrease of 28.1% at profile 4d00327.

Losses and gains have occurred throughout the management unit over this period,

**Unit 13B - Telscombe to Peacehaven Heights**

Between April 2004 and May 2005 the unit was eroding with a net loss of beach cross sectional area of 5.3%; the greatest gain being an increase of 0.8% at profile 4d00292, the greatest loss being a decrease of 17% at profile 4d00271.

All profiles recorded losses except profile 4d00292, as mentioned above.

Between March 2003 and May 2005 the unit was generally accreting with a net gain of beach cross sectional area of 11.8%; the greatest gain being an increase of 20% at profile 4d00281, with the smallest being an increase of 4.4% at profile 4d00273.

Gains have occurred throughout the management unit over this period with no losses being recorded.
**Unit 14 - Peacehaven Heights to Newhaven Harbour (Western Arm)**

Between April 2004 and May 2005 the unit was eroding with a net loss of beach cross sectional area of 11.1%; the greatest gain was an increase of 23.3% at profile 4d00223, just west of the Newhaven harbour arm. The greatest loss being a significant decrease of 52.8% at profile 4d00260, which appears to be due to a cliff fall.

All profiles recorded losses except profile 4d00223, as mentioned above, and profiles 4d00240 and 4d00250 that both recorded gains of <2.5%.

Between March 2003 and May 2005 the unit was eroding with a net loss of beach cross sectional area of 6.9%; the greatest gain being an increase of 35.5% at profile 4d00223 with the greatest loss being a decrease of 51.5% at profile 4d00260.

Losses have occurred throughout the management unit over this period.

**Unit 15A - Newhaven Harbour (Western Arm) to Tide Mills**

Between April 2004 and May 2005 the unit was eroding with a net loss of beach cross sectional area of 7.7%; the smallest loss was a decrease of 2.8% at profile 4d00223, just east of Newhaven harbour. The greatest loss was a decrease of 12.8% at profile 4d00203.

All profiles recorded losses along the frontage over this period.

Between March 2003 and May 2005 the unit was eroding with a net loss of beach cross sectional area of 7.6%; the greatest gain being an increase of 0.8% at profile 4d00218 with the greatest loss being a decrease of 15.2% at profile 4d00203.

Losses have occurred throughout the management unit over this period with only one of the three profiles in this unit profile recording a marginal gain of 0.8% - profile 4d00218, as mentioned above.

**Unit 15B - Tide Mills to Seaford Head**

Between April 2004 and May 2005 the unit was stable with a slight net gain of beach cross sectional area of 1.2%; the greatest gain being an increase of 16.6% at profile 4d00151 with the greatest loss being a decrease of 18.1% at profile 4d00127.

All profiles west of profile 4d00176 to 4d00198 recorded losses, ranging from 5% to 12.5%. The majority of profiles east of 4d00176 recorded gains, with the notable exception of profile 4d00127, as mentioned above.

Between March 2003 and May 2005 the unit was accreting with a net gain of beach cross sectional area of 5.6%; the highest being an increase of 29.1% at profile 4d00147 with the greatest loss being a decrease of 16.3% at profile 4d00188.

All profiles west of profile 4d00176 to 4d00198 recorded losses, ranging from 1.6% to 16.3%. All other profiles recorded gains, except 4d00127, that recorded a slight loss of 3.7%.
Note: Master Profile Lower Level = -0.9mODN rather than MLWN (-1.62mODN), this has been done to allow direct comparison across all surveys. The March 2003 data does not reach MLWN and is therefore significantly shorter than the other surveys.

Foreshore Change Parameter calculations have been also been omitted for this Management Unit as the 2003 data is too short to give representative results.

**Unit 16 - Seafront Head to Cuckmere Haven**

Between April 2004 and May 2005 the unit was **stable** with a slight net gain of beach cross sectional area of 3.9%; the greatest gain being an increase of 31.1% at profile 4d00115 with the greatest loss being a decrease of 11.5% at profile 4d00096.

Losses have occurred throughout the management unit over this period.

From the data that was available for comparison in this Management Unit (1 Profile), between March 2003 and May 2005 profile 4d00115 was generally stable with a net gain of beach cross sectional area of 5.4%.

Note: Only one of the designated profiles' (4d00115) was collected in 2003, whereas from 2004 onwards all four profiles for this management unit were collected. After revisiting the 2003 photography to collect additional profiles to meet the baseline specification, going back to collect these three missing profiles, following contractual problems, would not be economically viable.

**Unit 17 - Cuckmere Haven**

Between April 2004 and May 2005 the unit was **eroding** with a net loss of beach cross sectional area of 6.6%; the greatest gain being an increase of 0.7% at profile 4d00067 with the greatest loss being a decrease of 18% at profile 4d00053.

All profiles recorded losses over this period, except 4d00067, as mentioned above.

Between March 2003 and May 2005 the unit was generally stable with a slight net loss of beach cross sectional area of 1%; the greatest gain being an increase of 14.5% at profile 4d00067 with the greatest loss being a decrease of 9.5% at profile 4d00053.

Losses have occurred throughout the management unit over this period.

**Unit 18A - Cuckmere Haven (East) to Birling Gap**

Between April 2004 and May 2005 the unit was **eroding** with a net loss of beach cross sectional area of 15.4%; the smallest loss being a decrease of 2.1% at profile 4d00026 with the greatest loss being a decrease of 31.4% at profile 4d00050.

All profiles recorded losses over this period.

Between March 2003 and May 2005 the unit was eroding with a net loss of beach cross sectional area of 12.8%; the greatest gain was increase of 3.5% at profile
Losses and gains have occurred throughout the management unit over this period, with the majority of the losses occurring on the west of the frontage.

**Unit 18B - Birling Gap**

Between April 2004 and May 2005 the unit was eroding with a net loss of beach cross sectional area of 15.2%; the smallest loss being a decrease of 2.1% at profile 4d00022 with the greatest loss being a decrease of 28.2% at profile 4d00016.

All profiles recorded losses over this period.

Between March 2003 and May 2005 the unit was generally stable with a slight net loss of beach cross sectional area of 2.1%; the greatest gain was increase of 7.4% at profile 4d00022 with the greatest loss being a decrease of 11.6% at profile 4d00016.

Losses have occurred throughout the management unit over this period.
This newsletter has been published by the Environment Agency to update members of the public on the improvements to the sea defences between Widewater Lagoon and Brooklands Pleasure Ground. The background to the entire scheme can be viewed on the reverse of this newsletter. Additional information will be published in further newsletters and displayed on notice boards close to the construction site.

**Work continues on Phase 3**

Since February 2005 work has continued on Phase 3 of the Shoreham and Lancing Sea Defences. This final phase over 1.2km of coastline will complete a 3.3km line of upgraded sea defences, stretching from Shoreham Beach to Brooklands.

To date the specialist marine contractor Van Oord has constructed all of the 12 rock groynes, using limestone imported from Boulogne in northern France.

Following completion of the groynes, shingle beach material is being delivered to increase the width of the beach crest and slope to improve the standard of flood protection.

Beach material is being dredged from a licensed site to the east of the Isle of Wight by the dredger, Volvox Scaldia, and pumped ashore on most high tides seaward of Beach Green via a 850m submerged pipeline.

![Completed groynes at west end of Phase 3 site](image1)

![Shingle recharge material being pumped ashore](image2)

![Shingle stockpile at the crest of the beach](image3)
Trucking of shingle along the beach is predominantly a weekday 7am till 7pm operation, however there may need to be occasional weekend working to maintain the Programme to complete the works before the holiday season.

Shingle pumping will continue on a tidal basis, therefore machine movements at the Beach Green end of the site will be necessary when high tides fall in the early hours of the morning.

Works are currently on programme and Phase 3 is due for completion by the start of July 2005. The beach between Beach Green and Brooklands will remain closed until this time. We thank you for your continued patience during these essential works.

Further Information

The Environment Agency and Worthing Borough Council are undertaking this scheme in partnership with consultants, Halcrow Group Ltd and the Principal Contractor, Van Oord UK. To obtain further information about this scheme please contact Stuart Meakins, the Environment Agency’s Project Manager for the scheme, on 01903 832 034 email stuart.meakins@environment-agency.gov.uk. Alternatively, you can contact Andy Schofield of Halcrow on 01793 812 479.

Background to the Scheme

The scheme has been developed by the Agency's consultant, Halcrow Group Ltd, in line with the recommendations of the Coastal Defence Strategy for this coastline. The scheme will provide an improved flood defence standard (1 in 100 year, or 1%) to over 1300 residential and commercial properties in the areas of East Worthing, Lancing and West Shoreham.

The whole scheme includes the provision of 33 rock groynes and the importation of shingle to provide improved protection from flooding by the sea. Flooding can occur in this area either through overtopping i.e. the sea washing over the top of the defence, or breaching, where the defence collapses allowing the sea to flood the land behind.

The shingle bank provides the defence with the groynes keeping the majority of the shingle in place. This will provide a stable beach, which will not only provide an improved sea defence, but also a better amenity beach for beach hut users, bathers and the like, and a habitat in places for specialist natural vegetation.
Brighton & Hove City Council would like to thank the following for their help and co-operation during the development of the scheme:

- Ovingdean Residents and Preservation Society
- Brighton Marina Company
- Rottingdean Parish Council
- Rottingdean Preservation Society
- St Dunstan's
- Roedean School
- Saltdean Residents Association
- Southern Water PLC
- English Nature

The scheme will cost £10.8 million, funded by the Department for Environment, Food and Rural Affairs (DEFRA - formerly MAFF) and the Department for Transport (DfT - formerly DTLR).

Engineer to the contract:
The Highways Manager, Brighton & Hove City Council, Telephone 01273 290000

Engineering consultants:
Posford Haskoning

Brighton & Hove City Council

Brighton Marina to Saltdean Sea Defence Work

Final Phase
Marina to Ovingdean

History

The original Undercliff Walk was built in the 1930's as a job creation scheme during the recession.

It was designed by the Borough Engineer David Edwards and cost £360,000. The Walk was formally opened on 4 July 1933 at Ovingdean Gap by the Minister of Health Sir Hilton Young.

The wall was made out of 150,000 flint faced concrete blocks, the space between the wall and the cliff was filled with chalk hacked from the cliff face, and the Walk itself with the splash wall at the foot of the cliffs, was laid over the top.

The groynes were built out of mass or reinforced concrete or flint faced blocks at various times since the 1870s.
The final phase between the Marina and Ovingdean is programmed to begin mid-January 2003 and will take approximately 18 months. In order to ensure public safety during the construction period and to enable the contractor to proceed quickly, the Undercliff Walk will be closed from the access ramp above the Marina boatyard to the east side of Ovingdean for the duration of the work. There will also be closures of the section between Ovingdean and Rottingdean during work periods to allow vehicles to access the site via the ramp at Rottingdean. Access to the western end will be via the cliff path from the A259 at the Roedean Cafe.

Construction sites are dangerous places and the public is asked to keep away. Where possible, areas of the Undercliff Walk will be re-opened temporarily during the construction period. Groups wishing to visit the site to view and discuss the work should contact the council.

Plans showing the detail of the scheme can be viewed at Ovingdean Village Hall, on Sundays between 12 and 2pm and Tuesdays and Fridays between 8pm and 10.30pm.

The works will involve
- new cafe, toilets and chalets at Ovingdean
- the encasement of the old seawall with precast flint-faced concrete blocks
- placement of granite boulders along the foot of the wall for protection
- renovation of three of the old groynes at Ovingdean and six next to the Marina
- maintenance of the beaches where the groynes are to be renovated
- reconstruction of the promenade and splash wall
- installation of measures to protect pedestrians from falls of chalk and flint

In order to minimise the number of lorry movements on to and off the site, it is hoped to bring the granite boulders to the site by sea and to crush the old concrete arising from the work for use as fill material.

The quantities of materials to be used are estimated to be:
- 19,000 cubic metres of concrete
- 400 flint-faced concrete panels
- 1,400 tons of reinforcing steel
- 9,000 cubic metres of concrete removed from the existing defences, crushed and re-used
- 27,000 tons of granite boulders imported by sea, probably from Norway

The contractor
Harbour and General Works Ltd were formed in 1934 and are one of the leading maritime civil engineering contractors. In recent years they have completed schemes at Lancing, Reculver, Herne Bay, Deal, Kingsdown, and Bonchurch on the Isle of Wight. They have a large pool of experienced engineers and an excellent safety record.

The contractor will be moving site accommodation in before the work is due to start. Site offices will be located on the cliff top opposite the Roedean Cafe and there will be a site compound in the field opposite St Dunstan's.

The consultants
Posford Haskoning are part of the Dutch Royal Haskoning group and, as Posford Duvivier and before that Lewis & Duvivier, have worked for the council since the mid-1960's. On this scheme, they have prepared the design and will provide the site staff to supervise the contractor.

Also employed on this scheme has been geotechnical consultant High-Point Rendel, who contributed to the design of the rock fall protection measures - they were also the principle consultants on the cliff stabilisation scheme recently completed above the Marina.
Beach Change Summary - Spring 2004 to Spring 2005 (1 of 3)

Average % Change in Cross-Sectional Area
Spring 2004 - Spring 2005

- >30% (0)
- 16-30% (0)
- 5-15% (1)
- No Change
  - Less than 5% (10)
  - 5-15% (12)
- Erosion
  - 16-30% (0)
  - >30% (0)
Average % Change in Cross-Sectional Area
Spring 2004 - Spring 2005

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
<th>Count</th>
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<tr>
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<td></td>
<td>16-30%</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>&gt;30%</td>
<td>0</td>
</tr>
</tbody>
</table>

Accretion:
- Less than 5% (10)
- 5-15% (12)
- 16-30% (0)
- >30% (0)

Erosion:
- Less than 5% (0)
- 5-15% (0)
- 16-30% (0)
- >30% (0)
Average % Change in Cross-Sectional Area
Spring 2004 - Spring 2005

<table>
<thead>
<tr>
<th>Category</th>
<th>Range</th>
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<tr>
<td>Erosion</td>
<td>5-15%</td>
<td>12</td>
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<td>Erosion</td>
<td>16-30%</td>
<td>0</td>
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<tr>
<td>Erosion</td>
<td>&gt;30%</td>
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</tr>
<tr>
<td>Accretion</td>
<td>5-15%</td>
<td>1</td>
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<tr>
<td>Accretion</td>
<td>16-30%</td>
<td>0</td>
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<tr>
<td>Accretion</td>
<td>&gt;30%</td>
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</tr>
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</table>
Beach Change Summary - Spring 2003 to Spring 2005 (1 of 3)

Average % Change in Cross-Sectional Area
March 2003 - April / May / June 2005

Accretion
>30% (0)
16-30% (1)
5-15% (3)
No Change
Less than 5% (11)

Erosion
5-15% (8)
16-30% (0)
>30% (0)
Beach Change Summary - Spring 2003 to Spring 2005 (2 of 3)

Average % Change in Cross-Sectional Area
March 2003 - April / May / June 2005

- >30% (0)
- 16-30% (1)
- 5-15% (3)
- No Change
  - Less than 5% (11)
  - 5-15% (8)
- Erosion
  - 16-30% (0)
  - >30% (0)

Southeast Strategic Regional Coastal Monitoring Programme

Annual Report 2005
Average % Change in Cross-Sectional Area
March 2003 - April / May / June 2005

- **No Change**
  - Less than 5%: 11
  - 5-15%: 8

- **Accretion**
  - 16-30%: 1
  - 5-15%: 3

- **Erosion**
  - >30%: 0
  - 16-30%: 0
  - >30%: 0
% Change in Cross Sectional Area
April 2004 - April 2005

Accretion
- >30% (0)
- 16-30% (1)
- 5-15% (2)
- Less than 5% (3)
- 5-15% (11)
- >30% (0)

Erosion
- No Change (3)
- 16-30% (3)
- >30% (3)
- Less than 5% (3)
- 5-15% (3)
- >30% (3)

Foreshore Change Parameter
- Actual m2 Change in Cross-Sectional Area
- MU Boundary
- 4d01399
- 4d01433
- 4d01453
- 4d01483
- 4d01446
- 4d01449
- 4d01454
- 4d01458
- 4d01463
- 4d01468
- 4d01472
- 4d01476
- 4d01479

Southeast Strategic Regional Coastal Monitoring Programme
Annual Report 2005
% Change in Cross Sectional Area
April 2004 - April 2005

Accretion

>30% (0)
16-30% (1)
5-15% (2)
5-15% (11)
16-30% (0)
>30% (0)

Erosion

Less than 5% (3)
5-15% (11)

No Change

>30% (0)
16-30% (0)
>30% (0)

Actual m² Change in Cross-Sectional Area

MU Boundary

Foreshore Change Parameter

Actual m² Change in Cross-Sectional Area
% Change in Cross Sectional Area
March 2003 - April 2005

<table>
<thead>
<tr>
<th></th>
<th>&gt;30%</th>
<th>16-30%</th>
<th>5-15%</th>
<th>Less than 5%</th>
<th>5-15%</th>
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<td></td>
</tr>
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</table>

No Change

0 200 400m
% Change in Cross Sectional Area
March 2003 - April 2005

Accretion
>30% (0)
16-30% (2)
5-15% (4)
Less than 5% (9)
5-15% (2)
16-30% (0)
>30% (0)

Erosion
No Change

Actual m² Change in Cross-Sectional Area

MU Boundary

4d01399

Actual m² Change in Cross-Sectional Area

0 200 400m
% Change in Cross Sectional Area
April 2004 - April 2005

-30% (0)
-20% to -15% (0)
-15% to -5% (1)
-5% to 0% (11)
0% to 5% (3)
5% to 15% (4)
15% to 20% (1)
>20% (0)

Accretion
Erosion
No Change
Less than 5%
5-15%
16-30%
>30%

Foreshore Change Parameter
Actual m2 Change in Cross-Sectional Area

MU Boundary
Condition of Management Unit 4d-MU3 - Beach Change (1 of 2)

SDCG - Pagham to West Bognor Regis

% Change in Cross Sectional Area
April 2004 - April 2005

Accretion
- >30% (0)
- 16-30% (0)
- 5-15% (0)
- Less than 5% (12)

Erosion
- 5-15% (2)
- 16-30% (0)
- >30% (0)

Actual Change in Cross Sectional Area (m²)

Foreshore Change Parameter

MU Boundary

Legend:
- No Change
- Accretion
- Erosion

Scale:
0 200 400 m

0 200 400 m
% Change in Cross Sectional Area
March 2003 - April 2005

- >30% (0)
- 16-30% (0)
- 5-15% (0)
- Less than 5% (13)
- 5-15% (1)
- 16-30% (0)
- >30% (0)
Condition of Management Unit 4d-MU3 - Beach Change (2 of 2)

Southeast Strategic Regional Coastal Monitoring Programme
Annual Report 2005

SDCG - Pagham to West Bognor Regis

% Change in Cross Sectional Area
March 2003 - April 2005

- No Change: (13)
- Less than 5%: (1)
- 5-15%: (0)
- 16-30%: (0)
- >30%: (0)
Southeast Strategic Regional Coastal Monitoring Programme

% Change in Cross Sectional Area
April 2004 - April 2005

-30% (0)
-16-30% (0)
-5-15% (2)
Less than 5% (11)
5-15% (28)
16-30% (7)
>30% (1)

Foreshore Change Parameter

Actual m2 Change in Cross-Sectional Area

SDCG - West Bognor Regis to Elmer

Condition of Management Unit 4d-MU4 - Beach Change (1 of 4)
% Change in Cross Sectional Area

- >30%  (0)
- 16-30%  (0)
- 5-15%  (2)
- Less than 5%  (11)
- 5-15%  (28)
- 16-30%  (7)
- >30%  (1)

No Change
% Change in Cross Sectional Area

March 2003 - April 2005

- >30% (0)
- 16-30% (0)
- 5-15% (2)
- Less than 5% (11)
- 5-15% (25)
- 16-30% (11)
- >30% (0)

Accretion: 3
Erosion: 3
No Change: 3

Actual m2 Change in Cross-Sectional Area

MU Boundary

SDCG - West Bognor Regis to Elmer
Annual Report 2005
Southeast Strategic Regional Coastal Monitoring Programme
Condition of Management Unit 4d-MU4 - Beach Change (4 of 4)

Southeast Strategic Regional Coastal Monitoring Programme

SDCG - West Bognor Regis to Elmer

% Change in Cross Sectional Area
March 2003 - April 2005

- >30% (0)
- 16-30% (0)
- 5-15% (2)
- Less than 5% (11)
- 5-15% (25)
- >30% (0)
- No Change (3)

Actual m² Change in Cross-Sectional Area

MU Boundary
% Change in Cross Sectional Area
March 2003 - April 2005

Accretion
- >30% (0)
- 16-30% (0)
- 5-15% (0)
- Less than 5% (3)
Erosion
- 5-15% (5)
- 16-30% (2)
- >30% (0)

No Change
- (3)
% Change in Cross Sectional Area
April 2004 - April 2005

-30% (0)  
16-30% (0)  
5-15% (2)  
Less than 5% (13)  
5-15% (6)  
16-30% (2)  
>30% (0)  

No Change

Accretion

Erosion

Actual Change in Cross Sectional Area (m2)

Foreshore Change Parameter

MU Boundary

4d01399

Southeast Strategic Regional Coastal Monitoring Programme  
Annual Report 2005
### Condition of Management Unit 4d-MU7 - Beach Change (2 of 2)

#### Southeast Strategic Regional Coastal Monitoring Programme

#### SDCG - Littlehampton Harbour Mouth to Rustington

**Annual Report 2005**

% Change in Cross Sectional Area

- April 2004 - April 2005

<table>
<thead>
<tr>
<th>Parameter</th>
<th>MU Boundary</th>
<th>% Change in Cross Sectional Area (m²)</th>
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<tbody>
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<td>16-30% (0)</td>
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<td>5-15% (0)</td>
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<td>16-30% (0)</td>
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<tr>
<td></td>
<td></td>
<td>&gt;30% (0)</td>
</tr>
</tbody>
</table>

Actual Change in Cross Sectional Area (m²)

- 4d01399
Southeast Strategic Regional Coastal Monitoring Programme

Annual Report 2005

SDCG - Rustington to Goring-by-Sea

% Change in Cross Sectional Area
April 2004 - April 2005

-30%   (0)
16-30%   (0)
5-15%   (0)
Less than 5%   (25)
5-15%   (21)
16-30%   (2)
>30%   (0)
No Change
Erosion
Accretion

Actual Change in Cross Sectional Area (m²)
UN Boundary
Foreshore Change Parameter

4d01399
4d01003
% Change in Cross Sectional Area
April 2004 - April 2005

Accretion
- >30% (0)
- 16-30% (0)
- 5-15% (0)
- Less than 5% (25)
- 5-15% (21)
- 16-30% (2)
- >30% (0)

Erosion
- No Change

Actual Change in Cross Sectional Area (m2)

Foreshore Change Parameter

MU Boundary
% Change in Cross Sectional Area
April 2004 - April 2005

<table>
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<tr>
<th>% Change</th>
<th>No Change</th>
<th>5-15%</th>
<th>16-30%</th>
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<td>5-15%</td>
<td>(21)</td>
<td>(3)</td>
<td>(2)</td>
<td>(0)</td>
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<td>16-30%</td>
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<td>(0)</td>
<td>(0)</td>
<td>(0)</td>
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<td>(0)</td>
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Actual Change in Cross Sectional Area (m²)
% Change in Cross Sectional Area
April 2004 - April 2005

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<th>16-30%</th>
<th>5-15%</th>
<th>Less than 5%</th>
<th>5-15%</th>
<th>16-30%</th>
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<td>(0)</td>
<td>(25)</td>
<td>(2)</td>
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<td>200m</td>
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<td>200m</td>
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Southeast Strategic Regional Coastal Monitoring Programme
Annual Report 2005
Condition of Management Unit 4d-MU8A - Beach Change (1 of 4)

Southeast Strategic Regional Coastal Monitoring Programme

Annual Report 2005

% Change in Cross Sectional Area
March 2003 - April 2005

- >30% (1)
- 16-30% (0)
- 5-15% (3)
- Less than 5% (24)
- 5-15% (17)
- No Change (3)
- >30% (0)

Actual Change in Cross Sectional Area (m2)

SDCG - Rustington to Goring-by-Sea
% Change in Cross Sectional Area
March 2003 - April 2005

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<td>5-15%</td>
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<tr>
<td>Less than 5%</td>
<td>24</td>
</tr>
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<td>No Change</td>
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<tr>
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Actual Change in Cross Sectional Area (m²)

MU Boundary

SDCG - Rustington to Goring-by-Sea
% Change in Cross Sectional Area

March 2003 - April 2005

Accretion
- >30% (1)
- 16-30% (0)
- 5-15% (3)
- Less than 5% (24)
- 5-15% (17)
- >30% (0)

No Change
- Less than 5% (24)
- 5-15% (17)
- >30% (0)

Erosion
- >30% (0)

Actual Change in Cross Sectional Area (m²)

MU Boundary
% Change in Cross Sectional Area
March 2003 - April 2005

-30%   (0)
-15%   (3)
-5%    (24)
No Change (24)
15%    (17)
30%    (2)
>30%   (0)
Accretion

Erosion

Actual Change in Cross Sectional Area (m2)
Southeast Strategic Regional Coastal Monitoring Programme

Annual Report 2005

Condition of Management Unit 4d-MU8B - Beach Change (1 of 4)

SDCG - Goring-by-Sea to Lancing

% Change in Cross Sectional Area

April 2004 - April 2005

-30% (0)
16-30% (2)
5-15% (1)
Less than 5% (25)
5-15% (11)
16-30% (0)
>30% (0)

No Change

Accretion

Erosion

Actual Change in Cross Sectional Area (m²)

4d01399

Foreshore Change Parameter

MU Boundary
Condition of Management Unit 4d-MU8B - Beach Change (3 of 4)

SDCG - Goring-by-Sea to Lancing

Annual Report 2005

% Change in Cross Sectional Area
April 2004 - April 2005

-30% (0)
16-30% (2)
5-15% (1)
Less than 5% (25)
5-15% (11)
16-30% (0)
>30% (0)
No Change

Accretion
Erosion

Foreshore Change Parameter
Actual Change in Cross Sectional Area (m²)

MU Boundary

Southeast Strategic Regional Coastal Monitoring Programme

SDCG - Goring-by-Sea to Lancing

Annual Report 2005
% Change in Cross Sectional Area
April 2004 - April 2005

-30% (0)
16-30% (2)
5-15% (1)
Less than 5% (25)
5-15% (11)
>30% (0)
No Change

No Change

Actual Change in Cross Sectional Area (m2)

Accretion
Erosion
% Change in Cross Sectional Area
March 2003 - April 2005

-35% (1)
-25% (0)
-15% (7)
Less than 5% (15)
5-15% (16)
16-30% (0)
>30% (0)
No Change (3)

Actual Change in Cross Sectional Area (m²)

Southeast Strategic Regional Coastal Monitoring Programme
Annual Report 2005
Condition of Management Unit 4d-MU8B - Beach Change (3 of 4)

SDCG - Goring-by-Sea to Lancing Annual Report 2005

% Change in Cross Sectional Area
March 2003 - April 2005

- >30%   (1)
- 16-30%   (0)
- 5-15%   (7)
- Less than 5%   (15)
- No Change
- 5-15%   (16)
- 16-30%   (0)
- >30%   (0)

Actual Change in Cross Sectional Area (m²)

MU Boundary

4d01399

Actual Change in Cross Sectional Area (m²)
% Change in Cross Sectional Area
March 2003 - April 2005

- >30% (1)
- 16-30% (0)
- 5-15% (7)
- Less than 5% (15)
- 5-15% (16)
- 16-30% (0)
- >30% (0)

Actual Change in Cross Sectional Area (m²)

MU Boundary

SDCG - Goring-by-Sea to Lancing
% Change in Cross Sectional Area
April 2004 - June 2005

- >30% (6)
- 16-30% (4)
- 5-15% (5)
- Less than 5% (21)
- 5-15% (0)
- 16-30% (0)

Foreshore Change Parameter

Actual Change in Cross Sectional Area (m^2)

No Change

Accretion

Erosion

SDCG - Lancing to Shoreham Harbour Arm (West)
% Change in Cross Sectional Area
April 2004 - June 2005

- >30% (6)
- 16-30% (4)
- 5-15% (5)
- Less than 5% (21)
- 5-15% (0)
- 16-30% (0)
- >30% (0)

Actual Change in Cross Sectional Area (m²)
Accretion
- No Change
- Erosion

Foreshore Change Parameter
Condition of Management Unit 4d-MU9A - Beach Change (2 of 4)

SDCG - Lancing to Shoreham Harbour Arm (West)

No Window

Annual Report 2005

SDCG - Lancing to Shoreham Harbour Arm (West)

% Change in Cross Sectional Area

March 2003 - June 2005

- Foreshore Change Parameter
- Actual Change in Cross Sectional Area (m²)

Accretion

- >30% (9)
- 16-30% (4)
- 5-15% (9)
- Less than 5% (14)

Erosion

- 5-15% (0)
- 16-30% (0)
- >30% (0)

No Change

0 100 200m

0 100 200m 200m 200m 200m
Condition of Management Unit 4d-MU9A - Beach Change (3 of 4)

SDCG - Lancing to Shoreham Harbour Arm (West)

Annual Report 2005

% Change in Cross Sectional Area

March 2003 - June 2005

- >30% \( (9) \)
- 16-30% \( (4) \)
- 5-15% \( (9) \)
- Less than 5% \( (14) \)
- 5-15% \( (0) \)
- 16-30% \( (0) \)
- >30% \( (0) \)

No Change

Accretion

Erosion

Foreshore Change Parameter

Actual Change in Cross Sectional Area (m²)

MU Boundary
% Change in Cross Sectional Area

March 2003 - June 2005

-30% (9)
-16-30% (4)
-5-15% (9)
Less than 5% (14)
-5-15% (0)
-16-30% (0)
>30% (0)

No Change

Accretion

Erosion
% Change in Cross Sectional Area
April 2004 - May 2005

<table>
<thead>
<tr>
<th>Change</th>
<th>Foreshore Parameter</th>
</tr>
</thead>
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<tr>
<td>&gt;30%</td>
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<td>16-30%</td>
<td>(0)</td>
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<tr>
<td>5-15%</td>
<td>(4)</td>
</tr>
<tr>
<td>Less than 5%</td>
<td>(7)</td>
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<tr>
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<td>16-30%</td>
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<td>&gt;30%</td>
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SDCG - Shoreham Harbour Arm (East) to Aldrington
% Change in Cross Sectional Area
April 2004 - May 2005

<table>
<thead>
<tr>
<th>% Change</th>
<th>Count</th>
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<tbody>
<tr>
<td>&gt;30%</td>
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<tr>
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<tr>
<td>5-15%</td>
<td>4</td>
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<tr>
<td>Less than 5%</td>
<td>7</td>
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<tr>
<td>16-30%</td>
<td>2</td>
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<tr>
<td>&gt;30%</td>
<td>0</td>
</tr>
</tbody>
</table>

Accretion
No Change
Erosion

Actual Change in Cross Sectional Area (m²)

MU Boundary
Foreshore Change Parameter

SDCG - Shoreham Harbour Arm (East) to Aldrington
Annual Report 2005
Condition of Management Unit 4d-MU9B - Beach Change (1 of 2)

Southeast Strategic Regional Coastal Monitoring Programme

Annual Report 2005

SDCG - Shoreham Harbour Arm (East) to Aldrington

% Change in Cross Sectional Area
March 2003 - May 2005

- >30% (0)
- 16-30% (3)
- 5-15% (5)
- Less than 5% (5)
- 5-15% (5)
- 16-30% (2)
- >30% (0)

Actual Change in Cross Sectional Area (m²)

MU Boundary

0 100 200m
### % Change in Cross Sectional Area

**April 2004 - May 2005**

- **Accretion**
  - >30% (0)
  - 16-30% (0)
  - 5-15% (8)
  - Less than 5% (16)
  - 5-15% (12)
  - 16-30% (1)
  - >30% (0)

- **Erosion**
  - 5-15% (12)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>MU Boundary</th>
</tr>
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<tbody>
<tr>
<td>Foreshore Change</td>
<td>4d01399</td>
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<tr>
<td>Actual Change in Cross Sectional Area</td>
<td>-3m²</td>
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</table>
% Change in Cross Sectional Area
April 2004 - May 2005

Accretion
>30% (0)
16-30% (0)
5-15% (8)
Less than 5% (16)
5-15% (12)
16-30% (1)
>30% (0)

No Change
Erosion

Foreshore Change Parameter
Actual Change in Cross Sectional Area (m²)
% Change in Cross Sectional Area
April 2004 - May 2005

<table>
<thead>
<tr>
<th>% Change</th>
<th>Count</th>
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<tr>
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<td>12</td>
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<tr>
<td>16-30%</td>
<td>1</td>
</tr>
<tr>
<td>&gt;30%</td>
<td>0</td>
</tr>
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</table>

No Change:

-3-3-3-3

Actual Change in Cross Sectional Area (m2)

4d01399

SDCG - Aldrington to Brighton Marina (Western Arm)
% Change in Cross Sectional Area
March 2003 - May 2005

Accretion
- >30% (3)
- 16-30% (3)
- 5-15% (9)
- Less than 5% (13)
- 5-15% (6)
- 16-30% (3)
- >30% (0)

Erosion
- No Change

Actual Change in Cross Sectional Area (m²)
Condition of Management Unit 4d-MU10 - Beach Change (2 of 4)

% Change in Cross Sectional Area
March 2003 - May 2005

Accretion
>30% (3)
16-30% (3)
5-15% (9)
Less than 5% (13)

Erosion
5-15% (6)
16-30% (3)
>30% (0)

SDCG - Aldrington to Brighton Marina (Western Arm)
% Change in Cross Sectional Area
March 2003 - May 2005

Accretion
- >30%   (3)
- 16-30%  (3)
- 5-15%   (9)
- Less than 5% (13)
- 5-15%   (6)
- 16-30%  (3)
- >30%    (0)

Erosion
- No Change

% Change in Cross Sectional Area (m2)
MU Boundary
Actual Change in Cross Sectional Area (m2)
% Change in Cross Sectional Area
March 2003 - May 2005

Accretion
- >30% (3)
- 16-30% (3)
- 5-15% (9)
- Less than 5% (13)
- 5-15% (6)
- 16-30% (3)
- >30% (0)

No Change

Erosion

Actual Change in Cross Sectional Area (m²)
Condition of Management Unit 4d-MU12 - Beach Change (1 of 3)

Southeast Strategic Regional Coastal Monitoring Programme

Annual Report 2005

% Change in Cross Sectional Area

April 2004 - May 2005

<table>
<thead>
<tr>
<th>Change</th>
<th>Percentage</th>
<th>Count</th>
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<tr>
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<tr>
<td></td>
<td>5-15%</td>
<td>(1)</td>
</tr>
<tr>
<td></td>
<td>Less than 5%</td>
<td>(5)</td>
</tr>
<tr>
<td>Erosion</td>
<td>5-15%</td>
<td>(11)</td>
</tr>
<tr>
<td></td>
<td>16-30%</td>
<td>(6)</td>
</tr>
<tr>
<td></td>
<td>&gt;30%</td>
<td>(2)</td>
</tr>
</tbody>
</table>

SDCG - Brighton Marina (Eastern Arm) to Saltdean
**% Change in Cross Sectional Area**

April 2004 - May 2005

- **Accretion**
  - >30% (0)
  - 16-30% (2)
  - 5-15% (1)
  - Less than 5% (5)
  - 5-15% (11)
  - 16-30% (6)
  - >30% (2)

- **Erosion**
  - No Change

**Foreshore Change Parameter**

Actual Change in Cross Sectional Area (m²)

MU Boundary
Condition of Management Unit 4d-MU12 - Beach Change (3 of 3)

SDCG - Brighton Marina (Eastern Arm) to Saltdean

% Change in Cross Sectional Area
April 2004 - May 2005

- >30% (0)
- 16-30% (2)
- 5-15% (1)
- Less than 5% (5)
- 5-15% (11)
- 16-30% (6)
- >30% (2)

No Change
Accretion
Erosion

Actual Change in Cross Sectional Area (m²)

Foreshore Change Parameter

MU Boundary

4d01399
% Change in Cross Sectional Area
March 2003 - May 2005

-30% (2)
-16-30% (2)
-5-15% (6)
Less than 5% (9)
-5-15% (5)
-16-30% (3)
-30% (0)

Accretion

Erosion

No Change

MU Boundary

Actual Change in Cross Sectional Area (m²)
% Change in Cross Sectional Area
March 2003 - May 2005

Accretion
- >30% (2)
- 16-30% (2)
- 5-15% (6)
No Change
- Less than 5% (9)
- 5-15% (5)
- 16-30% (3)
- >30% (0)

Actual Change in Cross Sectional Area (m²)
### Condition of Management Unit 4d-MU12 - Beach Change (3 of 3)

SDCG - Brighton Marina (Eastern Arm) to Saltdean

#### Annual Report 2005

**% Change in Cross Sectional Area**

March 2003 - May 2005

<table>
<thead>
<tr>
<th>Change</th>
<th>Count</th>
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<tbody>
<tr>
<td>&gt;30%</td>
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<tr>
<td>5-15%</td>
<td>6</td>
</tr>
<tr>
<td>Less than 5%</td>
<td>9</td>
</tr>
<tr>
<td>5-15%</td>
<td>5</td>
</tr>
<tr>
<td>16-30%</td>
<td>3</td>
</tr>
<tr>
<td>&gt;30%</td>
<td>0</td>
</tr>
</tbody>
</table>

- **Accretion**
  - >30% (2)
  - 16-30% (2)
  - 5-15% (6)
  - Less than 5% (9)
- **Erosion**
  - 5-15% (5)
  - 16-30% (3)
  - >30% (0)

#### Actual Change in Cross Sectional Area (m²)

![Map with beach changes and labels](image)

- MU Boundary
- Actual Change in Cross Sectional Area (m²)
% Change in Cross Sectional Area
April 2004 - May 2005

Accretion
- >30% (0)
- 16-30% (0)
- 5-15% (0)

No Change
- Less than 5% (2)
- 5-15% (2)
- 16-30% (2)
- >30% (0)

Erosion

No Change

Foreshore Change Parameter

Actual Change in Cross Sectional Area (m2)
% Change in Cross Sectional Area
March 2003 - May 2005

- Accleration
  - >30%  (0)
  - 16-30%  (0)
  - 5-15%  (1)
- No Change
  - Less than 5%  (2)
  - 5-15%  (1)
- Erosion
  - 16-30%  (2)
  - >30%  (0)

Actual Change in Cross Sectional Area (m2)
% Change in Cross Sectional Area
April 2004 - May 2005

- >30% (0)
- 16-30% (0)
- 5-15% (0)
- Less than 5% (6)
- 5-15% (3)
- 16-30% (1)
- >30% (0)

Southeast Strategic Regional Coastal Monitoring Programme
Annual Report 2005
Condition of Management Unit 4d-MU13B - Beach Change (1 of 2)

Southeast Strategic Regional Coastal Monitoring Programme

Annual Report 2005

SDCG - Telscombe to Peacehaven Heights

% Change in Cross Sectional Area
March 2003 - May 2005

- >30% (0)
- 16-30% (3)
- 5-15% (6)
- Less than 5% (1)
- 5-15% (0)
- 16-30% (0)
- >30% (0)

Accretion

Erosion

No Change

Actual Change in Cross Sectional Area (m²)

MU Boundary

4d01399
% Change in Cross Sectional Area
March 2003 - May 2005

<table>
<thead>
<tr>
<th>% Change</th>
<th>Count</th>
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<tbody>
<tr>
<td>&gt;30%</td>
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<tr>
<td>5-15%</td>
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<tr>
<td>16-30%</td>
<td>0</td>
</tr>
<tr>
<td>&gt;30%</td>
<td>0</td>
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Actual Change in Cross Sectional Area (m2)
% Change in Cross Sectional Area
April 2004 - May 2005

- >30% (0)
- 16-30% (1)
- 5-15% (0)
- Less than 5% (4)
- 5-15% (2)
- 16-30% (2)
- >30% (2)

Southeast Strategic Regional Coastal Monitoring Programme
Annual Report 2005
% Change in Cross Sectional Area
April 2004 - May 2005

-30% (0)
-16-30% (1)
-5-15% (0)
Less than 5% (4)
5-15% (2)
5-15% (1)
>30% (2)

Foreshore Change Parameter
Actual Change in Cross Sectional Area (m²)
% Change in Cross Sectional Area
March 2003 - May 2005

<table>
<thead>
<tr>
<th>Change</th>
<th>Frequency</th>
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<tbody>
<tr>
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<tr>
<td>5-15%</td>
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<tr>
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<td>6</td>
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<tr>
<td>5-15%</td>
<td>1</td>
</tr>
<tr>
<td>16-30%</td>
<td>0</td>
</tr>
<tr>
<td>&gt;30%</td>
<td>2</td>
</tr>
</tbody>
</table>

No Change

Accretion

Erosion
% Change in Cross Sectional Area
March 2003 - May 2005

- >30% (1)
- 16-30% (0)
- 5-15% (0)
- Less than 5% (8)
- 5-15% (1)
- 16-30% (1)
- >30% (2)

No Change
Erosion
Accretion

Actual Change in Cross Sectional Area (m²)
% Change in Cross Sectional Area
April 2004 - May 2005

Accretion
- >30% (0)
- 16-30% (0)
- 5-15% (0)

No Change
- Less than 5% (1)
- 5-15% (2)
- 16-30% (0)
- >30% (0)

Erosion
- >30% (0)
- 16-30% (0)
- 5-15% (0)
- Less than 5% (1)

SDCG - (Newhaven Harbour (West Arm) - Tide Mills)
% Change in Cross Sectional Area
March 2003 - May 2005

- >30% (0)
- 16-30% (0)
- 5-15% (0)
- Less than 5% (1)
- 5-15% (2)
- 16-30% (3)
- >30% (0)

Accretion
No Change
Erosion

Actual Change in Cross Sectional Area (m²)

SDCG - (Newhaven Harbour (West Arm) - Tide Mills)
% Change in Cross Sectional Area
April 2004 - May 2005

<table>
<thead>
<tr>
<th>% Change</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;30%</td>
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<tr>
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<tr>
<td>16-30%</td>
<td>1</td>
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<tr>
<td>&gt;30%</td>
<td>0</td>
</tr>
</tbody>
</table>

Actual Change in Cross Sectional Area (m²)

- Accretion
- Erosion
- MU Boundary
- No Change

Southeast Strategic Regional Coastal Monitoring Programme
Annual Report 2005

SDCG - Tide Mills to Seaford Head
% Change in Cross Sectional Area
April 2004 - May 2005

- >30% (0)
- 16-30% (3)
- 5-15% (7)
- Less than 5% (6)
- 5-15% (6)
- >30% (0)

No Change
Accretion
Erosion

MU Boundary
Actual Change in Cross Sectional Area (m2)
### Condition of Management Unit 4d-MU15B - Beach Change (1 of 3)

#### Southeast Strategic Regional Coastal Monitoring Programme

**Annual Report 2005**

<table>
<thead>
<tr>
<th>% Change in Cross Sectional Area</th>
<th>March 2003 - May 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accretion</strong></td>
<td></td>
</tr>
<tr>
<td>&gt;30%</td>
<td>(0)</td>
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<tr>
<td>16-30%</td>
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<td>(7)</td>
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<td>Less than 5%</td>
<td>(6)</td>
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<tr>
<td><strong>Erosion</strong></td>
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<tr>
<td>5-15%</td>
<td>(4)</td>
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<tr>
<td>16-30%</td>
<td>(1)</td>
</tr>
<tr>
<td>&gt;30%</td>
<td>(9)</td>
</tr>
</tbody>
</table>

#### Actual Change in Cross Sectional Area (m²)

- **MU Boundary**: 4d01399

#### SDCG - Tide Mills to Seaford Head

The table above summarizes the percentage change in cross-sectional area for various categories from March 2003 to May 2005. The categories include Accretion and Erosion, with specific percentage ranges and corresponding counts. The diagram illustrates the geographic location and changes in beach profile, with various markers indicating specific points of interest. The MU Boundary is marked as 4d01399. The actual change in cross-sectional area is visually represented along the coastline.
% Change in Cross Sectional Area
April 2004 - May 2005

Erosion
No Change
Accretion

>30% (1)
16-30% (0)
5-15% (0)
Less than 5% (2)
5-15% (1)
16-30% (0)
>30% (0)

Actual Change in Cross Sectional Area (m²)

东南沿海战略区域海岸监测计划

年度报告 2005
% Change in Cross Sectional Area
April 2004 - May 2005

-30% (1)
16-30% (0)
5-15% (0)
Less than 5% (2)
5-15% (1)
16-30% (0)
>30% (0)

No Change

Accretion

Erosion

Actual Change in Cross Sectional Area (m²)

SDCG - Seaford Head to Cuckmere Haven

Southeast Strategic Regional Coastal Monitoring Programme

Annual Report 2005
% Change in Cross Sectional Area
March 2003 - May 2005

<table>
<thead>
<tr>
<th>Change</th>
<th>Count</th>
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<tbody>
<tr>
<td>&gt;30%</td>
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<tr>
<td>16-30%</td>
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<tr>
<td>5-15%</td>
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<tr>
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<tr>
<td>5-15%</td>
<td>0</td>
</tr>
<tr>
<td>16-30%</td>
<td>0</td>
</tr>
<tr>
<td>&gt;30%</td>
<td>0</td>
</tr>
</tbody>
</table>

Actual Change in Cross Sectional Area (m²)

- MU Boundary
- Actual Change in Cross Sectional Area (m²)
% Change in Cross Sectional Area
April 2004 - May 2005

<table>
<thead>
<tr>
<th>% Change</th>
<th>MU Boundary</th>
<th>Actual Change in Cross Sectional Area (m²)</th>
</tr>
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<tr>
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<td>(0)</td>
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<tr>
<td>Less than 5%</td>
<td>(4)</td>
<td></td>
</tr>
<tr>
<td>5-15%</td>
<td>(3)</td>
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<tr>
<td>16-30%</td>
<td>(1)</td>
<td></td>
</tr>
<tr>
<td>&gt;30%</td>
<td>(0)</td>
<td></td>
</tr>
</tbody>
</table>

Accretion:
- >30% (0)
- 16-30% (0)
- 5-15% (0)

No Change:
- Less than 5% (4)
- 5-15% (3)

Erosion:
- >30% (0)
## Condition of Management Unit 4d-MU17 - Beach Change

### Southeast Strategic Regional Coastal Monitoring Programme

#### Annual Report 2005

<table>
<thead>
<tr>
<th>% Change in Cross Sectional Area</th>
<th>March 2003 - May 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accretion</strong></td>
<td></td>
</tr>
<tr>
<td>&gt;30%</td>
<td>(0)</td>
</tr>
<tr>
<td>16-30%</td>
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<td>(1)</td>
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<tr>
<td>Less than 5%</td>
<td>(4)</td>
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<td>5-15%</td>
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<td>16-30%</td>
<td>(0)</td>
</tr>
<tr>
<td>&gt;30%</td>
<td>(0)</td>
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</tbody>
</table>

The Actual Change in Cross Sectional Area (m²) is shown for the MU Boundary (13) 4d00053 (-55) 4d00055 (-2) 4d00060 (-56) 4d00063 (13) 4d00065 (0) 4d00067 (41) 4d00069 (3) 3000Pr 4d01399 4d00056 4d00058 4d00059.

### SDCG - Cuckmere Haven

#### % Change in Cross Sectional Area

- **Accretion**
  - >30%: 0
  - 16-30%: 0
  - 5-15%: 1
  - Less than 5%: 4
- **Erosion**
  - 5-15%: 3
  - 16-30%: 0
  - >30%: 0

No Change

- 5-15%: 3
- 16-30%: 0
- >30%: 0

The MU Boundary is indicated by the line on the map.
% Change in Cross Sectional Area
April 2004 - May 2005

- >30% (0)
- 16-30% (0)
- 5-15% (0)
- Less than 5% (2)
- 5-15% (2)
- 16-30% (1)
- >30% (1)
Condition of Management Unit 4d-MU18A - Beach Change (1 of 2)

Southeast Strategic Regional Coastal Monitoring Programme

% Change in Cross Sectional Area
March 2003 - May 2005

<table>
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<tr>
<th>Acceleration</th>
<th>&gt;30%</th>
<th>16-30%</th>
<th>5-15%</th>
<th>Less than 5%</th>
<th>5-15%</th>
<th>16-30%</th>
<th>&gt;30%</th>
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Actual Change in Cross Sectional Area (m²)

SDCG - Cuckmere Haven (East) to Birling Gap
SDCG - Birling Gap

% Change in Cross Sectional Area
April 2004 - May 2005

<table>
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<tr>
<th>Parameter</th>
<th>No Change</th>
<th>5-15%</th>
<th>16-30%</th>
<th>&gt;30%</th>
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<td>(0)</td>
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</tbody>
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Actual Change in Cross Sectional Area (m2)

-3 4d01399

Foreshore Change Parameter

MU Boundary

Southeast Strategic Regional Coastal Monitoring Programme

Annual Report 2005
% Change in Cross Sectional Area
March 2003 - May 2005

-30%   (0)
16-30 %   (0)
5-15 %   (1)
Less than 5%   (0)
5-15 %   (1)
16-30 %   (0)
>30%   (0)

Actual Change in Cross Sectional Area (m²)