Dover is a shingle beach backed by a large Victorian sea wall. The unit also incorporates Shakespeare Beach to the west, which is a self-contained bay to the west of the Port. This was closed between autumn 2015 and spring 2017 due to a seawall failure that subsequently caused the main railway line between Dover and Folkestone to collapse. Consequently, no surveys were carried out on Shakespeare Beach in 2016.

**Survey outcome:**

There are no design levels for this unit.

In 2017, Shakespeare beach underwent repair works due to the sea wall failure, where rock armour was placed in front of the failed section of the wall. In the previous 2017 interim report, the CSA changes along Profiles 4c00052 – 4c00060 looked disproportionately large as the beach in 2017 was narrower. Consequently, this report has a new reference profile which compares the new structure profiles at Shakespeare Beach against 2017, thus the baseline plate for Shakespeare beach is set at 2017 in comparison to Harbour Beach which is still set to 2003.

4c00001 is now inaccessible and not exposed at MLWS and Profile 4c00027 no longer exists due to the construction of the new marina.

### Survey type | Survey dates | Comments
--- | --- | ---
**Most recent survey: Autumn 2018** | 06/11/2017 - 22/03/2018
Autumn to Spring | Along the main beach of Dover Harbour, there are four profiles; the two most central profiles show erosive changes. Profile 4c000119 has the larger loss of -16m² (-10%). The remaining two outer profiles have both accreted 10%; Profile 4c00008 has gained 13m² whereas Profile 4c00024 has gained 35m².

Shakespeare Beach shows the majority of profiles to have accreted with the most eastern profile accounting for this, with a large loss; Profile 4c00032 lost -51m² (-8%). The most westerly Profiles have the largest gains, specifically Profile 4c00060 at 21m² (38%).

Spring to Spring | 15/03/2017 - 22/03/2018
In Dover Harbour, the two most easterly profiles have low level changes. Profile 4c00024 has the largest overall change showing a gain of 43m² (13%). Profile 4c00019 on the other hand has a small loss of -9m² (-6%).

Shakespeare Beach shows accretion along the most
## Most recent survey: Autumn 2018

Central profiles, of which Profile 4c00042 has gained the most at 29m² (12%). The profiles either end of the unit have small losses; Profile 4c00032 has lost -29m² (-5%) and Profile 4c00060 has lost -7m² (-8%).

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<thead>
<tr>
<th>Survey type</th>
<th>Survey dates</th>
<th>Comments</th>
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<tbody>
<tr>
<td>Baseline to Spring</td>
<td>Profile Change (Harbour Beach)</td>
<td>Most recent survey: Autumn 2018 20/09/2003 22/03/2018 Dover Harbour beach shows three of four profiles have gained material and Profile 4c00011 lost -25m² (-27%). The most westerly profiles have the largest gains; Profile 4c00019 has gained 18m² (15%) and Profile 4c00024 has gained 25m² (7%).</td>
</tr>
<tr>
<td>Baseline to Spring</td>
<td>Profile Change (Shakespeare Beach)</td>
<td>15/03/2017 22/03/2018 This is the same analysis as given in the Spring to Spring comparison (see above for Shakespeare Beach).</td>
</tr>
<tr>
<td>Summer to Spring</td>
<td>Profile Change Summary</td>
<td>14/07/2017 22/03/2018 Dover Harbour, the majority of profiles show losses. The most central profiles; 4c00011 and 4c000019 have the largest erosive changes of -9m² (-12%) and -21m² (-13%), respectively. Conversely, Profile 4c00024 has a gain of 32m² (9%). Most of the profiles at Shakespeare Beach have low level changes. The central profiles have gained and the outer ends of the bay have lost material; Profile 4c00032 (east) has a small loss of -12m² (-2%). Profile 4c00037 (centre) has the largest overall change showing a gain of 27m² (9%). Similarly, Profile 4c00042 has gained 19m² (7%). The remaining profiles heading west have relatively low level accretive or erosive changes.</td>
</tr>
<tr>
<td>Spring to Autumn</td>
<td>Profile Change Summary</td>
<td>22/03/2018 12/10/2018 Within Dover Harbour beach, three of the profiles show low level changes. Profile 4c00024 has the largest change showing a loss of -47m² (-12%). On Shakespeare Beach, the majority of profiles show accretive but low level changes. There is a small gain on Profile 4c00047 of 14m² (6%). Profile 4c00060 is the only profile to have an erosive change showing a loss of -5m² (-6%).</td>
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South East Regional Coastal Monitoring Programme
Profile Change Summary for Autumn 2017 to Spring 2018

Annual Change in Cross-Sectional Area (m2)

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<th>( \text{ACCRETION} )</th>
<th>( &gt;30% )</th>
<th>( 15-30% )</th>
<th>( 5-15% )</th>
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Annual Change in Cross-Sectional Area (m²)

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Accretion

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<tbody>
<tr>
<td>-27%</td>
<td>-25%</td>
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</tbody>
</table>

Erosion

Less than 5% (no change)
South East Regional Coastal Monitoring Programme
Profile Change Summary for Baseline 2017 to Spring 2018

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Annual Change in Cross-Sectional Area (m²)

ACCRETION

- >30%
- 15-30%
- 5-15%
- Less than 5% (no change)

EROSION

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

Meters
South East Regional Coastal Monitoring Programme
Profile Change Summary for Summer 2017 to Spring 2018

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Annual Change in Cross-Sectional Area (m²)

- **ACCRETION**
  - >30%
  - 15-30%
  - 5-15%
- **EROSION**
  - >30%
  - 15-30%
  - 5-15%
  - Less than 5% (no change)
Profile Change Summary for Spring 2018 to Autumn 2018

Annual Change in Cross-Sectional Area (m²)

- **Accretion**
  - Less than 5% (no change)
  - 5-15%
  - 15-30%
  - >30%

- **Erosion**
  - Less than 5% (no change)
  - 5-15%
  - 15-30%
  - >30%

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Appendix A: Explanation of the Historic Summary Chart

The historic changes in Cross-Sectional Area (CSA) for each profile are summarised by identifying the historic highest and lowest CSA alongside the current CSA for each profile:

FIGURE A1: PRESENTATION OF STANDARD OF PROTECTION AND TRIGGER LEVELS
(A) HISTORIC VARIATION OF BEACH LEVELS (CSA)
(B) SUMMARY OF DATA, PINK BAR – CURRENT BEACH LEVEL, BLACK BARS – HISTORIC HIGH AND LOW
Appendix B: Profile Change Summary

Changes along individual profiles for a range of timeframes are summarised in a series of thematic maps on the previous pages. The maps show the location of each beach profile, superimposed on aerial photography (note the lines have been extended for clarity). The name of the profile, the percentage change of beach material and the change in m² has been including upon the line, which is illustrated in Figure B1.

FIGURE B1: PRESENTATION OF THE PROFILE CHANGE SUMMARY