ABSTRACT
This report updates the Committee on progress of research currently being undertaken by the University of Dundee on behalf of Angus Council and the Scottish Government into the beach erosion at Montrose, and the measures that have been undertaken to date.

1 RECOMMENDATIONS

It is recommended that the Committee:

(i) notes the contents of this report;

(ii) agrees to continue with the implementation of the findings of the Phase 2 Report titled, “Management of Erosion at Montrose”, which has been prepared for the council by the University of Dundee;

(iii) agrees to the Head of Roads continuing formal discussions / negotiations with the Montrose Port Authority regarding the findings of the Phase 2 Report;

(iv) agrees to the Head of Roads continuing to convene further stakeholder meetings to discuss the implementation of the findings of the Phase 2 Report and the proposals for Phase 3 of the project; and

(v) agrees to the Head of Roads in conjunction with officials within the Economic Development Service continuing to investigate potential external funding opportunities.

2 BACKGROUND

2.1 Committee Report 687/11, which was approved by Infrastructure Services Committee on 11 October 2011, noted the findings of the Phase 2 Report titled “Management of Erosion at Montrose”, instructed the Head of Roads to enter into formal discussions with the Montrose Port Authority regarding the findings of the Phase 2 report and instructed the Head of Roads to convene further stakeholder meetings to discuss the findings of the Phase 2 Report and the proposals for Phase 3 of the project. The approval of Report 687/11 also instructed the procurement of a bathymetric survey, a programme of beach profile monitoring and measures intended to manage the erosion within the bay.

2.2 Following the approval of that report further discussions took place with Montrose Port Authority and a stakeholder meeting was convened on the 22 August 2012, which was attended by representatives from Montrose Port Authority, Marine Scotland, Montrose Links Management Committee, and elected members, with apologies intimated by Montrose Basin Local Nature Reserve Management Committee and Glaxo Smith Kline.

2.3 The measures proposed in the Phase 2 Report will slow down the rate of erosion in the dune system by promoting an increase in the height of the upper beach to reduce the susceptibility of the dune toe to wave attack without detrimentally impeding longshore sediment transport. A series of potential measures intended to manage the erosion within the bay were highlighted
previously in report 687/11, and are listed in Table 1 of this report. These measures should be implemented on a strategic basis and would require statutory approvals from various organisations, and also various stakeholder agreements.

2.4 Phase 3 of the project has commenced. This will seek to develop demonstration projects on site and carry out interventions intended to reduce the rate of erosion within the bay that can be monitored and measured over a period. As approved previously by this committee (reference Report 687/11) the development and implementation of other interventions will be subject to securing the necessary capital funding.

3 CURRENT POSITION

3.1 Montrose Port Authority and Stakeholder Engagement

3.1.1 As mentioned above a meeting was held in August 2012, with all stakeholders to give an update of the progress previously made with the study and the way forward with Phase 3 of the project. The Research officer from the University of Dundee has since met with the Montrose Port Authority board to discuss the implications of future dredging of the estuary and the implications that this may have within Montrose Bay in this context.

3.2 Bathymetric Surveys & Programme of Beach Profile Monitoring

3.2.1 A bathymetric survey of the beach area and within the navigation channel of the South Esk was undertaken in April 2012 by SOI Ltd, following advertisement on Public Contract Scotland, as per committee Report 687/11.

3.2.2 Beach profile monitoring has been carried out during the project and will continue to be carried out on a regular basis and after major storm events.

3.3 Dune Management

3.3.1 A contract for the installation of sand fencing was awarded to Allison Enterprises Ltd, following advertisement on Public Contract Scotland. Coastal storms in December 2012 resulted in significant damage to the fencing. This has been re-erected. Notwithstanding the recent storm damage, the fencing is deemed to be a success to date as it is effectively facilitating the accumulation of sand to protect the dune toes.

3.4 Delivery Programme

3.4.1 The delivery programme for the various measures, which were described in Report 687/11, has been revised as is now shown in Table 1 below.

<table>
<thead>
<tr>
<th>Measure (As detailed in Report No. 697/12)</th>
<th>Delivery Timescale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bathymetric Surveys &amp; Programme of Beach Profile Monitoring</td>
<td>2011/12 followed by periodic monitoring</td>
</tr>
<tr>
<td>A - Sediment Management</td>
<td>2013/14 and annually during revised dredging activities</td>
</tr>
<tr>
<td>B - One Off Direct Shoreface Recharge</td>
<td>2013/14 subject to significant additional funding</td>
</tr>
<tr>
<td>C - Beach Control Structures</td>
<td>2013/14</td>
</tr>
<tr>
<td>D - Dune Management</td>
<td>2013/14 subject to available funding</td>
</tr>
</tbody>
</table>

4 PROPOSALS

4.1 It is proposed that the Head of Roads continues formal discussions / negotiations with the Montrose Port Authority; further stakeholder meetings to discuss the implementation of the findings of the Phase 2 Report and the proposals for Phase 3 of the project and, investigation of potential external funding opportunities.
As approved by this committee previously, it is proposed that the measures highlighted in the Phase 2 Report and itemised previously in Report 687/11 continue to be implemented subject to agreements with stakeholders, identification of funding and statutory approvals from various organisations as required. Further update reports and specific committee approvals as required under the Financial Regulations for higher value procurement will be brought to future meetings of this committee.

5 RISKS
There are no further updates to the risk analysis previously undertaken to identify where the risks that can impact against achievement of objectives were identified, the consequences evaluated and proposals identified to manage the risks, which was detailed in Report No.687/11.

6 FINANCIAL IMPLICATIONS

6.1 The indicative costs for the measures outlined, as previously presented in Table 2 of Report 687/11, are repeated below (Table 2):

<table>
<thead>
<tr>
<th>Measure</th>
<th>Delivery Timescale</th>
<th>Indicative Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bathymetric Surveys &amp; Programme of Beach Profile Monitoring</td>
<td>2011/12 followed by periodic monitoring</td>
<td>£100,000 followed by periodic monitoring</td>
</tr>
<tr>
<td>A Sediment Management</td>
<td>2012/13 and annually during revised dredging activities</td>
<td>Neutral</td>
</tr>
<tr>
<td>B One Off Direct Shoreface Recharge</td>
<td>2012/13 subject to significant additional funding</td>
<td>£1.22million-£2.7million</td>
</tr>
<tr>
<td>C Beach Control Structures</td>
<td>2012/13</td>
<td>£250,000</td>
</tr>
<tr>
<td>D Dune Management</td>
<td>2012/13</td>
<td>£6,020-£36,400</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>£1.576m - £3.086m</strong></td>
</tr>
</tbody>
</table>

6.2 The updated costs for the measures outlined are shown below in Table 3 with the timescales revised in line with Table 1 of this report.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Revised Delivery Timescale</th>
<th>Updated Indicative Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bathymetric Surveys &amp; Programme of Beach Profile Monitoring</td>
<td>2012/13 followed by periodic monitoring 2013/14</td>
<td>£49,000 (actual) followed by periodic monitoring £4,000 (see para 6.4 below)</td>
</tr>
<tr>
<td>A - Sediment Management</td>
<td>2013/14 and annually during revised dredging activities</td>
<td>Neutral</td>
</tr>
<tr>
<td>B - One Off Direct Shoreface Recharge</td>
<td>2013/14 subject to significant additional funding</td>
<td>£1.23 million-£2.7million</td>
</tr>
<tr>
<td>C - Beach Control Structures</td>
<td>2013/14</td>
<td>£250,000</td>
</tr>
<tr>
<td>D - Dune Management</td>
<td>2012/13</td>
<td>£19,000 (actual) £10,000 (subject to coastal conditions) £29,000 (Anticipated cost)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>2013/14</td>
<td><strong>£1.591m - £3.061m</strong></td>
</tr>
</tbody>
</table>

6.3 As outlined in the table above the total value of the works is currently estimated to range from £1.591m to £3.061m and will be undertaken on a phased basis subject to the necessary funding being identified.
6.4 The staff cost associated with the programme of beach profile monitoring, which are estimated to be in the region of £4,000 per year, can be contained within Road’s Division revenue budgets.

6.5 There is allowance within the Roads and Transport Renewals and Repair Fund allocation from 2012/13 of £286,000 for the Montrose Beach Project. A total of £49,000 was spent on the bathymetric surveys of the bay, and the dune fencing has cost £19,000 to date. The costs for the Phase 3 study work by the University of Dundee is £25,000 per annum over a 2 year period. With other ancillary third-part costs such as sediment sampling and aerial photography totalling £1,000, a total of £94,000 has been committed in 2012/13. This leaves £192,000 available from this original budget for further development of the measures detailed in Report 687/11 during financial year 2013/14.

6.6 Further consideration of future years’ funding to be allocated to those measures to be undertaken in 2014/15 and beyond will be given as part of the council’s future budget setting process. Additionally, within the Phase 2 Report, alternative funding mechanisms have been identified and it is proposed that Roads Division’s officers in partnership with the Council’s External Funding Team within Economic Development Division investigate these further. It is also proposed that formal approaches are also made to all stakeholders for support in funding these proposed interventions. Any funding secured will reduce the cost burden on the Council. An update report on the proposed way forward for those measures extending beyond financial year 2013/14 will be presented to a future meeting of the Infrastructure Services Committee.

7 HUMAN RIGHTS IMPLICATIONS

There are no Human Right implications arising from this Report.

8 EQUALITIES IMPLICATIONS

The issues dealt with in this report have been the subject of consideration from an equalities perspective. An equalities impact assessment has been undertaken.

9 SINGLE OUTCOME AGREEMENT

This report contributes to the following local outcome contained with the Angus Community Plan and Single Outcome Agreement for 2011 – 2014:

- Our communities are safe, secure and vibrant
- Our natural and built environment is protected and enjoyed

10 CONSULTATION

The Chief Executive, Director of Corporate Services, Head of Finance and Head of Law and Administration have been consulted in the preparation of this report.

11 CONCLUSION

11.1 Further discussions with Montrose Port Authority and community stakeholders on the findings of the Phase 2 Report titled, “Management of Erosion at Montrose” have been undertaken and are proposed to continue.

11.2 Phase 3 of the project, which looks to develop demonstration projects on site and carry out interventions which aim to reduce the rate of erosion within the bay that can be monitored and measured over a period of time, has commenced with the erection of dune fencing, undertaking of a bathymetric survey and ongoing programme of beach profile monitoring.

11.3 The development and implementation of other interventions will be on a phased basis and subject to securing the necessary capital funding for which the Head of Roads, in conjunction with officials within the Economic Development Division are continuing to investigate potential external funding opportunities.
NOTE:

The background papers, as defined by Section 50D of the Local Government (Scotland) Act 1973 (other than any containing confidential or exempt information) which were relied on to any material extent in preparing the above report are:

Report 687/11 – Montrose Beach Study – Update – Infrastructure Services Committee 11 October 2011
Report 604/10 – Montrose Beach Study – Update – Infrastructure Services Committee 24 August 2010
Report 953/07 – Montrose Beach Erosion – Infrastructure Services Committee 16 October 2007

Roads/JG/WS/MD