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1. Executive Summary

1.1 This is the first Local Aggregate Assessment for Medway, produced in line with the requirements set out in the National Planning Policy Framework and guidance on the Managed Aggregate Supply System. The Council has consulted with mineral planning authorities throughout the South East and neighbouring areas, industry representatives and other key stakeholders in the drafting of this report. This process included the plan being considered by the regional Aggregates Working Parties for South East England, London and the East of England. The Council is publishing the LAA as part of its Monitoring Report for 2012/2013.

1.2 The council has had regard to a range of data sources in compiling information on the demand for aggregates and supply options available. The annual aggregate monitoring produced by the Aggregates Working Party based on a survey of local operators has been a key source of data. Due to the size of Medway, and the limited number of minerals sites and wharves, there are a number of areas where it is not possible to publish information at the level of this individual minerals planning authority. This follows the agreements made with industry to respect commercial confidentiality. In some cases, it has been necessary to refer to information on a Kent and Medway basis, or the wider region, to provide an indication of trends in demand and supply.

1.3 Government guidance on the Managed Aggregate Supply System advises local authorities to use an average of 10 years’ land won sales data to calculate demand. Medway Council has had regard to this advice, but considers that it is more appropriate to use the level set in the proposed South East Plan sub-regional policy apportionment, as this was the basis of its draft Core Strategy allocation. Kent and Medway are net exporters of aggregates and therefore a supply led approach to planning is appropriate.

1.4 Medway’s contribution to aggregates planning and supply is particularly significant in the importation of marine dredged aggregates and crushed rock. Medway wharves have accounted for 24% of marine dredged materials landed in the region in recent years. The total landings of crushed rock at Kent and Medway wharves were 87% of the region’s total in 2011.

1.5 Provision for land won resources was set out in the draft Medway Core Strategy. There is one site with current planning permission for the extraction of 1.2 million tonnes of sand and gravel. The policy allocation was for 0.18 million tonnes per annum, in line with the sub-regional apportionment figures. The average of the last 10 years’ sales data shows demand at 24,400 tonnes pa. There is a landbank of 6.7 years using the policy allocation level, and over 49 years using the MASS 10 year average calculation.
1.6 The council considers that it is currently appropriate to maintain an allocation for land won resources based on the South East regional planning apportionment. This provision is in line with the levels of growth and development planned for Medway over the draft Core Strategy plan period up to 2028, meeting its aspirations to realise the ambitions for regeneration within the Thames Gateway programme. Reduced demand in recent years has resulting from the economic downturn and a fall in construction activity. It is the council’s view that it is appropriate to make provision for minerals over the longer planning period set out in the draft Core Strategy, and to be able to respond to anticipated uplift in the market.

1.7 Following a decision by Natural England in late November 2013 to notify a Site of Special Scientific Interest designation at Lodge Hill, an area proposed for strategic development in the draft Medway Core Strategy, the Council has had to withdraw the plan. Work will commence on a new local plan, but for the purposes of this monitoring period for the LAA, it is considered appropriate to refer to the proposed policy in the draft Core Strategy.
2. Introduction

Policy context

2.1 This is the first Local Aggregate Assessment produced for Medway. It has been prepared in line with requirements set out in the National Planning Policy Framework and subsequent guidance issued by government on minerals planning.

2.2 This Local Aggregate Assessment has an important role in the coordination of planning for the steady and adequate supply of minerals to meet the country’s needs. Aggregate minerals – sand and gravel, and crushed rock – are used as construction materials, and therefore are intrinsic to the nation’s development, maintaining infrastructure and supporting economic growth.

2.3 A Managed Aggregate Supply System (MASS) has been operating for over 35 years to balance supply with demand. This system seeks to ensure that mineral planning authorities with adequate resources of aggregates make an appropriate contribution to national as well as local supply. This is in conjunction with key land-use planning principles to reduce environmental damage to an acceptable level.

2.4 The Managed Aggregate Supply System has provided a mechanism for the long term planning for aggregates, managing the rate of primary extraction, in emphasising alternative sources of supply, such as secondary and recycled materials and marine dredged aggregates, to safeguard valuable and finite resources.

2.5 Minerals are recognised as a national strategic resource, and are therefore subject to planning considerations. However, following changes introduced in the Localism Act and the National Planning Policy Framework, Government has decentralised more power to mineral planning authorities to determine the appropriate level of aggregate extraction.

2.6 The Local Aggregate Assessment (LAA) was introduced in the National Planning Policy Framework in 2012, as part of the reform of the MASS. Mineral planning authorities are required to produce an annual assessment, and submit this to the regional Aggregate Working Party, and through this to the National Aggregate Coordinating Group. The national group will then consider whether the totals provided by the area Aggregate Working Parties make appropriate provision to maintain a steady and adequate supply of aggregate. This process seeks to ensure the coordination of minerals planning at a strategic level.

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2.7 Additional guidance on the content of LAAs has been set out in Guidance on the Managed Aggregate Supply System published by the Department for Communities and Local Government in October 2012. The council has also had regard to the National Planning Practice Guidance website launched in beta test mode in August 2013, which contains information on the content and data sources to be used in the production of a LAA. At the time of producing this Medway LAA, this guidance website does not yet have formal status.

2.8 The LAA is required to contain:

- A forecast of demand for aggregates based on the rolling average of 10 years sales data and other relevant local information.

- An analysis of all aggregate supply options, as indicated by landbanks, mineral plan allocations and capacity data, eg marine licences for marine aggregate extraction, recycled aggregates and the potential throughputs from wharves. This analysis should be informed by planning information, the aggregate industry and other bodies such as local enterprise partnerships.

- An assessment of the balance between demand and supply, and the economic and environmental opportunities and constraints that might influence the situation. It should conclude if there is a shortage or a surplus of supply and, if the former, how this is being addressed.

Development of LAA – collaboration and co-ordination

2.09 Medway Council is a member of the South East England Aggregates Working Party. SEEAWP represents each minerals planning authority in the former South East region, the Marine Management Organisation, the Crown Estate and the aggregates industry. The Aggregates Working Party is central to ensuring the coordination of minerals planning at a strategic level across the south east, and providing a link to the national level through the National Aggregate Co-ordinating Group. The Aggregates Working Party has specific responsibility to:

- Provide technical advice to Mineral Planning Authorities on the adequacy of each local aggregate assessment;

- Provide an assessment of the position of overall demand and supply for the AWP area, including, whether, in its view, the area is making a full contribution towards meeting both national and local needs. This should include an indication of emerging trends of demand in the AWP area;

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3 Available at: http://planningguidance.planningportal.gov.uk/blog/guidance/
- Obtain, collect and report on data on minerals activity in the area. This includes annual data on sales, permissions and mineral reserves in their area, recycled and secondary sources and use this information to produce an annual report on these issues.

2.10 In drafting this LAA, Medway Council has used a wide range of available information to assess the current position for aggregates planning in Medway. This has included reference to the SEEAWP Aggregates Monitoring report 2011 for information on regional context and trends. The council has also been able to make use of some data emerging for the Aggregates Monitoring report 2012.

2.11 The SEEAWP secretary has provided advice to Medway Council in the drafting of the LAA and this report was submitted to the SEEAWP for its consideration and technical advice.

2.12 Medway as a unitary authority recognises the particular importance in coordinating its minerals planning work, including the production of the LAA, with its neighbouring minerals planning authority (MPA), Kent County Council. The two councils have liaised in the development of their respective LAAs, and have worked together for a number of years in the collation of evidence to support minerals planning. Due to the size of Medway, and the limited number of minerals sites and wharves, some sources of data are restricted, and can not be disaggregated to a Medway level, for reasons of commercial confidentiality and agreements made with industry. This is reflected in how and what data is presented in this report. This results in some data gaps and in some cases data is referred to at a Kent and Medway level to provide an indication of the local circumstances.

Consultation

2.13 This report was drawn up following liaison with Kent County Council’s minerals planning service and local operators. To ensure that the LAA makes appropriate reference to the wider regional context, the council sought comments on a draft report from mineral planning authorities across the region and industry representatives through the SEEAWP. Due to Medway’s location in the Thames Gateway, the MPAs in Essex and Thurrock to the north were also contacted. The council consulted with the local operators of wharves, quarry sites and recycling facilities in Medway. Broader consultation was held with:

- London Aggregates Working Party
- East of England Aggregates Working Party
- Neighbouring district council planning authorities
- South East Local Enterprise Partnership
- North Kent Environmental Planning Group

2.14 The council considered the responses received to the consultation and made revisions to the assessment report as required. The Medway
LAA has been published in conjunction with the council’s Monitoring Report 2013 in December 2013.
3. **Context**

3.1 This section provides an overview of the planning policy background against which the LAA has been prepared, an outline of the area’s geological resources and specific features of minerals planning in Medway, resulting from the strategic importation role of the major wharves in the area.

*Policy context*

3.2 In 2009 the Department of Communities and Local Government issued national and regional guidelines for aggregates provision in England from 2005 to 2020\(^4\) as part of the Managed Aggregates Supply System. This sets out anticipated demand for aggregates that mineral planning authorities are expected to plan for. This guidance updated earlier guidelines from 2003, and recommended lower levels of provision to take account of materials being supplied from other sources, particularly marine dredged sand and gravel. This guidance is a material planning consideration and is still extant.

3.3 Government set the following guidelines for south east England:

**Table 1: National and regional guidelines for aggregates provision in England and the South East, 2005-2020 (million tonnes)**

<table>
<thead>
<tr>
<th>Region</th>
<th>Guidelines for land won production</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Land-won Sand &amp; Gravel</td>
<td>Land-won Crushed rock</td>
</tr>
<tr>
<td>South East</td>
<td>195</td>
<td>25</td>
</tr>
<tr>
<td>England</td>
<td>1028</td>
<td>1492</td>
</tr>
</tbody>
</table>

3.4 This demonstrates the importance of the South East to the provision of marine sand and gravel. The region is also the second largest importer of aggregates into England for this period. It should be noted that there is a lower level of certainty with the assumptions on materials to be sourced from outside of England, but this reflects the most up-to-date formal government guidance for mineral planning authorities.

3.5 The guidance directed the levels to be broken down to a sub-regional apportionment to mineral planning authority areas. Subsequent work carried out through the South East Plan established sub-regional apportionment levels. A partial review of the plan and the minerals allocation apportionment was well advanced when Government announced its intention to revoke regional plans. Medway Council

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accepted the revised apportionment that was determined following this review. This set out a requirement of 0.18 mtpa for land-won sand and gravel. The council has also supported the sub-regional apportionment of 0.2 mtpa for secondary aggregates. These levels were used as the basis of Medway’s mineral planning policies through its emerging Core Strategy.

3.6 Medway Council as a unitary authority has responsibility for minerals planning in its area. The Council was progressing its planning policy for minerals through its draft Core Strategy. This plan was prepared at a time when the revocation of the South East Plan was anticipated, but not yet enacted. The Council had regard to the letter of the Secretary of State in July 2010 that advised mineral planning authorities to work from the sub regional apportionment levels set out in the ‘Proposed Changes’ to the revision of Policy M3 in the South East Plan published in March 2010, although these figures were not formally adopted. Government advice was that mineral planning authorities should only use alternative figures if they have new or different information and a robust evidence base.

3.7 The draft Core Strategy policy recognised the need for Medway to plan for a steady supply of minerals to meet both local needs and on a strategic level to make an appropriate contribution towards national supply. Medway Council set out policies for safeguarding the supply of minerals and importation facilities. It was intended to identify areas of search in more detail in a subsequent Land Allocations plan.

3.8 The Core Strategy was submitted to the Planning Inspectorate for independent examination in 2012, but the process leading to adoption of the plan was delayed following the introduction of new environmental information relating to a strategic site proposed for development. In late November 2013, Natural England confirmed a designation for a Site of Special Scientific Interest at this strategic location at Lodge Hill. This led to the Council having to withdraw the draft Core Strategy. Work will now commence on a new local plan, to contain both strategic and land allocations policies, that will make provision for minerals and the safeguarding of wharves, railheads and associated infrastructure for importation, processing and handling of aggregates. Minerals planning issues were considered by the Core Strategy Planning Inspector in June 2012, and matters were set out between the Council and industry representatives in written statements and hearing sessions. Industry representatives supported the policies proposed for the Provision of Minerals and safeguarding of importation and processing facilities, with

amendments agreed to acknowledge the importance of their function at a local and regional level.

**Geology**

3.9 There are sand and gravel deposits in the Medway area, concentrated on the Hoo Peninsula. These are the results of post-glacial melt water outwash deposition found in a series of ‘river terraces’, trending roughly from north west to south east across the peninsula’s ridge, and on the Isle of Grain. There are also more recent water-lain deposits covering areas of land on the eastern and north western marshes of the peninsula, that include some sand and gravel seams.

3.10 The deposits have not been significantly reworked by natural processes since their deposition, and have a sand to gravel ratio and particle characteristics that makes them generally attractive for high specification value added concrete production.

3.11 Information arising from research to support minerals planning in Kent and Medway, together with borehole survey data provided by minerals companies, have been used to determine ‘Areas of Search’ for minerals allocations in development plans. Total proven aggregate mineral resources, including the defined ‘Areas of Search’ over the Medway area is calculated to be 1,640,000 tonnes. The total potential (proven and unproven) river terrace sand and gravel reserves in the unconstrained areas of the Hoo Peninsula are assessed as being in a range from 3,345,326 tonnes to 4,547,940 tonnes. This is considered to provide sufficient potential to meet the area’s needs over the plan period.
Bedrock geology:
- Thanet Sand Formation
- Thanet Sand - Bullhead Bed
- Harwich formation
- London Clay formation
- Lewes Nodular Chalk formation
- London Clay - Claygate Member
- Gault formation
- Chalk
- Melbourne Rock
- Lenham formation

Superficial geology:
- Well Hill gravel
- Chelsfield gravel
- Kempton Park gravel formation
- Boyen Hill gravel formation
- Alluvium
- Taplow gravel formation
- Black Park gravel formation
- Head (undifferentiated)
- River Terrace Deposits (undifferentiated)
- Peat
- Clay with flints
- Dartford/Silt/Ilford Silt formation
- Lynch Hill gravel formation
- Beach and Tidal Flat Deposits (undifferentiated)
Wharves

3.12 Medway makes a critical contribution to the south east’s infrastructure for the importation of aggregates, particularly marine dredged sand and gravel. The scale of the importation makes Medway’s wharves of regional and national significance. There are three currently in operation:

- Grain Terminal, Thamesport, Isle of Grain – operated by Aggregate Industries
- North Sea Terminal, Cliffe, Rochester - operated by Brett Aggregates of the Brett Group UK

3.13 There is a further inactive wharf at Halling.

3.14 Brett Aggregates has invested in upgrades to its plant at Cliffe in recent years, allowing the processing of in excess of 2 mtpa from the North Sea Terminal, and creating enhanced future capacity for the site. The works include a wharf, a rail head, aggregate processing, concrete batching and block manufacturing and is considered as a site of regional importance.

3.15 The Grain Terminal imports crushed rock (granite) from the super quarry at Glensanda in Scotland. Most of the production from Grain and Cliffe serves the London/South East region with distribution being achieved by transhipment via water and rail. Euro Wharf at Frindsbury handles a mixture of marine dredged aggregates, crushed rock and other minerals.

3.16 Together these three sites make a significant contribution to the importation of minerals into the region. Medway’s wharves are amongst the largest in Kent and Medway, and have the greatest capacity. The wharves are operating below their capacity levels, which offers the ability to increase production in response to market demand. Medway Council intends to work with Kent County Council to carry out an updated study of minerals aggregation facilities in 2014 that will provide further information on the capacity of this key infrastructure.
Minerals and aggregates importation wharves in Medway
4. **Consideration of aggregates options**

4.1 In line with the requirements for LAAs, this assessment considers a comprehensive range of options for the supply of aggregates:

- Recycled aggregates – including from construction, demolition and construction waste;
- Secondary aggregates – whose sources come from industrial wastes such as glass, ash, railway ballast, fine ceramic waste and scrap tyres; and industrial and minerals by-products, such as waste from china clay, coal and slate extraction and spent foundry sand;
- Marine sources – from areas licensed for marine sand and gravel dredging;
- Imports into and exports out of Medway;
- Land won resources – including land banks and allocations.

4.2 Each supply option is considered separately below.

**Marine dredged aggregates**

4.3 This supply stream is of particular importance for Medway, due to the quantities of materials landed at the area’s wharves. The location of the large wharves on the rivers Medway and Thames provides good access to the licensed dredging grounds in the Thames Estuary, North Sea and English Channel. These wharves are also well placed for onward transport of materials to markets locally, in London and the wider south east and East Anglia.

4.4 Landings of marine dredged aggregates into Kent and Medway wharves now account for over 50% of all MDA landed in the south east, excluding London, as recorded by the Crown Estate. Medway alone accounts for 24% of the regional landings.

4.5 There is wide recognition of the role of marine aggregates as an increasingly important supply stream. This is evidenced through the updated national and regional apportionment guidelines issued in 2009, (set out in Table 1 above) and information provided on annual sales of minerals through the aggregates monitoring surveys. A summary of the sales on regional and sub-regional levels is set out in Table 2 below.
### Table 2: Landings of Marine Dredged Sand and Gravel, 2003-2012
*(MPA & SE region, thousand tonnes)*

<table>
<thead>
<tr>
<th>County &amp; Region</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hampshire &amp; Isle of Wight</td>
<td>2111</td>
<td>1853</td>
<td>1687</td>
<td>1992</td>
<td>1908</td>
<td>1669</td>
<td>1157</td>
<td>1213</td>
<td>1279</td>
<td>1190</td>
</tr>
<tr>
<td>Kent &amp; Medway</td>
<td>3520</td>
<td>3498</td>
<td>3291</td>
<td>4319</td>
<td>3425</td>
<td>2850</td>
<td>3127</td>
<td>2680</td>
<td>3012</td>
<td>3229</td>
</tr>
<tr>
<td>East Sussex &amp; West Sussex</td>
<td>1133</td>
<td>1133</td>
<td>977</td>
<td>1390</td>
<td>799</td>
<td>1062</td>
<td>701</td>
<td>686</td>
<td>1475</td>
<td>1734</td>
</tr>
</tbody>
</table>

**Totals**

| 6764 | 6484 | 5955 | 7701 | 6132 | 5581 | 4985 | 4579 | 5766 | 6153 |

Source: AM surveys 2003-2012 (DRAFT)

Footnotes to Table:
Note: the figures will not compare with the Crown Estate landing figures, as this data includes materials in connection with the Thames Gateway port project outside CE licensed areas.
Note: Shoreham harbour landings are included in West Sussex figures, although one wharf is located in Brighton and Hove.

4.6 The AM2011 and 2012 surveys recorded an additional 200,000 tonnes above the Crown Estate landing figures, as explained in the footnote to the table above.

4.7 Information published by the Crown Estate and the British Marine Aggregate Producers Association shows that there is a steady supply of MDA coming into the Thames Estuary wharves from four licensed regions. Medway’s wharves are included in this area. Changes in the marine licensing regime are being implemented and new 15 year licences are anticipated to be renewed over the next two years. The Crown Estate is confident of the security of supply and the continued place of MDA in the aggregates supply stream.

### Table 2: The Crown Estate licensed dredging to Thames Estuary, 2012

<table>
<thead>
<tr>
<th>Licensed Region</th>
<th>Production Licences</th>
<th>2012 Dredging total for construction aggregate</th>
<th>% delivered to Thames Estuary</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Coast</td>
<td>13</td>
<td>3.56 mt</td>
<td>53.7% (1.91mt)</td>
</tr>
<tr>
<td>Thames Estuary</td>
<td>4</td>
<td>1.09 mt</td>
<td>96.9% (1.06mt)</td>
</tr>
<tr>
<td>East English Channel</td>
<td>6</td>
<td>3.55 mt</td>
<td>52.3% (1.86mt)</td>
</tr>
<tr>
<td>South Coast</td>
<td>14</td>
<td>3.63 mt</td>
<td>16.22% (0.59mt)</td>
</tr>
</tbody>
</table>


4.8 Information provided from the Annual Minerals Raised Inquiry carried out by ONS confirms the importance of MDA as a construction material

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7 Available at: http://www.bmapa.org/documents/BMAPA_CE_15th_AR_singles_low.pdf
nationwide and for Kent and Medway. MDA provides over 67% of the total sand and gravel supplied Kent and Medway for construction purposes. The supply from Kent and Medway represents 23% of the English total, and 21.5% of the GB total. This underlines the strategic importance of the Kent and Medway wharves in relation to the supply of MDA, and their role in contributing to this supply stream.

Table 3: Sand and Gravel for construction
(Extractors’ sales by end-use and area of origin, 2011 in thousand tonnes)

<table>
<thead>
<tr>
<th>Area of Origin</th>
<th>Sand</th>
<th>Gravel</th>
<th>Other Sand and Gravel for fill</th>
<th>Total</th>
<th>Of which marine dredged material</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Building Sand for use in mortar</td>
<td>Concreting Sand</td>
<td>Concrete Aggregate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kent &amp; Medway</td>
<td>362</td>
<td>1137</td>
<td>1458</td>
<td>538</td>
<td>3564</td>
</tr>
<tr>
<td>England</td>
<td>5197</td>
<td>19636</td>
<td>12730</td>
<td>4676</td>
<td>47039</td>
</tr>
<tr>
<td>GB</td>
<td>6140</td>
<td>22591</td>
<td>14103</td>
<td>5659</td>
<td>55015</td>
</tr>
</tbody>
</table>

Source: CLG – Mineral Extraction in Great Britain, 2011 – February 2013

Table 4: Market contribution of MDA to GB sand and gravel market (million tonnes)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total GB market</td>
<td>58</td>
<td>+5.5%</td>
<td>55</td>
<td>55</td>
<td>72</td>
<td>79</td>
</tr>
<tr>
<td>Total England &amp; Wales market</td>
<td>50</td>
<td>+6.4%</td>
<td>47</td>
<td>49</td>
<td>64</td>
<td>73</td>
</tr>
<tr>
<td>Marine landings to England &amp; Wales</td>
<td>11.52</td>
<td>+15.9%</td>
<td>9.94</td>
<td>10.03</td>
<td>13.12</td>
<td>14.45</td>
</tr>
<tr>
<td>Marine landings to SE England</td>
<td>9.56</td>
<td>+22.4%</td>
<td>7.81</td>
<td>7.97</td>
<td>9.61</td>
<td>10.56</td>
</tr>
<tr>
<td>Marine landings to London &amp; Thames corridor</td>
<td>6.9</td>
<td>+28.3%</td>
<td>5.38</td>
<td>5.85</td>
<td>7.18</td>
<td>7.36</td>
</tr>
</tbody>
</table>

Source: British Marine Aggregate Producers Association – Strength from the depths: sixth sustainable development report for the British marine aggregate industry, December 2012.

4.9 The significant increases to landings in London and along the Thames indicate the key role that the marine aggregates sector plays in providing large volumes of bulk construction materials close to the markets where they are required.

4.10 At a local level, a Kent and Medway Imports Study in 2011 provided evidence on the role of the area’s wharves in supporting the steady...

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supply of minerals. The study also considered their capacity and ability to respond to increased demand. The study was commissioned by Kent County Council and Medway Council to provide an update from an earlier study carried out in 2006. It considered all operational wharves and railheads in Kent and Medway. The work provided evidence of the strategic importance of this infrastructure for the importation of marine dredged aggregates, crushed rock, other land won aggregates, recycled and secondary aggregates, as well as other minerals. It demonstrated the essential role of the local wharves and railheads in ensuring an adequate and steady supply of materials to provide necessary infrastructure, buildings and goods.

4.11 The study reported that although the recession is affecting businesses, the scale of impact appears to be less than the drop in demand experienced by land won mineral operations. This is re-iterated in more recent publications by the Mineral Products Association.

Imports and Exports

4.12 Information on imports and exports of aggregates has been set out in the 2009 Aggregate Mineral Survey for England and Wales\(^\text{11}\). This showed that 63% of the marine sand and gravel sales in Medway was for markets in Kent and Medway; 16% went to London and 17% elsewhere. Data was not available at the Medway level for crushed rock. Marine dredged aggregates have been considered separately, so this section focuses on the importation of crushed rock.

Crushed rock Importation

4.13 Again consideration of this supply stream shows the importance of Medway’s wharves in the importation of land won aggregates and their supply into markets in Kent, London and the greater south east. Materials are transported on to wider markets by road, rail and shipping. There are no railhead importation facilities in Medway that are independent of the wharves. The combined wharf and rail facilities at Cliffe and Grain provide valuable infrastructure. Both land won sand and gravel and crushed rock have been imported, but in recent years, activity has been limited to crushed rock. Grain imports from the superquarry at Glendsanda in Scotland. This site has planning permission for the extraction of minerals until 2043, which provides some certainty for this supply stream.

4.14 The total landings of crushed rock at Kent and Medway wharves were 88.6% of the region’s total in 2011. It is not possible to provide a figure for Medway alone, due to confidentiality considerations, but it is acknowledged that the local wharves make an important contribution to this high proportion of the regional supply. The deep water wharves of north Kent and Medway provide suitable offloading facilities close to the demand for aggregates. It is noted that as vessels have increased in size, use of smaller wharves on the South Coast has been displaced to the larger facilities in north Kent and Medway.

Table 5: Imports of Crushed Rock by Sea, 2003-2012

4.15 The Aggregates Monitoring report 2011 produced by SEEAWP provides an overview of the regional position on the importation of crushed rock. Landings of sea borne crushed rock in 2011 at some 1.9 Mt maintained the level of landings in 2010. Nearly 90% of the crushed rock was landed at wharves in Medway and Kent. 95% of the crushed rock was sold for roadstone, railway ballast, concrete aggregate and other screened and graded aggregate, the rest for construction fill. Data shown above for the draft 2012 report indicates a decline in importation levels and an associated fall in the contribution made through Kent and Medway wharves, but still maintains a high proportion landed in this area.

4.16 As it is not possible to publish the sales data on crushed rock from Medway, the council has worked with the Aggregate Working Party secretary to consider the information provided for the annual Aggregates Monitoring surveys. This has allowed the calculation of an average for Medway based on past sales. This gives a 10 year average of 1.254 Mt and a 3 year average of 0.862 Mt. This aligns to the decline seen in regional sales since 2007.
Land Won resources

Reserves

4.17 Medway has deposits of sand and gravel, and quarrying has historically taken place across the Hoo Peninsula, but there have been limited operations in recent years.

4.18 Permitted reserves are 1.2 million tonnes. This is derived from a single site at Kingsnorth Quarry to the south east of the village of Hoo St Werburgh. Lafarge Aggregates Limited has planning consent for the extraction of 1,195,000 tonnes of sand and gravel. The plan is to extract minerals in phases at a rate of approximately 120,000 tonnes a year, over 10 years.

4.19 Planning consent (reference MC/2005/0589) was issued on 1 May 2007 for the extraction and processing of sand and gravel, establishment of a ready-mix concrete plant, and restoration to agriculture and water based conservation. Lafarge has not started its operations on the site, and in December 2011, (reference MC/12/0020) made a further application to defer the commencement date of the operations. Planning permission was granted on 21 June 2012 and this extended the period for the commencement of the development until 1 May 2017. As yet, no works have started.

4.20 There is a small amount of remaining permitted reserves from works at Perry’s Farm, Grain, but these are considered as uneconomic and are therefore not included in the calculation of available reserves.

4.21 Research carried out to support mineral planning work in Kent and Medway has provided an indication of further available reserves in the area. As set out earlier in this report, information on potential reserves indicates that there is sufficient potential resource for further allocations to meet needs over the development plan period.

Requirements – Policy and Sales average

4.22 Medway Council has used the sub-regional proposed apportionment level of 0.18 Mtpa as the basis of its draft Core Strategy policy allocation for land won aggregates.

4.23 Due to the limited number of quarrying sites in Medway, it is not possible to publish annual levels of sales of locally won sand and gravel. This adheres to the confidentiality agreements set between the aggregates industry and mineral planning authorities. However the council has been able to use data provided to the annual Aggregates Monitoring survey have been used to produce a 10 year and 3 year average figure.
4.24 The 10 year average of sales from quarries in Medway is 24,400 tonnes. The 3 year average of sales is zero.

*Landbank*

4.25 Medway is required to maintain at least a 7 year land bank for sand and gravel. Permitted reserves are considered to be 1,200,000 tonnes. The current position is set out below, using both the policy allocation of 0.18 Mtpa and the 10 year average, in line with MASS guidance.

**Table 6: Calculation of landbank for sand and gravel**

<table>
<thead>
<tr>
<th></th>
<th>Core Strategy Allocation of 0.18 Mtpa</th>
<th>10 year average of 0.0244 Mtpa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of land bank</td>
<td>6.7 years</td>
<td>49.2 years</td>
</tr>
</tbody>
</table>

4.26 Due to Medway’s geology, it is not appropriate to maintain a landbank for land won crushed rock, or a separate landbank between soft sand and sharp sand and gravel.

*Consideration of wider context*

4.27 The regional context is provided through the South East Aggregates Monitoring report 2011. This showed a decline in sales of land won sand and gravel to 5.8 mt in 2011, a fall of 0.3 mt from 2010. Over nine of the last ten years sales have fallen – from 11.5 Mt in 2002 to the current level. This is substantially below the regional apportionment ‘proposed changes’ level set for the South East region of 11.12 mtpa – 47% lower.

4.28 Despite the reduction in reserves, and limited new permissions in 2011, the combined tonnage in new reserves from 2009-2011 has exceeded sales. The regional landbank as measured in 2011 was 7.6 years using the ‘proposed changes’ apportionment level.

4.29 Sales of local crushed rock across the south east were 0.9 mt in 2011, 200,000 tonnes less than in 2010, and the lowest for 10 years. With 48 mt of reserves, there are over 30 years for working at the ‘Proposed Changes’ apportionment level.
Recycled and secondary aggregates

4.30 Materials defined as recycled or secondary aggregates are derived from demolition and construction waste, and industrial by-products such as power station ash, colliery spoil, blastfurnace slag and slate. Materials can be used as substitutes for aggregates, such as in concrete production, and as fill. The use of recycled and secondary aggregates is critical to the sustainable management of primary mineral resources.

Policy

4.31 In line with government policy to secure the valuable finite resources of materials required for development, the council promotes the use of alternatives to primary aggregates. This informed the aims of the draft Core Strategy minerals policy to support an increased efficiency in the use of minerals, and to use recycled and secondary aggregates where possible.

4.32 The draft Core Strategy confirmed Medway Council’s intention to meet the proposed sub-regional apportionment figure of 0.2mtpa for secondary aggregates, that would be supported by conditions requiring the reclamation and re-use of construction and demolition wastes on construction sites. Following the withdrawal of the draft Core Strategy, work on a new Local Plan will include strategic provision for secondary aggregates and site allocations for the processing, sorting and distribution of secondary aggregate materials.

4.33 Medway’s contribution towards this supply stream has come from by-products of the power stations on the Hoo Peninsula and reprocessing works for construction, demolition and excavation waste at various recycling operations in the area. It is difficult to quantify the total arisings from this supply source in Medway, in line with common issues in accessing robust data. It is noted that the closure of Kingsnorth Power Station will result in changes in the supply stream of secondary aggregates locally.

4.34 Research carried out in 1999 into waste in Medway, and in 2007 to inform the South East Plan regional policy provision on waste generated consistent estimates of the arisings of construction, demolition and excavation (CDE) waste in Medway, at around 330,000 tonnes per annum. This estimate was used to support the local target to contribute towards secondary aggregate production.

4.35 Facilities exist within Medway for the recycling of CDE waste at fixed sites. However there is additional capacity, as it is understood that significant amounts of material are dealt with onsite by mobile plant in the demolition and construction process.
4.36 Capacity and arisings in this sector are difficult to compile as there is poor operator participation in the annual aggregates monitoring surveys. Due to the difficulties in collating comprehensive survey information in this market area, and the small number of returns from operators in Medway, it is not possible to provide information at a Medway level for the production of secondary and recycled aggregates at this time.

Context

4.37 The use of recycled and secondary materials in the GB aggregates market has increased from 30 mtpa in 1990 to 60 mtpa in 2011\textsuperscript{12}. This equates to a rise from 10% to 29% of the overall market being provided from recycled and secondary sources.

4.38 On a regional level, the Aggregates Monitoring 2011 survey recorded that over 2.5 Mt of Construction, Demolition & Excavation waste was being recycled at fixed sites and used for aggregates, and 0.3 Mt from other secondary sources. This is a noted area for incomplete survey returns, as there are often poor levels of participation in the survey and it can be difficult to engage smaller and mobile operators. The data therefore needs to be treated with appropriate caution on its robustness.

4.39 More comprehensive surveys in this area were carried out in 2005 and 2008\textsuperscript{13}. These suggested that 6Mt was a ‘reasonable indication’ of the tonnage recycled as aggregate in the South East. The current state of the economy and the downturn in the construction sector suggests that current recycling output is likely to be less than the 6Mt. However the 2011 SE Aggregates Monitoring report indicates that it is likely to contribute 25% to aggregate consumption in the region. This is broadly in line with the information provided by the BMAPA referred to above.

National and Regional overview – supply streams

4.40 The national picture for aggregates sales shows some stabilisation in the market, but still significantly below pre-recession levels in 2007. It is noted that there has been a fall in the proportion of aggregates being sourced from land-won reserves, and a corresponding increase in the use of marine dredged material and secondary and recycled aggregates.

\textsuperscript{12} Source: British Marine Aggregate Producers Association – Strength from the depths: sixth sustainable development report for the British marine aggregate industry, December 2012.

### Table 7: Market Summary (in million tonnes)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<tbody>
<tr>
<td>Total GB aggregates market</td>
<td>208</td>
<td>+1%</td>
<td>206</td>
<td>203</td>
<td>256</td>
<td>280</td>
</tr>
<tr>
<td>Land based aggregates</td>
<td>136.5</td>
<td>-7.8%</td>
<td>148</td>
<td>147</td>
<td>187</td>
<td>195</td>
</tr>
<tr>
<td>Recycled and secondary aggregates</td>
<td>60</td>
<td>+3.4%</td>
<td>58</td>
<td>57</td>
<td>69</td>
<td>70</td>
</tr>
<tr>
<td>Total marine aggregates production</td>
<td>19.12</td>
<td>+19.9%</td>
<td>15.95</td>
<td>20.10</td>
<td>21.24</td>
<td>23.20</td>
</tr>
<tr>
<td>Marine landings to GB aggregates market</td>
<td>11.5</td>
<td>+15.9%</td>
<td>9.94</td>
<td>10.03</td>
<td>13.12</td>
<td>14.45</td>
</tr>
<tr>
<td>Marine landings to European aggregates market</td>
<td>6.1</td>
<td>+17.5%</td>
<td>5.19</td>
<td>5.66</td>
<td>6.21</td>
<td>6.65</td>
</tr>
<tr>
<td>Beach replenishment contract fill</td>
<td>1.49</td>
<td>+73.2%</td>
<td>0.86</td>
<td>4.5</td>
<td>2.21</td>
<td>2.10</td>
</tr>
</tbody>
</table>

Source: British Marine Aggregate Producers Association – Strength from the depths: sixth sustainable development report for the British marine aggregate industry, December 2012.

4.41 On a regional basis, data collected in the 2011 Aggregates Monitoring survey from quarry, wharf and rail depot operators showed a strong position of supply over demand. AM2011 confirmed an established pattern of consumption across the region, set out in the 2009 monitoring report, with a small net export of land-won sand and gravel and marine aggregate, principally to London, and the region being a major importer of hard rock, principally from the South West.
Table 8 (see p 22) Sand and Gravels – Sales, Permissions and Reserves 2012 (MPA and SE region, thousand tonnes)

<table>
<thead>
<tr>
<th>County</th>
<th>Soft Sand (Building Sand)</th>
<th>Sharp Sands and Gravels</th>
<th>Total: All Sands and Gravels</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reserves at start of year</td>
<td>Sales during year</td>
<td>Permissions during year</td>
</tr>
<tr>
<td>Berkshire unitaries</td>
<td>c</td>
<td>c</td>
<td>0</td>
</tr>
<tr>
<td>Bucks</td>
<td>1440</td>
<td>104</td>
<td>2267</td>
</tr>
<tr>
<td>East Sussex</td>
<td>2670</td>
<td>164</td>
<td>0</td>
</tr>
<tr>
<td>Hampshire</td>
<td>434</td>
<td>c</td>
<td>0</td>
</tr>
<tr>
<td>Kent</td>
<td>14370</td>
<td>388</td>
<td>0</td>
</tr>
<tr>
<td>Medway</td>
<td>c</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Milton Keynes</td>
<td>c</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Oxfordshire</td>
<td>2392</td>
<td>155</td>
<td>260</td>
</tr>
<tr>
<td>Surrey</td>
<td>7223</td>
<td>367</td>
<td>0</td>
</tr>
<tr>
<td>West Sussex</td>
<td>4160</td>
<td>284</td>
<td>0</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>32,822</td>
<td>52,041</td>
<td>84,863</td>
</tr>
</tbody>
</table>

Source: AM2012 (DRAFT)

Footnotes to table:
- c = confidential figure or figure that cannot be recorded without revealing a confidential figure
- 0 = nil sales or less than 500 tonnes
- Information provided for the Berkshire unitaries relates to AM2011 returns.
- The reserves for Kent and Surrey do not include over 4 Mt allocated for non aggregate use.
- The reserves do not include 1Mt in dormant sites in Berks and Bucks.
- Reserves of an unspecified type in the Isle of Wight have been allocated to soft sand, sand and gravel in the same % as for known reserves.
- The figures for sharp sales and gravels include 3% sold for construction fill and 3% of the reserves are recorded as only suitable for fill.
- The Berks sharp sands and gravels and reserves include a small percentage of soft sand.
- East Sussex: reserves include some sharp sands and gravels not likely to be worked before 2014.
Consideration of Local Circumstances

5.1 Medway’s draft Core Strategy policies were based on the levels of aggregate provision proposed for sub-regional allocation before the revocation of the South East Plan. The Council has supported these figures as appropriate to meeting local needs and contributing towards supply at a regional and national level. It is not considered that it is appropriate at this time to define a new target based on an average of the past 10 years’ sales data. The allocation for minerals in the draft Core Strategy was considered to be in line with growth proposed over the whole plan period. Work on a new local plan will review the appropriate allocation levels.

5.2 The draft Core Strategy provided for a level of growth of around 18,000 homes and 21,500 jobs up to 2028, together with the necessary infrastructure to realise the ambitions of the Thames Gateway regeneration programme.

5.3 In line with national and regional trends, there has been a downturn in housebuilding in recent years, against the draft Core Strategy target of 815 units per year. However population projections confirm the anticipated levels of growth in the area over the plan period.

5.4 ONS has published Interim 2011 based population projections to 2021. These are based on the latest 2011 mid year estimate and take account of the 2011 Census. The population of Medway is forecast to increase from 264,885 in 2011 to 290,337 in 2021; this represents an increase of 9.6% (+25,500).

5.5 As the aggregates provision set out in the draft Core Strategy was determined based on the needs of local growth, it is not considered appropriate to seek to revise the minerals allocation at this time in the LAA. The council recognises the need to plan over the longer term period set out in strategic plans, to respond to changes in the economy and wider developments.
5.6 The wharves infrastructure in Medway is critical to maintaining capacity for the importation of aggregates, particularly marine sand and gravels, which are increasingly important as a supply stream. As the South East is a net importer of crushed rock, the contribution made for the importation through Medway wharves is also valued. This is a key consideration for policy development in the new local plan.

5.7 The council will continue to monitor the supply and demand for aggregates, together with national and regional trends to determine if it is appropriate to revise policy in future development plans.
6. Conclusions

6.1 Medway Council’s draft Core Strategy policy made provision for primary and secondary aggregates in line with the proposed sub-regional apportionment levels. These levels accorded with the development strategy set out in the Core Strategy for a level of growth to realise the ambitions of the Thames Gateway regeneration programme. The Core Strategy policies sought to safeguard the minerals importation, processing, storage, handling and transfer facilities. These policies were supported by industry. The plan also recognised the need to make provision for the treatment, recycling, reuse and transfer of waste materials, which are critical to the supply of secondary aggregates locally.

6.2 The assessment of current demand shows that sales are under the level set in the sub-regional apportionment, but that this is in line with the reduced use of materials resulting from the economic downturn and slowdown in the construction sector.

6.3 The future anticipated growth and levels of development set out for Medway in the draft Core Strategy supported the view that it is appropriate to maintain a landbank calculated on the proposed sub-regional apportionment levels, in line with Government advice. It is not considered appropriate at this time to use the 10 year sales average MASS calculation.

6.4 Permitted reserves of land won sand and gravel resources in Medway are close to the 7 year landbank requirement calculated on the draft policy allocation. However using the NPPF and MASS guidance for a level based on a 10 years sales average, the landbank extends to over 49 years.

6.5 Planning permission for the aggregates extraction site that makes up Medway’s reserves has been extended to 2017. The council intends to consider further allocations for minerals extraction to meet local needs and contribute towards a steady and adequate supply at a strategic level, through a new local plan.

6.6 Medway has a strategic role in the importation of aggregates through its large wharves on the rivers Medway and Thames. Their ability to handle large vessels and the proximity to markets in the south east and London gives these wharves significance of a regional and even national scale. This is borne out in the data relating to the quantities of marine dredged aggregates and imported crushed rock landed at wharves in Medway. The facilities have surplus capacity and therefore able to respond to an upturn in the economy. Assessment of the licensing regime for marine dredging confirms the ability to provide a sustainable and adequate supply from this source at present and in coming years. The Medway wharves are linked to the producers of imported crushed rock, and with the Glensanda quarry benefitting from planning permission until 2043, this again provides a degree of certainty on this supply stream.
6.7 It is considered that Medway is making adequate provision to ensure the steady supply of aggregates from a range of sources, and that it can continue to make an effective contribution to meeting local and wider needs for aggregates. The council will actively participate in the work of the SEE Aggregates Working Party and maintain cooperative working with neighbouring mineral planning authorities and industry representatives.
7. Responses received to consultation draft.
Dear Catherine

This is the response on behalf of the East of England AWP to the consultation on the draft Medway LAA.

‘The East of England Aggregate Working Party thanks you for consulting it on the draft Medway Local Aggregate Assessment. The EE AWP supports Medway’s intention to continue to plan for the supply of aggregate based on the sub-regional target and considers that this represents an appropriate methodology so as to plan for growth.

You may wish to take into account the following points, based on the comments of some members:

• The LAA does not touch on a number of areas that guidance suggests – such as environmental constraints and the economic justification section is not detailed, and

• There is no wharf capacity information and exports are not detailed by destination – though it is noted that Medway Council in conjunction with Kent County Council intend to carry out an updated study of minerals aggregates facilities in 2014 which will provide further information on the capacity of key infrastructure’

regards

Susan Marsh B.SC (Hons), Dip. TP, MRTPI
Principal Minerals & Waste Planning Officer
Operating a Shared Minerals and Waste Planning Service for Central Bedfordshire, Bedford Borough and Luton Borough Councils

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Dear Sir / Madam,

Please find attached the comments made against the Medway LAA by Essex County Council.

If there are any questions, please feel free to contact me.

Thanks,

Philip Dash
Minerals and Waste Planning Officer
Planning and Environment

Essex County Council
Telephone: 01245 437543 | Ext: 51543
Email: philip.dash@essex.gov.uk | www.essex.gov.uk

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Essex County Council, acting as the Minerals Planning Authority (MPA), welcomes the opportunity to provide comment on the draft Medway Local Aggregate Assessment November 2013 (LAA). Information obtained from the British Geological Survey does not highlight that Essex imports mineral from the Medway Plan Area but nonetheless provides the following comments in support of the draft Medway LAA 2013.

The MPA is pleased to note the positive approach taken to the provision of minerals in the LAA. The MPA agrees that the apportionment as originally articulated in the National and Sub-National Guidelines for Aggregate Provision 2009, and then as further apportioned by the South East Aggregates Working Party, remains a valid basis upon which to plan for the release of mineral given that Medway is a net exporter of aggregate and wishes to support its own evidenced growth agenda.

The importance of the wharf facilities in Medway are clearly highlighted within Section 4 of the LAA. It may be considered useful to specifically highlight that Medway intends to safeguard these facilities in order to ensure their continued use, and perhaps specify the policy through which this would be enacted.

The approach to recycled and secondary aggregate provision is agreed with, as is the statement that an absence of data makes monitoring problematic.
Dear Catherine.

Thank you for consulting the London Aggregates Working Party (LAWP) on the draft LAA for Medway. This was reported to the LAWP at its meeting on 22 November 2013.

LAWP noted the recognition in the draft LAA that the landings of aggregates by sea at two wharves included material that was exported to London, and ask Medway to safeguard the capacity at these wharves to enable this aggregate supply to be maintained or increased. LAWP also supported the proposed provision in Medway Towns draft LAA of 0.18mtpa for land-won sand and gravel.

As a specific amendment to the text, the first sentence of para 4.25 should read, ‘Medway is required to maintain at least a 7 year landbank for sand and gravel’ so that it is in accord with NPPF.

Yours sincerely

Chris Waite
LAWP Secretary
Dear Catherine

Thank you for consulting the South East England Aggregates Working Party (SEEAWP) on the draft LAA for Medway Towns. This was circulated to SEEAWP members and was reported to SEEAWP at its meeting on 13 November 2013.

SEEAWP supported the provision to be made for land-won sand and gravel at 0.1mtpa, noting that this was the figure proposed in the draft Core Strategy.

Chris Waite
SEEAWP Secretary
### List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEEAWP</td>
<td>South East England Aggregates Working Party</td>
</tr>
<tr>
<td>MDA</td>
<td>Marine Dredged Aggregates</td>
</tr>
<tr>
<td>NPPF</td>
<td>National Planning Policy Framework</td>
</tr>
<tr>
<td>MASS</td>
<td>Managed Aggregates Supply System</td>
</tr>
<tr>
<td>LAA</td>
<td>Local Aggregates Assessment</td>
</tr>
<tr>
<td>Mtpa</td>
<td>Million tonnes per annum</td>
</tr>
<tr>
<td>Mt</td>
<td>million tonnes</td>
</tr>
<tr>
<td>MPA</td>
<td>Mineral Planning Authority</td>
</tr>
<tr>
<td>BMAPA</td>
<td>British Marine Aggregate Producers Association</td>
</tr>
<tr>
<td>ONS</td>
<td>Office for National Statistics</td>
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