Hampshire
Portsmouth, Southampton,
New Forest National Park
& South Downs National Park

Hampshire Minerals and Waste Plan

Local Aggregate Assessment 2015

December 2015
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<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
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<tbody>
<tr>
<td>AM</td>
<td>Aggregates Monitoring (carried out yearly)</td>
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<tr>
<td>AMRI</td>
<td>Aggregates Minerals Raised Inquiry (carried out yearly)</td>
</tr>
<tr>
<td>AMS</td>
<td>Aggregates Minerals Survey (carried out 4 yearly)</td>
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<tr>
<td>BGS</td>
<td>British Geological Survey</td>
</tr>
<tr>
<td>DCLG</td>
<td>Department for Communities and Local Government</td>
</tr>
<tr>
<td>IBA</td>
<td>Incinerator Bottom Ash (can be used to produce an aggregate)</td>
</tr>
<tr>
<td>ISA</td>
<td>Integrated Sustainability Appraisal</td>
</tr>
<tr>
<td>HCC</td>
<td>Hampshire County Council</td>
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<tr>
<td>HMWP</td>
<td>Hampshire Minerals and Waste Plan</td>
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<tr>
<td>LAA</td>
<td>Local Aggregate Assessment</td>
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<tr>
<td>MASS</td>
<td>Managed Aggregate Supply System</td>
</tr>
<tr>
<td>MoD</td>
<td>Ministry of Defence</td>
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<tr>
<td>MMO</td>
<td>Marine Management Organisation</td>
</tr>
<tr>
<td>MR</td>
<td>Monitoring Report</td>
</tr>
<tr>
<td>MT</td>
<td>Million tonnes</td>
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<tr>
<td>MPA</td>
<td>Minerals Planning Authority</td>
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<tr>
<td>NFNPA</td>
<td>New Forest National Park Authority</td>
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<tr>
<td>NPPF</td>
<td>National Planning Policy Framework</td>
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<tr>
<td>NFNPA</td>
<td>New Forest National Park Authority</td>
</tr>
<tr>
<td>PCC</td>
<td>Portsmouth City Council</td>
</tr>
<tr>
<td>SCC</td>
<td>Southampton City Council</td>
</tr>
<tr>
<td>SLA</td>
<td>Service Level Agreement</td>
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<tr>
<td>SPZ</td>
<td>Source Protection Zone</td>
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<tr>
<td>SDNPA</td>
<td>South Downs National Park Authority</td>
</tr>
<tr>
<td>SEEAWWP</td>
<td>South East England Aggregate Working Party</td>
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<tr>
<td>SPZ</td>
<td>Source Protection Zone</td>
</tr>
<tr>
<td>SWAWP</td>
<td>South West Aggregate Working Party</td>
</tr>
<tr>
<td>TPA</td>
<td>Tonnes per annum</td>
</tr>
<tr>
<td>WRAP</td>
<td>Waste &amp; Resources Action Programme</td>
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</tbody>
</table>
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Executive Summary

The requirement to produce an annual LAA was introduced through the publication of the National Planning Policy Framework (NPPF)\(^1\) in March 2012. The purpose of the Local Aggregate Assessment (LAA) is to detail the current and predicted situation in Hampshire with respect to all aspects of aggregate supply, in particular with regard to the county’s land-won aggregate provision up to 2030.

Hampshire is fortunate in that it has access to a number of sources of aggregate. In terms of total aggregate sales in 2014, marine-won sources provided 36% while land-won sales contributed just under 24% compared with the 10 year average of 36% and 30% respectively.

**Key Aggregate Sales Information:**

- Recycled and secondary aggregate sales increased in 2014 by around 175,000 tonnes and there is approximately 1.66 millions tonnes worth of spare capacity remaining based on the updated 10 year average of recycled and secondary aggregate sales;

- Marine-won aggregate sales decreased in 2014 and there is sufficient capacity to provide further marine-won aggregate if demand increases in future:

- The sales of imported crushed rock also increased in 2014 and there is adequate capacity to provide further crushed rock aggregate if demand increases in future;

- Although land-won aggregate sales increased this year, sales are only 56% of the Hampshire Minerals and Waste Plan local aggregate provision which provides adequate 'headroom' for sales to increase further in future.

This LAA has also shown that Hampshire's local aggregate provision will not impact on the wider South East region as a whole. This is a key issue as Hampshire is a net exporter of land-won sand and gravel but also imports and exports occur with neighbouring and non-neighbouring mineral planning authorities.

This document highlights that although there is generally a surplus in aggregate handling capacity there may be a need for additional infrastructure, particularly with regard to meeting Hampshire's needs for land-won mineral extraction up to 2030 and beyond. The need for any additional infrastructure, such as the further requirement for land-won extraction will be identified through the LAA and the Hampshire Minerals and Waste Plan monitoring indicators which will highlight any developing issues in this respect.

\(^1\) National Planning Policy Framework, paragraph 145 (DCLG 2012)
3. Introduction

3.1 Mineral aggregates (such as sand and gravel and hard rock) make an essential contribution to national prosperity and quality of life. They help to underpin the construction industry and provide the critical raw materials for built development, other construction, manufacturing and the maintenance of infrastructure. Aggregates are usually defined as hard granular materials which may be comprised of primary (extracted from the land or the sea) or recycled materials.

3.2 Hampshire County Council (HCC), Portsmouth City Council (PCC), Southampton City Council (SCC), the New Forest National Park Authority (NFPNA) and the South Downs National Park Authority (SDNPA) adopted the Hampshire Minerals and Waste Plan (HMWP) in October 2013 which was produced in partnership. The HMWP provides minerals (and waste) planning policy in Hampshire until 2030.

3.3 Since the adoption of the Plan, this Plan-making partnership has come to an end and a new partnership has formed between HCC, PCC, SCC, and NFPNA hereafter referred to as the Hampshire Authorities to monitor and implement the Plan. A separate Service Level Agreement (SLA) has been established between HCC and SDNPA for HCC to undertake the monitoring duties on behalf of the National Park.

3.4 This report is the Local Aggregate Assessment for Hampshire and covers the administrative areas of the entire original plan-making partners. The purpose of the LAA is to detail the current and predicted situation in Hampshire with respect to all aspects of aggregate supply, in particular with regard to the County's land-won aggregate provision up to 2030. The LAA covers the following sections:

### Sections covered in this LAA

- **Section 4. 'Aggregates in Hampshire': [See page 12]**
- **Section 5.'Total Aggregate Supply' [See page 34];**
- **Section 6.'Future Aggregate Supply, Demand, Opportunities and Constraints' [See page 37];**
- **Section 7.'Hampshire’s Local Approach' [See page 45];** and
- **Section 8.'Conclusions and review of the Local Aggregate Assessment' [See page 48].**
3.5 The requirement to produce an annual LAA was introduced through the publication of the National Planning Policy Framework (NPPF)\textsuperscript{2} in March 2012. This stated that:

'Minerals planning authorities should plan for a steady and adequate supply of aggregates by preparing an annual Local Aggregate Assessment, either individually or jointly by agreement with another or other mineral planning authorities, based on a rolling average of 10 years sales data'.

3.6 Following the publication of the NPPF, the Government issued further guidance on the Managed Aggregate Supply System\textsuperscript{3}(MASS) in October 2012.

<table>
<thead>
<tr>
<th>The LAA should cover an assessment of:</th>
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<tbody>
<tr>
<td>• recycled aggregate</td>
</tr>
<tr>
<td>• secondary aggregate</td>
</tr>
<tr>
<td>• marine aggregate</td>
</tr>
<tr>
<td>• imported aggregate; and</td>
</tr>
<tr>
<td>• land-won aggregate</td>
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3.7 Guidance was also produced in April 2015 jointly by the Planning Officers Society and the Mineral Product Association\textsuperscript{4}The guidance provides advice to mineral planning authorities of what should be included and accounted for within a Local Aggregate Assessment.

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\textsuperscript{2}National Planning Policy Framework, paragraph 145 (DCLG, 2012)
\textsuperscript{3}Guidance on Managed Aggregate Supply System (DCLG, 2012)
\textsuperscript{4}Practice Guidance on the Production and use of Local Aggregate Assessments (POS and MPA, 2015)
The following aspects should be addressed in an LAA

- a forecast of the demand for aggregates based on the average of 10 year rolling sales data and other relevant local information, such as planned major infrastructure projects and housebuilding within the Mineral Planning Authority (MPA) area as well as addressing three year average sales data (see Total Aggregate Supply [See page 34]);

- an analysis of all aggregate supply options, as indicated by landbanks, mineral plan allocations and capacity data e.g. marine licences for marine aggregate extraction and the potential throughputs from wharves. Import and export levels of aggregate through rail depots should also be accounted for within the assessment. This analysis should be informed by planning information, the aggregate industry and other bodies such as local enterprise partnerships (see Future Aggregate Supply, Demand, Opportunities and Constraints [See page 37]); and

- an assessment of the balance between supply and demand, 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 (see Future Aggregate Supply, Demand, Opportunities and Constraints [See page 37] and Conclusions and review of the Local Aggregate Assessment [See page 48]).

3.8 The LAA analyses relevant data on aggregates and concludes what this shows about the picture of supply and demand in Hampshire. It is important to note that this data predominantly comes from the annual monitoring of aggregates sales by the Hampshire Authorities including the SDNPA on behalf of the South East England Aggregate Working Party (SEEAWP). The Aggregate Monitoring (AM) survey collects annual sales data from active mineral extraction sites, minerals wharves, minerals rail depots and recycled aggregate processing sites. The most recent survey of this nature is the AM 2014 survey which has been used in the preparation of this LAA. Every four years the AM survey is expanded into a more comprehensive national survey referred to as the Aggregate Minerals Survey (AMS) which also collects data on the movement of minerals, including mineral imports and exports between authorities. The information collected allows for an estimate to be made for the ‘consumption’ of aggregates by mineral planning authority areas. This survey, undertaken jointly between the Department for Communities and Local Government (DCLG) and the British Geological Survey (BGS) provides broad land-won sand and gravel import and export figures for both regional areas and MPAs. The latest survey of this nature has been undertaken in 2015 although up to date ‘consumption’ data representing aggregate flows between authorities is not included within this report since the data is still to be validated. Therefore consumption data from the Aggregate Monitoring Survey 2009 is still valid and used and referenced within this report. Other information on the use and need for aggregates was prepared in the evidence base documents produced as part of the HMWP preparation. These evidence base documents provide more detailed aggregate information and analysis in most circumstances and are referenced within this LAA where appropriate. This includes the following documents:
Evidence documents relevant to this LAA

- HMWP100a - Minerals In Hampshire - Background Study (Hampshire Authorities, 2012)
- HMWP101a - Hampshire Minerals Proposal Study (Hampshire Authorities, 2012)
- HMWP32a and HMWP133a - Assessment of Habitats Regulations: Habitats Regulation Assessment Record and Appendices (Hampshire Authorities, 2013)
- HMWP013 - Wharves and Rail Depots Study (Hampshire Authorities, 2012)

3.9 This LAA is an update to the LAA produced in 2014. The last LAA was published in December 2014, following consultation in October/November 2014 with SEEAWP & other interested parties. The LAA is published alongside the Monitoring Report (MR) of the HMWP. The MR is an essential tool to monitor the policies within the HMWP and covers other areas (not covered by the LAA) that are subject to monitoring via a number of monitoring indicators set out in Appendix C of the adopted Plan. The MR will report on the current landbank, which is covered in Section 2.4 'Land-won Sand and Gravel', as it is used as a monitoring indicator by the Hampshire Authorities including the SDNPA to review the current local aggregate provision and to decide whether a review of mineral site allocations within the HMWP is required. The MR will be published alongside a finalised version of this LAA. It is intended that the MR and the finalised LAA will be published each year in December hereafter.
4. Aggregates in Hampshire

4.1 Hampshire has the capability of supplying aggregates from a number of sources.

Hampshire sources of aggregate:

- recycled and secondary aggregate;
- dredging sand and gravel from the sea bed (marine-won);
- importing aggregate; and
- extracting sand and gravel from the land (land-won).

4.2 When planning for a steady and adequate supply of minerals, Minerals Planning Authorities such as the Hampshire Authorities including the SDNPA have a duty to consider all supply options (including marine-won, secondary and recycled sources and land-won) when determining total aggregate supply and demand. This was duly undertaken through the development of the adopted HMWP (2013).

4.1.1 Recycled and Secondary Aggregate

Recycled and secondary aggregate play an important role in the total aggregate supply in Hampshire and provide an opportunity to reduce the need for land or marine-won sand and gravel or other aggregates. Recycled aggregates are those derived from construction, demolition and excavation waste that has been reprocessed to provide materials or a product suitable for use within the construction industry. It includes materials such as:

- Stone;
- Concrete;
- Brick; or
- Asphalt.

4.1.2 These can be re-used (rather than disposing of it) and can also comprise other secondary aggregates which are slightly different to the sources noted above and are usually by-products of other construction or industrial processes. For example, the production of Incinerator Bottom Ash (IBA) from Hampshire’s Energy Recovery Facilities as a by-product of the incineration process can be used as a secondary aggregate for road construction. Other types of secondary aggregate include spent railway ballast and recycled glass.

4.1.3 A significant amount of recycled and secondary aggregate is processed on development and construction sites, but an increasingly large amount is processed at free standing sites or sites located within existing minerals and waste activities such as quarries, waste transfer, materials recovery and landfills. There are 29 sites which hold valid planning permissions for the production of recycled and secondary aggregates in Hampshire, 15 are considered to be strategic sites and therefore
safeguarded in accordance with *Policy 16* of the adopted HMWP (2013). These have the capacity to manage at least 50,000 tonnes per annum (tpa) and generally have a permanent or long term planning permission. The following map highlights the location of safeguarded aggregate recycling facilities in Hampshire.

**Figure 1 - Safeguarded aggregate recycling facilities**

![Map of Hampshire showing safeguarded aggregate recycling facilities](image)

*Source: Hampshire Authorities, 2014.*

4.1.4 The sales figures of recycled and secondary aggregate in Hampshire for the most recent 10-year period, 2005 - 2014, are detailed in Table 1.

**Table 1 - Recycled and secondary aggregate sales in Hampshire, 2004 - 2013 (million tonnes (mt))**

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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>0.62</td>
<td>0.62</td>
<td>0.55</td>
<td>0.64</td>
<td>0.60</td>
<td>0.79</td>
<td>0.93</td>
<td>0.81</td>
<td>0.93</td>
<td>1.11</td>
<td>0.95</td>
<td>0.76</td>
</tr>
</tbody>
</table>

* Sales are estimated for 2005 and 2006 as no data was collected for these years

*Source: Aggregate Monitoring surveys 2004-2013.*
4.1.5 More detailed information on recycled and secondary aggregates, their use, imports, exports and capacity are set out in the Minerals in Hampshire Background Study\(^5\) which was prepared to support the HMWP's preparation.

**Use of recycled and secondary aggregates**

4.1.6 Recycled and secondary aggregates have a growing use in applications such as base layers for new developments and road construction. They can also be used in the production of concrete and other construction materials in addition to other uses such as the creation of children’s playgrounds in Hampshire, helping to reduce demand for primary-won (or ‘virgin’) aggregates. As recycled and secondary aggregate is mainly used as a substitute for land and marine-won sand and gravel. The main markets for such material are broadly the same as those for its primary sourced alternative i.e. areas of greatest demand in Hampshire.

**Imports and exports**

4.1.7 From evidence obtained through working closely with aggregate operators, it is understood that some small volumes of recycled and secondary aggregate are being imported into, and exported out of Hampshire across the borders with Dorset, Berkshire, Surrey and West Sussex. More research is required in order to obtain information on volumes. It is assumed for now that the net balance of imports to and exports from Hampshire of recycled and secondary aggregate by road is nil. More detailed information on the imports and exports of recycled and secondary aggregate can be found in the Minerals in Hampshire Background Study\(^6\) which was prepared to support the HMWP preparation.

**Capacity**

4.1.8 The current capacity for recycled aggregate in Hampshire has been identified to be just under 2.5 million tonnes\(^7\). This capacity represents the total number of plant/site(s) able to produce recycled aggregate to the standards set out in the Waste and Resources Action Programme (WRAP) Protocol for the Production of Aggregates from Inert Waste\(^8\) (without improvements, assuming maximising working within the constraints of consents and practical considerations). This capacity is significantly greater than past sales over the last 10 years.

4.1.9 It should also be noted that these aggregate recycling and secondary aggregate producing facilities in Hampshire also produce non-aggregate such as soils or material used for landfill engineering. This material is addressed within this report and not included within the available capacity. Non aggregate material produced from these sites for 2014 was approximately 10% of the total amount of secondary and recycled aggregate produced.

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5. HMWP100a - Minerals In Hampshire: Background Study, section 4.1.1, paragraphs 51-55 (Hampshire Authorities, 2012)
6. HMWP100a - Minerals In Hampshire: Background Study, section 4.1.1 (Hampshire Authorities, 2012)
7. 2014 Aggregates Monitoring Survey information supplied by operators
8. WRAP Protocol for the Production of Aggregates from Inert Waste: www.wrap.org.uk/content/quality-protocol/production-aggregates-inert-waste
4.2 Marine-won Sand and Gravel

4.2.1 Marine-won sand and gravel makes an important contribution to meeting the nation's demand for construction aggregate materials, essential for the development of the built environment. In Hampshire, marine-won sand and gravel is a major source of primary aggregate, and also a principal alternative source to land-won aggregate. It comprises a significant proportion of the total aggregate sold in Hampshire and helps to meet demand for sharp sand and gravel in south Hampshire. Marine-won sand and gravel is dredged primarily from the English Channel and landed at Hampshire's wharves.

4.2.2 National marine policy is contained within the Marine Policy Statement (MPS)\(^9\) which has been prepared and adopted for the purposes of the Marine and Coastal Access Act 2009\(^10\). This is the framework for preparing Marine Plans and taking decisions affecting the marine environment. Marine Plans will set out how the MPS will be implemented in specific areas.

4.2.3 In April 2013, the Marine Management Organisation (MMO) formally started planning in the south inshore and offshore marine plan area. The marine planning team published the South Plans Analytical Report (SPAR) in June 2014\(^11\). The SPAR summarises the evidence and issues for the South Inshore and South Offshore marine plan areas. This includes identifying relevant issues and will inform the next steps in the planning process, such as generating a vision, objectives and then options. This will inform the process and production of the marine plans in the south plan areas. The SPAR highlights areas of potential resource for aggregate extraction within the South Plan areas\(^12\). Within the South Marine Plan's Area (where Hampshire is situated) 38% of sand and gravel demand is met from the Marine Plan’s Area, Southampton is the second highest wharf landing area within the Marine Plan’s Area at 0.73 mtpa.

4.2.4 Hampshire has seven existing wharves located on the south coast of Hampshire, six of which are active and primarily concentrated in and around the cities of Southampton and Portsmouth. In 2014, five of these sold\(^13\) marine-won aggregate. The following map highlights the location of Hampshire's existing aggregate wharves.

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10. Marine and Coastal Access Act 2009, section 44
12. Figure 29 of the South Plan Analytical Report (SPAR) shows areas of potential resource for aggregate extraction within the south plan areas
13. Some marine dredged aggregate sold may have been from stockpiled material dredged in a previous year.
Figure 2 - Aggregate wharves in Hampshire

Source: Hampshire Authorities, 2014

4.2.5 The mineral rights for marine sand and gravel are owned by the Crown Estate, up to the edge of the continental shelf. There are two dredging regions in proximity to Hampshire: South Coast (including Owers) and the East English Channel. It is understood that there is 84.33 million tonnes (mt) of good quality permitted reserves suitable for primary (construction) aggregate uses in the 'South Coast region, and 21 mt of good quality permitted reserves suitable for primary (construction) aggregate uses in the 'East English Channel region. In 2014, Hampshire received 1,314,788 tonnes of its marine-won aggregates from the 'South Coast' region and this was 98.7% of the total dredged marine-won aggregate landed in this year\textsuperscript{14}. A map showing the marine mineral resources is shown below.

\textsuperscript{14}Crown Estate communication – (04/11/15)
The Crown Estate has indicated that based upon the 10 year average annual extraction rate of 3.96 mt and the licences within the South Coast region, the life expectancy of the good quality primary aggregate reserves, can be assessed as being over 21 years. In 2014, there was 3.4 mt extracted from the South Coast region indicating reserves would last over 28 years at that rate of extraction.

Hampshire receives the majority of its marine aggregate from two dredging regions which have significant unlicensed marine aggregate resources (i.e. not yet technically proven). The Crown Estate commissioned British Geological Survey (BGS) to undertake mineral resource assessments which have now been completed and were published in 2013\textsuperscript{15}

\textsuperscript{15}Crown Estate: \url{www.thecrownestate.co.uk/media/5544/ei-bmapa-16th-annual-report.pdf}. 

\textbf{Figure 3} - Detail of sand and gravel resources in the East English Channel and Thames Estuary based on the marine sand and gravel resources of the English Channel and Thames Estuary
4.2.8 The report and map have allowed The Crown Estate to conclude that the technically unproven resources identified here are capable of delivering considerably more than 50 years reserve life at current extraction levels. Any extraction would be subject to the receipt of a Marine Licence\textsuperscript{16} from the MMO which would only be granted following completion of an Environmental Impact Assessment, a Coastal Impact Study and consultation exercise, a favourable decision from the MMO and a commercial Production Agreement from The Crown Estate.

### Product agreement status as of September 2014

- **There are a total of 27 Production Agreement areas covering 17 discrete areas of seabed that would affect imports to Hampshire. Some areas are non-exclusive so have more than 1 licensee (Production Agreement) on the area;**

- **East English Channel – 11 Production Agreement areas covering 7 discrete areas of seabed; and,**

- **South Coast – 14 Production Agreement areas (3 to the west of the Isle of Wight, 9 to the East of the Isle of Wight, and 2 in the Owers sub-region) covering 10 discrete areas of seabed.**

4.2.9 Almost all of the Production Agreement Areas within both the South Coast and East English Channel regions have long term Marine Licence permissions in place. The Marine Licences and Production Agreement Areas in the South coast region are shown in the map below:

**Figure 4 - Marine Licences and Production Areas in the South Coast region (as of July 2015)**

Source: The area involved - 16th Annual Report (Crown Estate/MPA)\textsuperscript{17}

\textsuperscript{16}Marine Licensing -: www.marinemanagement.org.uk/licensing/marine/activities/dredging.htm

\textsuperscript{17}Crown Estate: [www.thecrownestate.co.uk/media/5544/ei-bmapa-16th-annual-report.pdf](http://www.thecrownestate.co.uk/media/5544/ei-bmapa-16th-annual-report.pdf)
4.2.10 More detailed information on marine-won aggregate and their uses, imports and exports and capacity can be found in the Minerals in Hampshire: Background Study\textsuperscript{18}, Wharves and Rail Depots Study\textsuperscript{19} and Wharves and Rail Depot Needs Assessment\textsuperscript{20}.

Sales

4.2.11 The sales figures of marine-won sand and gravel in Hampshire for the most recent 10-year period, 2005 - 2014, are detailed in the following table:

**Table 2 - Marine-won sand and gravel landings in Hampshire, 2005-2014 (mt)**

<table>
<thead>
<tr>
<th>Year</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>
<th>2013</th>
<th>2014</th>
<th>3 Year Ave.</th>
<th>10 Year Ave.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>1.44</td>
<td>1.54</td>
<td>1.69</td>
<td>1.44</td>
<td>1.08</td>
<td>1.12</td>
<td>1.17</td>
<td>1.10</td>
<td>1.43</td>
<td>1.36</td>
<td>1.30</td>
<td>1.34</td>
</tr>
</tbody>
</table>

\textit{Source: Aggregate Monitoring surveys 2005-2014}

Use of marine-won aggregate

4.2.12 Most of the marine dredged sand and gravel landed in Hampshire is used as concreting aggregate. In addition, marine aggregate is, and has been for many years, used as the only viable resource for major beach replenishment schemes. The use of material for Beach nourishment is variable from year to year and across regions and licences areas. It can occur in addition to the primary aggregate off-take but this is not a regular occurrence. In 2014, 100,000 tonnes\textsuperscript{21} from the South Coast dredging region was used for beach replenishment. However, it is important to note that tonnage may have been delivered to other parts of south east England and to mainland Europe.

4.2.13 It is understood that most of the aggregate landed at Hampshire’s wharves is transferred to markets within 25 miles but in some instances this can be greater. This evidence is based on discussions with Hampshire’s wharf operators\textsuperscript{22}. It is also understood that the Isle of Wight is dependent upon the Hampshire wharves and/or the Port of Southampton for a small part its aggregate supply.

Imports and exports

4.2.14 Marine-won sand and gravel is imported to and then exported from Hampshire. Figures have been obtained from the AM2009 and through dialogue with the BGS and are shown in the table below, it should be noted that 2014 figures for marine aggregate movements are to be made available within the early part of 2016 and will be used in the following years version of the LAA.

\textsuperscript{18}HMWP100a Minerals in Hampshire - Background Study (Hampshire Authorities)
\textsuperscript{19}HMWP013 - Wharves and Rail Depots Study (Hampshire Authorities)
\textsuperscript{20}HMWP012 - Assessment of need for wharves and rail depots in Hampshire, section 3 (Land & Mineral Management Ltd, 2011)
\textsuperscript{21}Crown Estates: http://www.thecrownestate.co.uk/media/438891/ei-marine-aggregate-area-involved-17th-report.pdf
\textsuperscript{22}HMWP012 - Assessment of need for wharves and rail depots in Hampshire, section 3 (Land & Mineral Management Ltd, 2011)
Table 3 - Marine-won sand and gravel imports to and exports from Hampshire, 2009

<table>
<thead>
<tr>
<th>Region</th>
<th>Origin</th>
<th>Imports into Hampshire (thousand tonnes)</th>
<th>Exports from Hampshire (thousand tonnes)</th>
<th>Balance (thousand tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>South east</td>
<td>Berkshire</td>
<td>0</td>
<td>33</td>
<td>-33</td>
</tr>
<tr>
<td></td>
<td>Surrey</td>
<td>0</td>
<td>1</td>
<td>-1</td>
</tr>
<tr>
<td></td>
<td>West Sussex</td>
<td>47</td>
<td>36</td>
<td>+11</td>
</tr>
<tr>
<td></td>
<td>Other MPAs</td>
<td>0</td>
<td>23</td>
<td>-23</td>
</tr>
<tr>
<td>South west</td>
<td>Dorset</td>
<td>1</td>
<td>2</td>
<td>-1</td>
</tr>
<tr>
<td></td>
<td>Wiltshire</td>
<td>0</td>
<td>11</td>
<td>-11</td>
</tr>
<tr>
<td></td>
<td>Other MPAs</td>
<td>0</td>
<td>61</td>
<td>-61</td>
</tr>
<tr>
<td>Other</td>
<td>Other MPAs</td>
<td>1</td>
<td>5</td>
<td>-4</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>49</td>
<td>172</td>
<td>-123</td>
</tr>
</tbody>
</table>

Note: In balance column, a '-' prefix indicates a net export, and a '+' prefix indicates a net import.

Source: 2009 Aggregate Minerals Survey.

4.2.15 The evidence presented in Table 3 above shows Hampshire to be a net exporter of marine-won sand and gravel (as is also the case for land-won sand and gravel). The largest movements occur with West Sussex to the east of Hampshire, where both imports and exports take place and to non-neighbouring MPAs in the south west region, to which Hampshire exports a significant amount of marine-won sand and gravel.

Capacity

4.2.16 The Wharves and Rail Depot Needs Assessment\(^{23}\) identified an estimated maximum capacity of existing aggregate wharves to handle marine-won sand and gravel. This estimated capacity of 2.21 mt is potentially available and showing that there is currently spare capacity available at marine aggregate wharves when compared to sales over the past 10 years, although there has been an estimated decrease in wharf capacity of 0.35 mtpa and there is continuing increasing pressure on wharf operations by surrounding infrastructure and regeneration developments.

4.2.17 This maximum capacity was identified through conversations with the existing operators of the facilities on issues such as existing infrastructure, transport and operating systems deployed at each site. The capacities were made to reflect what might be possible at the sites should a return to high aggregate demand occur during the HMWIP period i.e. in excess of the highest marine and other aggregate imports reported in 1989. Additional future capacity for aggregate wharves is discussed in Section 4, 'Future Aggregate Supply, Demand, Opportunities and Constraints' [See page 37] of this LAA.

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\(^{23}\)HMWP012 - Assessment of Need for Wharves and Rail Depots in Hampshire, section 3 (Land & Mineral Management Ltd, 2011)
4.3 Hard Rock

4.3.1 Hampshire does not have any natural hard rock resources and therefore relies on imports of hard rock such as limestone and granite in order to meet demand for this type of aggregate.

4.3.2 Historically, imports of limestone into Hampshire have been made by rail (from Somerset and more recently Cornwall), and this continues to be the main method for importation.

4.3.3 Imports of granite have historically largely taken place by sea through Southampton Docks from Glensanda Quarry in Scotland. However, these sea imports ceased in 2006 as the customer wished to be supplied from the Isle of Grain in Kent (by rail).

4.3.4 Associated British Ports (the operator of the Port of Southampton) believes there is now insufficient capacity at the Port of Southampton for hard rock aggregate imports.

Imports and Sales

4.3.5 Limestone is largely imported into Hampshire from quarries situated in the Mendip Hills in Somerset by rail directly to three aggregate rail depots located in the south of the county at Botley, Eastleigh and Fareham. These rail depots are highlighted in the following map.

Figure 5 - Hampshire aggregate rail depots

Source: Hampshire Authorities, 2015
4.3.6 In addition to rail imports, analysis of AM2009 with the BGS identified that a similar amount of hard rock is also imported into Hampshire by road. It is understood that these imports of hard rock are initially delivered by rail to depots outside of Hampshire, predominantly Theale (near Reading) in Berkshire, and Poole in Dorset, before then being imported from these depots into Hampshire by road.

4.3.7 It was re-confirmed to Hampshire County Council by operators of quarries in Somerset supplying Hampshire’s rail depots with hard rock that there are to be no likely issues which will impact on future supply. Through engagement with Cornwall County Council it was confirmed that the Quarry supplying hard rock had no issues which may impact future supply and is permitted up until 2042.

4.3.8 The hard rock sales (from rail and sea imports) in Hampshire for the most recent 10-year period, 2005 - 2014, are detailed in Table 4. Figures for hard rock imports by road are only available for 2009 and are not included in Table 4. In 2009 hard rock imports by road were understood to total 0.39 mt and so comparable with hard rock sales from total rail and sea imports.

Table 4 - Hard rock sales in Hampshire, 2005-2014 (mt)

<table>
<thead>
<tr>
<th>Year</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>
<th>2013</th>
<th>2014</th>
<th>3 Year Ave.</th>
<th>10 Year Ave.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>0.78</td>
<td>0.77</td>
<td>0.54</td>
<td>0.59</td>
<td>0.35</td>
<td>0.36</td>
<td>0.33</td>
<td>0.28</td>
<td>0.39</td>
<td>0.46</td>
<td>0.38</td>
<td>0.49</td>
</tr>
</tbody>
</table>

Source: Aggregate Monitoring surveys 2005-14

4.3.9 In terms of exports of crushed rock these are technically zero, since Hampshire does not have its own source of (imported) crushed rock that it can export. However, from dialogue with the BGS it is understood that a small amount of rail imported crushed rock that arrives at the Hampshire rail depots, is then sold on outside of Hampshire via road exports, thus mirroring the process for Hampshire's imports by road.

Use of hard rock

4.3.10 Historically, limestone and granite have been imported into the county for use in roadstone and rail ballast respectively.

Capacity

4.3.11 An assessment of wharf and rail depot capacity was undertaken to support the HMWP. The assessment sets out the wharf and rail depot capacities to handle hard rock, as outlined in Table 5.
4.3.12 As with identifying capacities for marine-won sand and gravel, these maximum capacities were identified through conversations with the existing operators of the facilities of infrastructure, transport and operating systems deployed at each site. The capacities were made to reflect what might be possible at the sites should a return to high aggregate demand occur during the Plan period (up to 2030) i.e. in excess of the highest marine and other aggregate imports reported in 1989.

4.3.13 Table 5 above shows rail depot capacity to be significantly above the level of sales over the past 10 years, however this is restricted to three depots all based in the south of Hampshire. In contrast, current capacity for the import of hard rock by sea has been identified to be very limited, although still in excess of what is currently understood to be imported which is very minimal. Additional future capacity for both types of infrastructure is discussed in section 4. ‘Future Aggregate Supply, Demand, Opportunities and Constraints’ [See page 37].

Table 5 - Maximum import capacity of hard rock at existing Hampshire facilities

<table>
<thead>
<tr>
<th>Import facility</th>
<th>Annual capacity (mt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wharves</td>
<td>0.15</td>
</tr>
<tr>
<td>Rail Depots</td>
<td>1.10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1.25</strong></td>
</tr>
</tbody>
</table>

*Source: Assessment of Need for Wharves and Rail Depots in Hampshire - Land and Mineral Management, September 2009*
4.4 Land-won Sand and Gravel

4.4.1 Recycled and secondary aggregate, marine won sand and gravel and the importation of aggregate can substitute local land-won extraction to a certain degree, but not entirely, meaning that there is still a need to plan for local land-won extraction. Locally won sand and gravel is Hampshire’s most widely worked mineral.

Geology of Hampshire

4.4.2 Hampshire can be divided broadly into four main geological areas:

Hampshire’s four geological areas:

- **Chalk Downlands** - a broad belt of deep chalk deposits runs east to west across the centre of the county, with two smaller deposits in the south east and the west;

- **Hampshire Basin** - in the southern part of the county the chalk dips beneath younger deposits of silts, sands and clays;

- **London Basin** - similar geological deposits to those found in the Hampshire Basin occur in the north of the county; and

- **Wealden Edge** - in the eastern part of the county the chalk has been eroded to expose older geological deposits of clays, sands and sandstones which form the western end of the Weald.

4.4.3 The following map shows the simplified representation of the geology of Hampshire.

**Figure 6 - Simplified geology of Hampshire**

Source: Hampshire Authorities, 2015
4.4.4 In terms of aggregates Hampshire's geology gives rise to the following aggregate deposits:

- sharp sand and gravel;
- soft sand; and
- silica sand.

4.4.5 Sand and gravel deposits occur as 'lower terrace' deposits, particularly in the Avon, Test, Itchen and Blackwater river valleys. They also occur as 'upper terrace' gravels, which are present within parts of the London and Hampshire Basin areas. These are generally north-east and south-west Hampshire, and include areas in the Ringwood Forest, adjacent to the Hampshire coast, around Southampton Water, near Romsey, and in the Yateley area. Soft sand occurs within the Wealden Edge area (near Bordon in East Hampshire) and at locations within the Hampshire Basin, in Ringwood Forest, around Romsey and Fair Oak, near Eastleigh.

4.4.6 Evidence submitted as part of the public hearings of the HMWP indicated that resources on the edge of the Folkstone beds in east Hampshire, have properties consistent with silica sand uses.

4.4.7 The following map shows the broad location of minerals of economic importance in Hampshire.

**Figure 7 - Minerals of economic importance in Hampshire**

*Source: Hampshire Authorities, 2015*
Historically, much of Hampshire's land-won aggregate production has come from south-west Hampshire (west of Lymington) and from the Avon Valley (north of Ringwood). Smaller, yet still significant production areas have also been located in north east Hampshire and south Hampshire.

Production in south Hampshire has fallen significantly in recent years, reflecting the depletion of available resources resulting from closure of extraction sites at Netley, near Southampton, Warsash near Fareham and on the Gosport peninsular. Increased availability of alternative sources of aggregate, such as rail and marine dredged imports and recycled and secondary aggregates have helped address this fall of land won production.

In comparison, production has correspondingly increased from the south-west Hampshire, which has traditionally supplied sand and gravel to west Hampshire, Bournemouth and Poole market areas. Meanwhile, in north-east Hampshire, production has remained largely steady over recent years.

In terms of soft sand, reserves in Hampshire are very scarce and are concentrated in a small number of areas. In contrast, sharp sand and gravel are more widely distributed. Historically, soft sand has been extracted from within those areas, but has ceased in south Hampshire in recent years. Currently soft sand extraction takes place at only three quarries at:

- Blashford Quarry (near Ringwood) in south west Hampshire;
- Frith End Sand Quarry in east Hampshire (to the north of Bordon); and
- Kingsley Quarry in east Hampshire (to the north of Bordon).

As noted above, evidence presented during the Public Examination of the HMWP showed that the Folkstone bed in east Hampshire, which includes the quarries at Frith End and Kingsley, includes resources which have properties consistent with silica sand uses. These resources, until the new information was submitted, have always been considered to be soft sand through data collection and surveying. In this context, it is important to note that the use of such material from the sites noted is largely for non aggregate uses although both sites also extract soft sand for aggregate uses.

The South Downs National Park - Soft Sand Study (August 2012)\(^{25}\) provides information regarding the extent of silica sand deposits within the Folkestone bed formation which spans across the South Downs National Park area. The study informed that the BGS had identified specific areas of silica sand deposits within the Folkestone bed formation, although these did not lie within the HMWP plan area and were identified in Surrey and Kent.

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4.4.14 More information on Hampshire’s geology can be found in the *Joint Baseline Report* and *Minerals in Hampshire: Background Study* as well as the *Soft* and *Silica Sand Topic Papers* which have all been published in support of the HMWP preparation.

**Hampshire Sales**

4.4.15 Sales of primary, or land-won aggregate which originated in Hampshire over the 20-year period from 1995 - 2014 are shown in the following graph. Total sales are shown divided between sharp sand and gravel and soft sand. Please note, aggregate sales prior to 2013 may include a small amount of silica sand (non-aggregate).

**Figure 8 - Sales of land-won sand and gravel in Hampshire, 1994-2014**

Sales of land-won sand and gravel in Hampshire, 1994-2014

Source: Aggregates Monitoring surveys 1994-2014

4.4.16 Sales during this period can be seen to be on a predominant downward trend particularly from 1998 onwards, where total sales declined every year until 2012, apart from a small increase in 2007.

4.4.17 Sales of sharp sand and gravel mirror total sales closely (as sharp sand and gravel forms the majority of land-won sales in Hampshire) and have steadily declined since 1998, with a relatively sharp decline from 2002. Aside from a small increase in 2007, land-won aggregate sales have steadily increased in consecutive years since 2012. Soft sand sales show a much more gradual decline since 1998, almost plateauing during the mid-2000s, before a slight increase in 2008 and 2010, before declining again in 2011. In 2012, a slight increase in sales of soft sand (including silica sand) was recorded, followed by a decrease in 2013, and a further decrease in 2014.

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27. HMWP 100a - Minerals In Hampshire - Background Study, section 3.4 (Hampshire Authorities, 2012)
29. HMWP146 - Silica Sand Topic Paper (Hampshire Authorities, 2012) (now superseded by updated version of Minerals In Hampshire - Background Study)
4.4.18 The sales figures of sand and gravel in Hampshire for the most recent 10-year period are detailed in Table 6. A 10-year period has been adopted in line with the approach detailed in the NPPF. It is argued that this period is sufficiently long enough to incorporate years of both high (2005 - 2008) and low (2009 - 2012) economic activity and therefore provides a realistic average period. The following table shows land-won sales over a 10-year period from 2005-2014 (please note, sales of silica sand are not represented in the table 6).

**Table 6 - Land-won sand and gravel sales in Hampshire, 2004-2013 (mt)**

<table>
<thead>
<tr>
<th>Year</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>
<th>2013</th>
<th>2014</th>
<th>3 Year Ave.</th>
<th>10 Year Ave.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>1.58</td>
<td>1.24</td>
<td>1.49</td>
<td>1.27</td>
<td>1.05</td>
<td>0.98</td>
<td>0.83</td>
<td>0.75</td>
<td>0.85</td>
<td>0.83</td>
<td>0.88</td>
<td>1.09</td>
</tr>
</tbody>
</table>

**Source:** Aggregate Monitoring surveys 2005-14

4.4.19 The 10 year average for 2014 has decreased since 2013 by 0.08mt, this significant drop is accounted for by the absence of 2004 land-won sales figures within the 10 year average which at 1.67mt was a significant year for sand and gravel sales.

4.4.20 Although it is acknowledged that new information submitted as part of the public hearings for the HMWP has shown that resources at Kingsley and Frith End quarries have properties with silica sand uses, data collection (including from the operators themselves) has historically identified the quarries as sources of soft sand only. This means that the sites are included in the data represented above for soft sand. There is no current data which allows us to split the sales of silica sand from the two quarry sites away from the soft sand sales represented above at this stage.

4.4.21 The pattern of declining land-won aggregate sales in Hampshire mirrors that of the South East region, which have declined from a total of 13.8 million tonnes (mt) in 1995 down to 5.4 mt in 2013. This represents a decline of 61% during this period, compared with a fall in Hampshire’s sales from 2.56 mt to 0.85 mt representing a 67% decrease in Hampshire during the same period.

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31. 2013 South East Aggregates Monitoring Report
Current Supply

4.4.22 The current supply of land-won aggregate in Hampshire is provided from 13 permitted sand and gravel extraction sites. The details of those sites are presented in Table 7.

**Table 7 - Permitted sand and gravel quarries in Hampshire**

<table>
<thead>
<tr>
<th>Site</th>
<th>Operator</th>
<th>Aggregate</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avon Tyrell, Ripley</td>
<td>New Milton Sand &amp; Ballast</td>
<td>/</td>
<td>Active</td>
</tr>
<tr>
<td>Bleak Hill Quarry, Ringwood Forest</td>
<td>CEMEX</td>
<td>/</td>
<td>Active</td>
</tr>
<tr>
<td>Bramshill Quarry, Eversley</td>
<td>CEMEX</td>
<td>/</td>
<td>Active</td>
</tr>
<tr>
<td>Chandlers Farm, Eversley</td>
<td>CEMEX</td>
<td>/</td>
<td>Inactive</td>
</tr>
<tr>
<td>Downton Manor Farm, Milford on Sea</td>
<td>New Milton Sand and Ballast</td>
<td>/</td>
<td>Active</td>
</tr>
<tr>
<td>Eversley Common Quarry, Eversley</td>
<td>Lafarge Tarmac</td>
<td>/</td>
<td>Active</td>
</tr>
<tr>
<td>Fawley Quarry, Fawley</td>
<td>CEMEX</td>
<td>/</td>
<td>Active</td>
</tr>
<tr>
<td>Frith End Quarry, Sleaford</td>
<td>Grundon</td>
<td>/</td>
<td>Active</td>
</tr>
<tr>
<td>Kingsley Quarry, Kingsley</td>
<td>Lafarge Tarmac</td>
<td>/</td>
<td>Active</td>
</tr>
<tr>
<td>Marchwood Quarry, Marchwood</td>
<td>Marchwood Aggregates</td>
<td>/</td>
<td>Active</td>
</tr>
<tr>
<td>Mortimer Quarry, Mortimer West End</td>
<td>Hanson</td>
<td>/</td>
<td>Active</td>
</tr>
<tr>
<td>Roke Manor Quarry, Shootash</td>
<td>Raymond Brown Aggregates</td>
<td>/</td>
<td>Active</td>
</tr>
</tbody>
</table>

* Resources have been traditionally identified as soft sand. New information has suggested that these resources can now be classified as silica sand as well as soft sand.
** Sharp Sand and Gravel

*Source: Aggregates Monitoring survey 2014*
4.4.23 The locations of the listed sites in Table 7 in relation to designated areas are shown in Figure 9.

**Figure 9 - Location of Hampshire's permitted sand and gravel sites**

*Source: Hampshire Authorities, 2015*

4.4.24 At 31 December 2014, these 13 sites represented a total sand and gravel reserve of approximately 12.8 million tonnes and in 2014, a total of 0.88 million tonnes of sand and gravel was sold from them\(^{32}\)

**Use of local land-won aggregate**

4.4.25 Uses of sand and gravel across Hampshire may include its use as:

- an aggregate;
- a material to make concrete;
- concrete products;
- cement in other building material uses; and
- as a constructional base material or fill.

4.4.26 Unwashed or as-raised sand and gravel is commonly used as constructional fill material and also for surfacing tracks and paths.

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\(^{32}\)The 2013 land-won sales figure does not include sales of silica sand for non-aggregate uses.
Hampshire Imports and Exports

4.4.27 As well as producing sand and gravel for use within the County, Hampshire also imports and exports sand and gravel from/to surrounding MPAs. Historically, sand and gravel has been imported into Hampshire predominantly from the west (Dorset, Poole/and Bournemouth) and from the north (Berkshire), and exported predominantly to the south west (Dorset), west (Wiltshire) and north (Berkshire). However, tracking imports and exports has been a longstanding issue.

4.4.28 The 2009 AMS undertaken jointly between DCLG and the BGS provided broad land-won sand and gravel import and export figures for MPAs/regions. The data within AM2009 along with additional information obtained through direct correspondence with the BGS has enabled Hampshire’s sand and gravel imports/exports to be identified by origin/destination and to be calculated. The following table highlights imports to, and exports from Hampshire based upon AM2009.

Table 8 - Land-won sand and gravel imports to and exports from Hampshire, 2009

<table>
<thead>
<tr>
<th>Region</th>
<th>Origin / Destination</th>
<th>Imports into Hampshire (thousand tonnes)</th>
<th>Exports from Hampshire (thousand tonnes)</th>
<th>Balance (thousand tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>South East</td>
<td>Berkshire</td>
<td>77</td>
<td>96</td>
<td>-19</td>
</tr>
<tr>
<td></td>
<td>Surrey</td>
<td>19</td>
<td>46</td>
<td>-27</td>
</tr>
<tr>
<td></td>
<td>West Sussex</td>
<td>64</td>
<td>7-15</td>
<td>+49-57</td>
</tr>
<tr>
<td></td>
<td>Oxfordshire</td>
<td>15</td>
<td>0</td>
<td>+15</td>
</tr>
<tr>
<td></td>
<td>Isle of Wight</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Other MPAs</td>
<td>8</td>
<td>76</td>
<td>-68</td>
</tr>
<tr>
<td>South West</td>
<td>Wiltshire</td>
<td>19</td>
<td>61</td>
<td>-42</td>
</tr>
<tr>
<td></td>
<td>Dorset</td>
<td>105</td>
<td>68-42</td>
<td>+37</td>
</tr>
<tr>
<td></td>
<td>Gloucestershire</td>
<td>15</td>
<td>0</td>
<td>+15</td>
</tr>
<tr>
<td></td>
<td>Other MPAs</td>
<td>4</td>
<td>58</td>
<td>-54</td>
</tr>
<tr>
<td>London</td>
<td>0</td>
<td>12</td>
<td>-12</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
<td>16</td>
<td>-8</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>334</td>
<td>440-474</td>
<td>-106 to -140</td>
<td></td>
</tr>
</tbody>
</table>

Note: In balance column, a '-' prefix indicates a net export, and a '+' prefix indicates a net import.  
Source: Aggregate Minerals Survey 2009 / British Geological Survey
4.4.29 Overall, according to 2009 data, Hampshire was a net exporter of land-won sand and gravel. The largest movements occur between Berkshire to the north and Dorset and Wiltshire to the south west and west. Historically there have always been significant aggregate flows with these authorities due to the number of quarries located near to the relevant minerals planning authority boundaries. Net imports also occur from West Sussex and also non-adjacent authorities such as Oxfordshire and Gloucestershire. Significant exports also leave Hampshire for non-neighbouring MPAs in both the south east and south west regions, therefore highlighting the long distances that sand and gravel can be transported. The following map highlights Hampshire's imports and exports in 2009.

Figure 10- Hampshire's land-won sand and gravel imports and exports, 2014


Source: Hampshire Authorities, 2015

Long-term capacity

4.4.30 As at 31 December 2014, Hampshire had permitted sand and gravel reserves of 12.8 million tonnes, as calculated from the AM2014 survey. To provide a more up-to-date reserve, an estimate has also been calculated for the end of 2015, which takes into account any additional reserves permitted in 2015 minus the estimated sales during 2015.
4.4.31 The landbank is the number of years of reserves remaining at an annual rate of aggregate supply\textsuperscript{33} this is shown for Hampshire in Table 9 at both the actual and estimated reserves based upon the locally derived aggregate provision (local requirement) and the following three sale periods.

- 2005-14 average sales (10 years average) of 1.09 million tonnes per annum,
- 2012-14 average sales (3 years average) of 0.83 million tonnes per annum, and
- 2014 sales of 0.88 million tonnes per annum.

Table 9 - Hampshire landbanks (years)

<table>
<thead>
<tr>
<th></th>
<th>Permitted Reserve (million tonnes)</th>
<th>Date (when permitted reserve recorded)</th>
<th>Landbank based upon Local Requirement (years)***</th>
<th>Landbank based upon 10yr Average sales between 2005-2014 (years)</th>
<th>Landbank based upon 3yr Average sales between 2012-2014 (years)</th>
<th>Landbank based upon 2014 Sales (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS&amp;G**</td>
<td>11.1</td>
<td>31.12.14</td>
<td>8.6</td>
<td>12.0</td>
<td>15.9</td>
<td>14.5</td>
</tr>
<tr>
<td>SS&amp;G 2015* (estimated)</td>
<td>10.3</td>
<td>31.12.15</td>
<td>8.0</td>
<td>11.8</td>
<td>14.7</td>
<td>13.6</td>
</tr>
<tr>
<td>Soft Sand</td>
<td>1.7</td>
<td>31.12.14</td>
<td>6.0</td>
<td>10.0</td>
<td>13.0</td>
<td>15.5</td>
</tr>
<tr>
<td>Soft Sand 2015* (estimated)</td>
<td>1.6</td>
<td>31.12.15</td>
<td>5.7</td>
<td>10.7</td>
<td>14.5</td>
<td>14.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>12.8</td>
<td>31.12.14</td>
<td>8.2</td>
<td>11.7</td>
<td>15.4</td>
<td>14.5</td>
</tr>
<tr>
<td>Total 2015* (estimated)</td>
<td>11.9</td>
<td>31.12.15</td>
<td>7.6</td>
<td>11.7</td>
<td>13.7</td>
<td>13.5</td>
</tr>
</tbody>
</table>

* Based upon the same level of sales as the previous year and any new permissions.
** Sharp Sand and Gravel
*** Local Requirement for SS&G - 1.28, Soft Sand - 0.28, Total - 1.56 (mtpa)

\textit{Source: Aggregates Monitoring surveys and Hampshire Minerals & Waste Plan (2013)}

4.4.32 Additional capacity for land-won aggregate is discussed in \textit{section 4.'Future Aggregate Supply, Demand, Opportunities and Constraints'} [See page 37] of this LAA.

\textsuperscript{33}The current apportionment figure is 1.56 mtpa The previous proposed (regional) apportionment for Hampshire was 2.05mtpa which was lower than that prescribed in The South East Plan (2009) of 2.61mtpa. The lower regional apportionment figure was described in the Proposed Changes to Policy M3 of the South East Plan.: http://webarchive.nationalarchives.gov.uk/20100528142817/www.gos.gov.uk/gose/planning/regionalPlanning/798061/?a=42496
5. Total Aggregate Supply

5.1 As discussed in section 2, ‘Aggregates in Hampshire’ [See page 12], the supply of aggregates in Hampshire is based on a balanced supply arising from different sources: recycled and secondary aggregate, marine-won aggregate, imported crushed rock and land-won sand and gravel. This supply ensures that reliance is not placed on any one source. Table 10 below presents the 10 year average sales of each aggregate source in Hampshire.

Table 10 - Total aggregate sales in Hampshire, 2005-2014 (mt)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Recycled and Secondary</td>
<td>0.62*</td>
<td>0.62*</td>
<td>0.55</td>
<td>0.64</td>
<td>0.60</td>
<td>0.79</td>
<td>0.93</td>
<td>0.81</td>
<td>0.93</td>
<td>1.11</td>
<td>0.95</td>
<td>0.76</td>
</tr>
<tr>
<td>Marine-won: Sand and gravel</td>
<td>1.44</td>
<td>1.54</td>
<td>1.69</td>
<td>1.44</td>
<td>1.08</td>
<td>1.12</td>
<td>1.17</td>
<td>1.10</td>
<td>1.43</td>
<td>1.36</td>
<td>1.30</td>
<td>1.34</td>
</tr>
<tr>
<td>Imports**: Crushed rock</td>
<td>0.78</td>
<td>0.77</td>
<td>0.54</td>
<td>0.59</td>
<td>0.35</td>
<td>0.36</td>
<td>0.33</td>
<td>0.28</td>
<td>0.39</td>
<td>0.46</td>
<td>0.38</td>
<td>0.49</td>
</tr>
<tr>
<td>Land-won: Sharp sand and gravel</td>
<td>1.27</td>
<td>1.05</td>
<td>1.31</td>
<td>0.98</td>
<td>0.94</td>
<td>0.83</td>
<td>0.71</td>
<td>0.59</td>
<td>0.73</td>
<td>0.76</td>
<td>0.69</td>
<td>0.92</td>
</tr>
<tr>
<td>Land-won: Soft sand</td>
<td>0.31</td>
<td>0.19</td>
<td>0.18</td>
<td>0.29</td>
<td>0.11</td>
<td>0.14</td>
<td>0.12</td>
<td>0.16</td>
<td>0.12</td>
<td>0.11</td>
<td>0.13</td>
<td>0.17</td>
</tr>
<tr>
<td>Land-won: Sub-total</td>
<td>1.58</td>
<td>1.24</td>
<td>1.49</td>
<td>1.27</td>
<td>1.05</td>
<td>0.98</td>
<td>0.83</td>
<td>0.75</td>
<td>0.85</td>
<td>0.88</td>
<td>0.83</td>
<td>1.09</td>
</tr>
<tr>
<td>Total</td>
<td>4.42</td>
<td>4.17</td>
<td>4.27</td>
<td>3.94</td>
<td>3.08</td>
<td>3.24</td>
<td>3.26</td>
<td>2.94</td>
<td>3.60</td>
<td>3.80</td>
<td>3.45</td>
<td>3.67</td>
</tr>
</tbody>
</table>

* Estimated figure
** It is recognised that imports of crushed rock are also imported into Hampshire by road.

Source: Aggregates Monitoring surveys 2005-14

5.2 As shown through Table 10 above there has been a slight increase in aggregate sales in 2014 following a sharp increase between 2012 to 2013. Land-won sales have increased in Hampshire whereas sales in the wider region, as reported in the 2013 South East Aggregates Monitoring Reports which show a continued fall.

5.3 Following an acute increase in marine aggregate sales between 2012 and 2013, 2014 has shown there to be a slight decrease in marine aggregate production. Recycled aggregate sales had increased, and are currently above both of the respective 10 and 3 year average sales data and at their highest value in 10 years. As well as recycled and secondary aggregate sales, another notable change is an increase in sales between 2013 and 2014 from crushed rock imports into Hampshire’s three aggregate rail depot facilities.

5.4 Table 11 below summarises a comparison of the different levels of contribution from each aggregate source in the form of 3 year and 10 year averages as well as 2014 sales data.
Table 11 - Comparison of aggregate sales in Hampshire in 2014 with the 3 year and 10 year averages (percent)

<table>
<thead>
<tr>
<th>Aggregate</th>
<th>2014</th>
<th>3 year average</th>
<th>10 year average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recycled and Secondary aggregate</td>
<td>29.1</td>
<td>29</td>
<td>20.7</td>
</tr>
<tr>
<td>Marine-won: Sand and gravel</td>
<td>35.7</td>
<td>37.6</td>
<td>36.4</td>
</tr>
<tr>
<td>Imports: Crushed rock</td>
<td>12.1</td>
<td>11.0</td>
<td>13.3</td>
</tr>
<tr>
<td>Land-won: Sand and gravel</td>
<td>23.1</td>
<td>24.0</td>
<td>29.6</td>
</tr>
<tr>
<td><strong>Total</strong>*</td>
<td></td>
<td><strong>100%</strong>*</td>
<td><strong>100%</strong>*</td>
</tr>
</tbody>
</table>

*Due to rounding errors this figure is not exactly 100%

Source: Aggregates Monitoring surveys 2005-14

5.5 The following graph compares the total supply of each aggregate source over time represented in the table above.

Figure 11 - Total aggregate supply in Hampshire, 2005-2014

Source: Aggregates Monitoring surveys 2005-14

5.6 The following table provides a comparison of the 10 year average sales total for each aggregate source against the identified capacity for that source to identify where additional provision may be required, or contrastingly where contingency capacity is available.
Table 12 - Comparison of average aggregate sales against identified capacity in Hampshire

<table>
<thead>
<tr>
<th>Type/source of aggregate</th>
<th>Average annual sales (2005-14) (million tonnes)</th>
<th>Identified annual capacity (million tonnes)</th>
<th>Surplus Annual capacity (million tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recycled and secondary aggregate</td>
<td>0.76</td>
<td>2.41</td>
<td>1.65</td>
</tr>
<tr>
<td>Marine-won sand and gravel</td>
<td>1.34</td>
<td>2.21**</td>
<td>0.87</td>
</tr>
<tr>
<td>Imported crushed rock</td>
<td>0.49</td>
<td>1.25</td>
<td>0.76</td>
</tr>
<tr>
<td>Land-won sand and gravel</td>
<td>1.09</td>
<td>1.56</td>
<td>0.47</td>
</tr>
<tr>
<td>Total*</td>
<td>3.68</td>
<td>7.43</td>
<td>3.75</td>
</tr>
</tbody>
</table>

*Due to rounding errors this figure is not exactly 100%

**Assessment of Need for Wharves and Rail Depots in Hampshire - Land and Mineral Management, September 2009


5.7 In respect to land-won sand and gravel, the capacity identified in the HMWP is currently more than sufficient to meet the locally derived provision of 1.56mtpa and has therefore been "capped" at the same level.

5.8 Despite an increase in recycled and secondary aggregate sales in 2014, there has also been an increased level of capacity for this aggregate type by 90,000 tonnes. This has been down to both an increase in operational capacity and by being informed of capacity levels unknown of before through dialogue with mineral operators. This still indicates a growth in recycled and secondary aggregate sales which exceeds the increase in capacity.

5.9 The previous LAA stated that wharf capacity within Hampshire stood at 2.56mtpa, however since then there has been a loss of one wharf. According to the Assessment of Need for Wharves and Rail Depots in Hampshire, this particular medium sized wharf was capable of handling between an estimated 0.1-0.35mtpa. In this case the upper limit of estimated capacity was removed from the previous total wharf capacity (2.56mtpa) stated in preceding LAA’s.

5.10 There is a significant amount of available alternative infrastructure capacity for aggregate in Hampshire that is considered to be more than sufficient to meet Hampshire’s needs to 2030. This is discussed further in section 4, ‘Future Aggregate Supply, Demand, Opportunities and Constraints’ [See page 37].
6. Future Aggregate Supply, Demand, Opportunities and Constraints

6.1 Future Aggregate Supply

6.1.1 A forecast of the demand for aggregates is based on the average of 10-years sales data and other relevant local information. The supply of land-won aggregate in England has historically been based on the Managed Aggregate Supply System (MASS) which has assisted MPAs in planning for a steady and balanced supply of aggregates. This was based on aggregate 'Guidelines' published from time to time, from which Aggregate Working Parties - comprising industry, MPA and Government representatives - provided advice to MPAs.

6.1.2 The MASS system was subject to a review in 2012 following the publication of the NPPF. This resulted in the publication of guidance on the MASS which recognises the principles of the MASS but also the need to determine aggregate provision through a Local Aggregate Assessment that assesses the demand for and supply of aggregates. The guidance set out that LAAs should cover an assessment of total aggregate supply (recycled and secondary aggregate, marine-won aggregate, imported aggregate and land-won aggregate) as well as the following issues which have all been covered in this LA:

- a forecast of the demand for aggregates based on the 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, e.g. marine licences for marine aggregate extraction 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; and
- 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.

6.1.3 The approach taken by the Hampshire Authorities and the SDNPA in preparing the HMWP to plan for land-won aggregate supply over the period up to 2030, is based on the principle that future supply should be based on past average sales. This meets the requirements of the NPPF which states that:

'minerals planning authorities should plan for a steady and adequate supply of aggregates by preparing an annual Local Aggregate Assessment, either individually or jointly by agreement with another or other mineral planning authorities, based on a rolling average of 10 years sales data'.

34. Guidance on Managed Aggregate Supply System (DCLG, 2012)
6.1.4 The most recent 10-year period of sales (2005 - 2014) for Hampshire would give a land-won sand and gravel provision of 1.17 million tonnes per annum (mtpa). The annual level of supply, based on 10-year average sales, will vary year on year. As identified in Total Aggregate Supply the locally derived provision of 1.56mtpa in the HMWP is above the current level of average sales.

**Are changes to aggregate supply likely?**

6.1.5 It is not anticipated that there will be any significant changes to the level of supply in the short to medium term. However, the annual monitoring of the HMWP policies will consider the issue of supply vs demand. Monitoring triggers (thresholds) for policy review are included in Appendix C (Implementation & Monitoring Plan) of the HWMP in relation to *Policy 17 (Aggregate Supply - capacity and source)* and are set as follows:

- *aggregate production capacity reduced by more than 556,000 tpa (10% of 5.56 mtpa)*; and
- *local land-won aggregate sales exceed 1.56 mtpa.*

6.1.6 Also relevant is *Policy 20 (Local land-won aggregates)* which ensures an adequate and steady supply of locally extracted sand and gravel will be provided by maintaining a landbank of permitted sand and gravel reserves sufficient for at least seven years. The monitoring trigger for policy review is also included within Appendix C of the HMWP and is set to highlight if the Landbank falls below 7 years worth of aggregate supply.

6.1.7 More detailed information on Hampshire's local aggregate provision approach is provided in the *Minerals in Hampshire: Background study*36.

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36.HMWP100a - Minerals In Hampshire: Background Study, section 4, paragraphs 176-184 and 207-218 (Hampshire Authorities, 2012)
6.2 Future Aggregate Demand

6.2.1 The monitoring and reporting of annual sales of sand and gravel has historically been undertaken through the annual Aggregate Mineral surveys. These surveys collect confidential sales data from all active sand and gravel sites. However, as a secondary source, the Government's Annual Mineral Raised Inquiry (AMRI) surveys, which since 1973 have collected data on the extracted sales of all primary aggregates, can also be used. The most up to date AMRI report was published in February 2015 based on 2013 aggregate sales data on a national scale. The next updated version based on 2014 data is due to be published in late 2015 or early 2016.

Infrastructure

6.2.2 At the current time there are a number of approved significant development planned at Whitehill & Bordon, Welborne, Aldershot, and at North Whiteley (a new community based upon up to 3,500 new residential dwellings in South Hampshire). Significant urban regeneration and development projects are also coming forward in the two cities of Southampton and Portsmouth associated with their respective city centre masterplans. All these proposed developments will require significant amounts of aggregates for delivery. There is also the likelihood of major highway schemes being implemented in the short term including the Stubbington Bypass.

6.2.3 Figure 13 below demonstrates the existing correlation between previous years aggregate sales and gross dwelling completions in Hampshire. The graph also includes projected housing completions for the next three years, this estimate has been based on intelligence received from developers regarding the phasing of large residential developments (over ten dwellings) over the next three years. Since small scale housing developments are excluded in this, an average of the last three years small housing completions (1,290 dwellings per annum) was included within the large scale housing projection for each of the next three years.

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6.3 Opportunities

6.3.1 Options for delivering 1.56mtpa of land-won aggregate over the plan period to 2030 were extensively assessed through the Integrated Sustainability Appraisal (ISA)\textsuperscript{38}, as well as other forms of appraisal such as Habitats Regulation Assessment\textsuperscript{39} and Strategic Flood Risk Assessment\textsuperscript{40} as part of plan preparation for the HMWP. In addition, more detailed information is also contained in the Minerals in Hampshire: Background Study\textsuperscript{41} and the Minerals Proposal Study\textsuperscript{42}.

6.3.2 In terms of the HMWP ISA, it is important to note that no weighting was applied to the criteria of ISA objectives when assessing the proposals. All of the criteria were considered with equal weight and the most sustainable options which were identified for further land won extraction as a result of this process are illustrated in Table 13.

6.3.3 The supply of sand and gravel from the most recent sales data against the HMWP requirement and the local aggregate provision is shown in Table 13. The latest 10 year local aggregate provision has been updated to include the latest sales for 2014 and shows that currently the sand and gravel held in permitted reserves and allocated sites is higher than the total Plan requirement (the fixed HMWP local aggregate provision of

\textsuperscript{38}HMWP078 - Hampshire Minerals and Waste Plan Integrated Sustainability Appraisal Report, section 6.2 (Hampshire Authorities, 2012)

\textsuperscript{39}HMWP132a - Hampshire Minerals and Waste Plan Assessment Under the Habitats Regulations - Habitat Regulations Assessment Record (Submission - revised (Hampshire Authorities, 2012) and HMWP133a Hampshire Minerals and Waste Plan Assessment Under the Habitats Regulations - Habitat Regulations Assessment Appendices (Submission - revised (Hampshire Authorities, 2012)

\textsuperscript{40}HMWP004 - Hampshire Minerals and Waste Plan Strategic Flood Risk Assessment (Hampshire Authorities, 2011)

\textsuperscript{41}HMWP100a - Minerals in Hampshire: Background Study, section 3, paragraphs 60-107 (Hampshire Authorities, 2012)

\textsuperscript{42}HMWP101a - Hampshire Minerals Proposal Study, section 3 (Hampshire Authorities, 2012)
1.56 mtpa). This is highlighted by the fact that the total sand and gravel from unallocated (or 'windfall') sites is now shown as a surplus i.e. it is not necessary for unallocated sites to be proposed in order to meet the plan requirement at this point in time.

Table 13 - Land-won provision in Hampshire to 2030

<table>
<thead>
<tr>
<th>HMWP Local Aggregate Provision</th>
<th>Latest 10-year Local Aggregate Provision (Based on sales)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SS&amp;G (mt)</td>
</tr>
<tr>
<td>Annual provision / sales</td>
<td>1.28</td>
</tr>
<tr>
<td>Total Plan Requirement: Annual provision x Plan period (15.25 years) [a]</td>
<td>19.52</td>
</tr>
<tr>
<td>Permitted reserves (at 31.12.14)</td>
<td>11.05</td>
</tr>
</tbody>
</table>

Allocated Sites

<table>
<thead>
<tr>
<th>Site</th>
<th>Soft Sand (mt)</th>
<th>Total (mt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bleak Hill Quarry Extension</td>
<td>0.50</td>
<td>0.50</td>
</tr>
<tr>
<td>Bramshill Quarry Extension</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Cutty Brow</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Forest Lodge Farm</td>
<td>0.17</td>
<td>0.57</td>
</tr>
<tr>
<td>Hamble Airfield</td>
<td>1.50</td>
<td>1.50</td>
</tr>
<tr>
<td>Purple Haze</td>
<td>0.38</td>
<td>4.00</td>
</tr>
<tr>
<td>Roeshot</td>
<td>3.00</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>Sub-Total</strong></td>
<td><strong>7.55</strong></td>
<td><strong>11.58</strong></td>
</tr>
<tr>
<td><strong>Permitted reserves + allocated sites [b]</strong></td>
<td><strong>18.6</strong></td>
<td><strong>24.33</strong></td>
</tr>
<tr>
<td><strong>Unallocated [b - a]</strong></td>
<td><strong>-0.92</strong></td>
<td><strong>+1.46</strong></td>
</tr>
<tr>
<td><strong>Annual (unallocated / 15.25 year total)</strong></td>
<td><strong>-0.06</strong></td>
<td><strong>+0.09</strong></td>
</tr>
</tbody>
</table>

**Note:** - indicates deficit / + indicates surplus

**Source:** Aggregate Monitoring Surveys

6.3.4 Please note, although Frith End and Kingsley Quarry sites have been reclassified as silica sand, their reserves have remained included within the soft sand reserves in the table above.

6.3.5 Over and above the sites allocated in the HMWP, additional land-won aggregate sites could be considered against criteria set out in Policy 20 (Local land-won aggregate) of the Plan for sites which may come forward outside of the areas identified (i.e. 'unallocated' sites).
6.3.6 Historically there have been a number of proposals which come forward and have been granted planning permission which have not previously been identified within the adopted Plan at the time. Unallocated sites play an important contribution in meeting Hampshire’s aggregate demand. Historically, over the 15 year period from 1996 - 2010, a total of 4.76 (mt) has derived from unallocated opportunities in Hampshire, which equates to an annual average of 0.30 (mt), and hence just under twice the annual contingency (0.16mt) which is required throughout the duration of the HMWP43. However by their nature, it cannot be predicted if or when an unallocated site may become available and promoted for mineral extraction, so cannot be included within projections for meeting aggregate demand.

6.3.7 In respect to soft sand, a particularly significant material, the remaining soft sand reserves at each of the five sites in Hampshire where soft sand is extracted are likely to be supplemented within the Plan period through two additional sites (Purple Haze and Forest Lodge Home Farm) and potentially from the Mineral Safeguarded Area at Whitehill & Bordon (in the district of East Hampshire)44.

6.3.8 Should unallocated opportunities not come forward, then the NPPF allows for MPAs to consider the contribution that secondary and recycled aggregate can make as substitutes for primary materials. An assessment of capacity for recycled and secondary aggregate has already been provided in this LAA (See Section 2.1 Recycled and Secondary Aggregate) [See page 12] and has shown there to be significant available capacity.

6.3.9 In terms of future capacity provision for hard rock importation in Hampshire, opportunities for rail depots have been identified at the centre of the county at Micheldever and in the north of the county at Basingstoke. Provision of this additional capacity would ensure alternative provision is made to cover any shortfalls in other supplies, and help reduce the quantity of hard rock being imported by road into the north of the county.

6.3.10 Although evidence has clearly shown that there is no requirement for further wharf capacity within the Plan period45, the potential to provide additional sea import capacity for either hard rock or marine-won sand and gravel is still considered to be limited. Further capacity is unlikely to be delivered unless existing infrastructure or port land is released from its current use. This may include existing MoD wharfage which may become surplus, or existing operational, commercial or military port land. The development of further capacity could only take place if a site is considered to be suitable (i.e. meets other environmental and amenity criteria and policies) and is deliverable as a potential location for further capacity.

6.4 Potential constraints to future supply

6.4.1 Minerals can only be worked where they are found. The site appraisal process undertaken for the HMWP has highlighted issues associated with already limited options for viable and deliverable indigenous sand and gravel resources. This may

43. HMWP 100a - Minerals In Hampshire: Background Study, section 4.1.4. (Hampshire Authorities, 2012)
limit further land-won extraction in the future. This includes the consideration of the following issues:

- environmental and landscape designations;
- water resources;
- soils; and
- communities and amenity.

6.4.2 Hampshire has a significant number of environmental and landscape designations (e.g. National Parks, Areas of Outstanding Natural Beauty, Special Protection Areas) which can restrict, and may continue to restrict opportunities for future minerals development, particularly in regard to land-won extraction. Protected habitats and landscape character are addressed through both Policy 3 and 4 respectively of the HMWP.

6.4.3 Similarly, floodplains (groundwater/fluvial/tidal), Source Protection Zones (SPZs), secondary and principal aquifers, groundwater depth, geology and smaller abstractions (without modelled SPZs) are also constraints which need to be taken into consideration when identifying suitable sites for mineral extraction and is addressed through Policy 11 of the HMWP.

6.4.4 Minerals development tends to be in areas of rich soil quality. Almost 60% of Hampshire’s agricultural land is considered to be ‘best and most versatile’ land\(^\text{46}\). It is therefore essential that minerals development takes sensitive land and soils into consideration. Through restoration, the landscape and its associated soils should be returned to a suitable quality, to ensure that high quality agricultural land and soils are not lost (Policy 8 (Protection of soils) of the HMWP covers this particular issue in the Plan).

6.4.5 Minerals development should not have a significant impact on communities if they are designed, managed and located appropriately. However, concerns may still be raised about the potential impacts of noise and dust, as well as associated lorry movements, particularly at a planning application stage. Such issues need to be addressed to ensure that minerals development does not significantly impact the amenity of local communities. Conditions attached to planning permissions for minerals development can reduce and mitigate any potential impacts, as appropriate. Detailed consideration of minerals processes and the implications, if any, for human health is the responsibility of the pollution control authorities. However, planning authorities operate in the public interest to ensure that the locations of proposed development are acceptable and public health and safety is a material consideration in these decisions.

6.4.6 The primary aim of minerals planning is to prevent, minimise or mitigate these impacts to an acceptable level (HMWP Policy 10 deals with these specific issues in the Plan).

\(^{46}\)Best and most versatile agricultural land (BMV): The Agricultural Land Classification (ALC) provides a method for assessing the quality of farmland to enable informed choice to be made about its future use in the planning system. It helps underpin the principles of sustainable development. The ALC system classifies land into five grades, with Grade 3 subdivided into 3a and 3b. The best and most versatile land is defined as Grades 1, 2 and 3a by Government policy guidance. This is the land which is most flexible, productive and efficient in response to inputs and which can best deliver future crops for food and non-food uses such as biomass.
6.4.7 Although no further capacity for wharves and rail depots is required within the Plan period and there is sufficient spare capacity to deal with any increase in requirements, it is important that capacity is monitored. The closure of existing operational sites, although not anticipated, could impact Hampshire’s capability to import marine-won aggregates if significant loss of capacity takes place. In addition, if operational practices change, Hampshire’s existing aggregate wharves may not meet modern and future operational requirements of the marine aggregates industry.
7. Hampshire's Local Approach

7.1 The decision to develop a local aggregate provision for Hampshire as part of plan preparation was considered to be the most appropriate approach for Hampshire to take, due to the following issues at the time:

- **a significant reduction in land-won sales locally, regionally and nationally over the past 20 years;**
- **the availability of an alternative supply of sand and gravel in Hampshire from both marine sources and recycled/secondary aggregate;**
- **a significant number of landscape and habitat constraints;**
- **provision from the Chief Planning Officer for MPAs to develop 'local' (in place of 'regional') apportionment figures for planning purposes if they have new or different information and a robust evidence base; and**
- **the absence of up-to-date national guidelines.**

7.2 The 10-year average sales approach provides a simple method that is readily understandable by all interested parties. It is a transparent approach which can be easily calculated, and does not rely on a 'black-box' model that contains confidential combinations of various variables. Furthermore, it is based on 'what actually happened' (actual sales). The calculation of an average smooths out the peaks and troughs that are experienced in every growth cycle, and therefore, provides a more stabilised level of supply for industry.

7.3 The decision to use a 10-year average, as opposed to a shorter or longer sales period, was felt to be a prudent choice. 10 years was considered to be a sufficiently long sales period on which to base a local aggregate provision, as it is a period that takes in both periods of high economic growth (2001-2008) and low economic growth (2008-2013).

7.4 As such, it encompasses a range of economic scenarios, and is felt to offer a pragmatic response to future demand. Furthermore, it also reflects the approach of the NPPF.

7.5 Past sales, as opposed to aggregate consumption, reflect the quantity of aggregate required of a sub-region/MPA, as they take into account the inter and intra-regional flows of aggregate that take place, and as such, more accurately reflect the market areas, rather than MPA boundaries.

7.6 Despite the dissolution of formal regional planning, the flow of land-won aggregate both sub-regionally and between regions continues to take place. Hampshire have developed a locally derived aggregate provision that meets the requirements of the NPPF. This LAA shows that on a regional market basis, Hampshire's local aggregate provision will have very little effect, and will actually help regional production more accurately reflect current levels of sales.

47. National Planning Policy Framework, paragraph 145 (DCLG, 2012)
7.7 It is the Hampshire Authorities’ understanding that the decline in land-won sand and gravel sales is a long-term one and is representative of the gradual decline in overall aggregate sales. The reasons for this are understood to be due to:

- the development of more efficient construction techniques requiring less aggregate;
- the decline in the construction of big infrastructure programs; and
- the increased importance and reliance on alternative sources.

7.8 It is considered that the proportion of recycled and marine aggregate of the overall aggregate supply in Hampshire, is likely to increase throughout the Plan period. More information on this can be found in documents submitted as part of the public hearing for the HMWP. Furthermore, the NPPF provides significant support for recycled aggregate which is considered likely to increase before land-won supply increases.

7.9 The HMWP was adopted in October 2013 with a land-won sand and gravel provision of 1.56mtpa. The latest 10 year (2005-14) sales average of 1.09mtpa indicates that the planned provision is more than sufficient at this point in time.

7.10 The LAA 2015 seeks to show Hampshire’s up to date position and identify any issues in the approach adopted in the HMWP which may need to be addressed as a result of this monitoring.

7.1 Consultation and the duty to co-operate

7.1.1 The Hampshire Authorities have sought to work collaboratively with other authorities in the preparation of this, and previous versions of the LAA, in order to satisfy Section 110 of the Localism Act. As such, the draft 2015 LAA was consulted with the following bodies for comment:

- South East England Aggregate Working Party (SEEAWP);
- South West Aggregate Working Party (SWAWP);
- Marine Management Organisation (MMO);
- The Crown Estate;
- Dorset County Council;
- Somerset County Council;
- Wiltshire Council; and
- Minerals operators with an interest in Hampshire (and not a member of SEEAWP).

7.1.2 The MASS guidance indicates that all LAAs should be submitted for consideration and scrutiny to the relevant aggregate working party. The Aggregate Working Parties should provide technical advice on the adequacy of each LAA.

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48. Crown Estate communication - 30/9/14
49. ND079 - Marine Mineral Planning 50 years supply
51. Section 110 of the Localism Act - Duty to co-operate in relation to planning of sustainable development
7.2 Planning ahead

7.2.1 Although supported by national policy, common sense requires aggregate to be supplied from a variety of sources to ensure resource security which could cover any shortfall in future supply. Hampshire has the advantage of being able to access aggregates from many sources. Hampshire's local approach far more accurately reflects the current situation in the County and enables land-won sand and gravel to be planned for more sustainably.

7.2.2 The reserves permitted and allocated in the HMWP are close to historical and current markets outside Hampshire, such as Dorset and West Berkshire. Therefore it is anticipated that those market areas will continue to be supplied in the future.

7.2.3 The Hampshire Authorities and SDNPA feel that the approach taken in the adopted HMWP is the most sustainable and realistic one to take forward and plan strategically for until 2030.

7.2.4 Opportunities for land-won production in Hampshire are limited due to the environmental, access and community constraints present in Hampshire. However, land-won sales have significantly reduced over the past 10-years and as such, the level of land-won provision as identified in the adopted HMWP is considered to be more than sufficient.

7.2.5 However, in order to respond to any unforeseen rises in demand for sand and gravel over the Plan period, provision has been made within the HMWP with robust monitoring of all policies so that sales can be monitored against the local land-won provision and the demand for aggregates. This will ensure that the infrastructure to provide for a steady or increased supply of marine-won and recycled/secondary aggregate is in place.

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52 HMWP 100a- Minerals In Hampshire - Background Study, section 3.4, paragraphs 60 - 107 (Hampshire Authorities, 2012)
8. Conclusions and review of the Local Aggregate Assessment

8.1 As detailed in this LAA, Hampshire has a full range of supply options available to meet aggregate needs within the plan area, including recycled and secondary aggregate, imported materials, marine-won and land-won aggregates. (This LAA has shown that compared to 2013 there:)

- has been a recorded increase in sales of land-won aggregate and this is now 56% of the HMWP local aggregate provision (of 1.56mtpa);
- has been a recorded increase in sales of recycled and secondary aggregate and an increase in recycled and secondary aggregate production capacity;
- are significant existing marine reserves of sand and gravel and that there is sufficient capacity to handle increased imports of marine-won sand and gravel if the market demand increased despite the reduced amount of wharf capacity identified in this report; and,
- is sufficient capacity at the existing rail depots to meet the needs of hard rock importation, although it should be noted that all existing facilities are located in south Hampshire.

8.2 In terms of land-won sand and gravel, although Hampshire has experienced a long decline in sales over the last ten years which reflects the experience of the South East region as a whole, 2014 showed there was an increase in sales. In order to plan for future supply, Hampshire has adopted a forecast model for demand based on average sales data of land-won sand and gravel which meets the requirements of the NPPF and is consistent with the overall objective to minimise the amount of primary extraction. This approach results in a local aggregate provision of 1.56mtpa. This has been rigorously assessed and evidence has shown that due to Hampshire's unique environment, further land-won extraction in the future will be severely limited.

8.3 This LAA has also shown that Hampshire's local aggregate provision will not impact on the wider South East region as a whole. This is a key issue as Hampshire is a net exporter of land-won sand and gravel but also imports and exports occur with neighbouring and non-neighbouring mineral planning authorities.

8.4 This document highlights that although there is generally a surplus in aggregate handling capacity there may be a need for additional infrastructure, particularly with regard to meeting Hampshire's needs for land-won mineral extraction up to 2030 and beyond. The need for any additional infrastructure, such as the further requirement for land-won extraction will be identified through the LAA and the HMWP monitoring indicators which will highlight any developing issues in this respect.

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53. [The allocation of Micheldever Sidings in the HMWP will provide a more sustainable transport option for importing aggregate into the north of Hampshire.]
Monitoring and review

8.5 The HMWP includes a commitment to monitor and annually review this LAA to ensure that a steady and adequate supply is maintained. Review of any new data on aggregates that is collected between aggregate monitoring surveys takes place as its received.

8.6 A revised (draft) LAA will be produced in advance of the annual Monitoring Report (MR) for consultation by SEEAWP in September / October each year. The MR covers all other areas that are subject to monitoring (and not covered by the LAA) and will be published in early 2016 and sit alongside this LAA.

8.7 The MR will contain a review of Hampshire’s landbank which will state whether the Hampshire Authorities need to review the current provision and to decide whether a review of allocations is required.
Appendix A - South East and South West regional MPA land-won sand and gravel apportionment assessments

Table A - South East region MPAs land-won sand and gravel local aggregate provision

<table>
<thead>
<tr>
<th>MPA</th>
<th>Identified provision (mtpa)</th>
<th>10-Year (2004-13) Sales Average (mtpa)</th>
<th>2013 Sales (mtpa)</th>
<th>2009 Consumption (mtpa)</th>
<th>Proposed LDF Adoption Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Berkshire Unitaries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Bracknell Forest</td>
<td>0.882</td>
<td></td>
<td></td>
<td>0.792</td>
<td>0.81</td>
</tr>
<tr>
<td>• Reading</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Slough</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• West Berkshire</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Windsor and Maidenhead</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Wokingham</td>
<td></td>
<td></td>
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<tr>
<td>Berkshire Unitaries</td>
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<td></td>
<td></td>
<td>0.773</td>
<td>0.76</td>
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<tr>
<td>Buckingham Henry</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>East Sussex Brighton and Hove SDNPA</td>
<td>0.10</td>
<td></td>
<td></td>
<td>c</td>
<td>0.08</td>
</tr>
<tr>
<td>Hampshire, Portsmouth, Southampton, NFNPA,</td>
<td>1.56</td>
<td></td>
<td></td>
<td>0.847</td>
<td>0.97</td>
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<td>SDNPA</td>
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<td></td>
</tr>
<tr>
<td>Isle of Wight</td>
<td>0.10</td>
<td></td>
<td></td>
<td>0.06</td>
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</tr>
<tr>
<td>Kent</td>
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<td></td>
<td></td>
<td>0.756</td>
<td>1.18</td>
</tr>
<tr>
<td>Medway</td>
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<td></td>
<td></td>
<td>c</td>
<td>Inc with Kent</td>
</tr>
<tr>
<td>Milton Keynes</td>
<td>0.17</td>
<td></td>
<td></td>
<td>c</td>
<td>Inc with Bucks</td>
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<tr>
<td>Oxfordshire</td>
<td>1.00</td>
<td></td>
<td></td>
<td>0.566</td>
<td>0.74</td>
</tr>
<tr>
<td>Surrey</td>
<td>1.40</td>
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<td>0.796</td>
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<tr>
<td>West Sussex SDNPA</td>
<td>0.50</td>
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<td></td>
<td>0.277</td>
<td>0.25</td>
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<td><strong>Total</strong></td>
<td><strong>8.45</strong></td>
<td><strong>7.4</strong></td>
<td><strong>5.399</strong></td>
<td><strong>5.45</strong></td>
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</tr>
</tbody>
</table>

* c = confidential

**Sources:**
1. Identified in SEEAWP 2013 South East Aggregates Monitoring Report
2. Consumption figures taken from DCLG’s 2009 Aggregate Minerals Survey.

An updated version of the annual report is to be prepared early 2016 and will be referenced in next years 2016 LAA, as would an update of DCLG’s Aggregate Minerals Survey for 2014 which will also be addressed in the 2016 LAA as prepared by Hampshire Authorities.
Table B - South West region MPAs land-won sand and gravel local aggregate provision

<table>
<thead>
<tr>
<th>MPA</th>
<th>Identified provision (mtpa)</th>
<th>3-Year (2011-2013) Sales Average (mtpa)</th>
<th>2013 Sales (mtpa)</th>
<th>2009 Consumption (mtpa)</th>
<th>Proposed LDF Adoption Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cornwall</td>
<td>Nil</td>
<td>Inc. with Devon</td>
<td>0</td>
<td>0.02</td>
<td>TBC</td>
</tr>
<tr>
<td>Devon (inc Plymouth, Dartmoor NPA)</td>
<td>0.57</td>
<td>0.472</td>
<td>0.49</td>
<td>0.53</td>
<td>2016</td>
</tr>
<tr>
<td>Dorset (inc Bournemouth, Poole)</td>
<td>1.57</td>
<td>1.52</td>
<td>1.6</td>
<td>0.70</td>
<td>2017</td>
</tr>
<tr>
<td>Gloucestershire</td>
<td>0.83</td>
<td>0.77</td>
<td>0.68</td>
<td>0.35</td>
<td>2016</td>
</tr>
<tr>
<td>Somerset (exc. Exmoor NPA)</td>
<td>Inc. with Devon</td>
<td>Inc. with Devon</td>
<td>0</td>
<td>0.38</td>
<td>Adopted (2015)</td>
</tr>
<tr>
<td>Wiltshire (inc. Swindon)</td>
<td>1.20</td>
<td>0.468</td>
<td>0.434</td>
<td>0.85</td>
<td>Adopted (2009)</td>
</tr>
<tr>
<td>West of England1</td>
<td>Nil</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4.17</strong></td>
<td><strong>3.23</strong></td>
<td><strong>3.2</strong></td>
<td><strong>2.84</strong></td>
<td></td>
</tr>
</tbody>
</table>

1 West of England (Bath and North East Somerset (BANES), Bristol, North Somerset and South Gloucestershire)
The above information is from the draft 2013 SWAWP Annual Report and DCLG’s 2009 Aggregate Minerals Survey.
Appendix B - Consultation responses to the draft LAA

8.8 Responses to the consultation on the draft 2015 LAA (published for comment in September 2015) are shown below.

8.9 Response from SEEAWP

SEEAWP
South East England Aggregates Working Party

Technical Secretary: Richard Read BA, MRTPI.
Address: 2 Windermere Gardens, Alresford, Hampshire SO24 9NF
Tel: 077860977547 Email: readplanning@btinternet.com

Lisa Kirby-Hawkes
Development Planning Manager
Hampshire County Council

20 November 2015

Dear Lisa

Hampshire, Portsmouth, Southampton, New Forest and South Downs Local Aggregate Assessment (LAA) 2015

SEEAWP thanks you for consulting its members on the draft LAA for 2015. At its meeting on 10 November this was one of eight LAAs considered at the meeting. The evidence from the LAAs 2015 so far submitted to SEEAWP clearly indicates that the south east was continuing to make an appropriate contribution to aggregate supply regionally and nationally.

During the discussion at the meeting some general points arising from the LAAs were made. An issue was that south east England would in due course depend increasingly on alternatives to local extraction. This matter stressed the need to safeguard appropriate infrastructure. Additionally some mineral planning authorities would require more supply from its neighbours and this need to be taken into account in mineral plans. Finally, it was recognised that the supply of soft sand was becoming a challenge as significant proportion of the resource is within designated land.

It was also agreed that once all the LAAs had been submitted a short summary would be provided by the Secretary on all the key statistics to provide an overall picture for the south east of England.

Additionally some specific comments arising from your authority’s LAA were recorded in the Minutes that have now been circulated. I trust that these will be taken into account by you when you draft your Authority’s LAA for next year.

Nevertheless, the Hampshire, Portsmouth, Southampton, New Forest and South Downs LAA was agreed.

Yours sincerely

Tony Cook
SEEAWP Chairman
Response from SWAWP

From: Julia Webberley [mailto:juliawebberley@davidjarvis.biz]
Sent: 18 November 2015 13:37
To: Sellen, Rob
Cc: eingleiswoolcock@cornwall.gov.uk; davepitt@davidjarvis.biz
Subject: RE: Draft Hampshire LAA 2015

Dear Rob

Thank you for forwarding the draft LAA to us for consideration by the members of the SWAWP. I attach the only comment I have received to date, from Cornwall Council.

Kind regards
Julia

Hi Julia,

Many thanks for the email, the details in your table are correct.

I’ve just got one comment on the Hampshire LAA;

• Paragraph 2.3.7 change Cornwall County Council to read Cornwall Council.

Kind regards,

Ellie Inglis-Woolcock
Senior Planner (Local Plans)
Response from Cornwall Council regarding aggregate supply to Hampshire

FW: Greystone Quarry
Spriggs, Melissa
Sent: Wed 04/11/2015 14:07
To: Sellen, Rob
Cc: Planning Policy

Rob,

It looks like the Greystone Quarry has permission until 2042 so shouldn’t have any supply issues.

Regards,

Melissa

From: Rubin Emily [mailto:Emily.Rubin@cornwall.gov.uk]
Sent: 04 November 2015 13:36
To: Spriggs, Melissa
Subject: RE: Greystone Quarry

Dear Melissa,

Please see this link to the published fees report for Greystone Quarry:
http://www.cornwall.gov.uk/environment-and-planning/planning/minerals-waste-and-renewable-energy/monitoring-and-compliance/development-condition-monitoring/2015-development-conditions-monitoring-reports/. I understand that further fees reports are due to be published shortly so you may want to check back in a week or so if your deadline allows.

The fees report includes information on the operator, permissions and other issues. I’m afraid we are unable to share any information we have on the level of reserves for reasons of commercial confidentiality.
8.10  Response from aggregate operators in Somerset supplying Hampshire

**RE: Supply of crushed rock into Hampshire from Somerset**

Bown, John (Newton Abbot) GBR <John.Bown@hanson.biz>

*You replied to this message on 03/11/2015 14:52.*

**Sent:** Tue 03/11/2015 14:44
**To:** Planning Policy

Melissa

I can confirm that there is no change to the previous information regarding supplies of hard rock from Whately Quarry.

I can also confirm that there is no new information that would impact on the stone supplies into Hampshire.

Regards

John

---

**John Bown**
Land & Planning Manager
Trusham Quarry
Newton Abbot
Devon
TQ13 0NX