

# **TEES VALLEY JOINT LOCAL AGGREGATES ASSESSMENT**



**2017**

**Darlington Borough Council, Hartlepool Borough Council, Middlesbrough Council,  
Redcar & Cleveland Borough Council, and Stockton-on-Tees Borough Council**

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## Summary

This LAA provides an assessment of the demand for and supply of aggregates in the Tees Valley, other relevant local information, and an assessment of all supply options. It has been prepared jointly by the five Tees Valley authorities of Darlington Borough Council, Hartlepool Borough Council, Middlesbrough Council, Redcar and Cleveland Borough Council and Stockton-on-Tees Borough Council.

### Key Statistics

#### Crushed Rock

- Sales in 2016 = 44,000 tonnes
- Ten year sales average (2007-2016) = 41,000 tonnes per year
- Three year sales average (2013 -2016) = 39,000 tonnes per year
- Permitted reserves at 31 December 2016 = 1.89 million tonnes
- Sub-regional apportionment = 187,500 tonnes
- Landbank at 31 December 2016 = 10.1 years
- Proposed annual provision = 187,500
- Consumption of crushed rock = 715,000 tonnes (2014 latest available data)
- Demand forecast (2015-2030) = 3,000,000 tonnes
- Balance between supply and demand (2015-2030) = -1,105,385 tonnes

#### **Conclusions on supply:**

There is currently only one crushed rock supplier within the Tees Valley (Hart Quarry, Hartlepool). Permitted reserves currently give an estimated landbank of 10.1, based on the sub-regional apportionment. However, the 10-year sales average is significantly below the regional apportionment.

There is an additional need for crushed rock within the Tees Valley which cannot be met solely by Hart Quarry. The Tees Valley relies heavily upon imports from other regions, especially the North East and North Yorkshire, and this is likely to continue.

#### Sand and Gravel

- Sales in 2016 = 0
- Ten year sales average (2007-2016) = 5,000 tonnes per year
- Three year sales average (2013 -2016) = 0
- Permitted reserves at 31 December 2014 = 1,280,000 tonnes
- Sub-regional apportionment = 175,000 tonnes
- Landbank at 31 December 2016 = 7.3

- Proposed annual provision= 175,000
- Consumption of sand and gravel = 370,000 tonnes (2014 latest available data)
- Demand forecast (2015-2030) = 2,800,000 tonnes
- Balance between supply and demand (2015-2030)\*= -1,520,000 tonnes

\* Based upon permitted reserves as at 2014 and assuming approval of application to extend operations at Stockton Quarry. Alternatively balance between supply and demand will be - 2,800,000.

**Conclusions on supply:**

There are currently no active sand and gravel extraction sites within the Tees Valley. Beach extraction at North Gare ceased in 2012 and Stockton Quarry has been mothballed, with permission for extraction expiring in July 2015. Planning permission to extend the operations at Stockton Quarry is being sought but a submitted application has not yet been determined.

Permitted reserves currently give an estimated landbank of 7.3 years but the 10-year sales average is just 5,000 tonnes per year. The Tees Valley relies heavily upon imports of land-won sand and gravel and this is likely to continue. There is additional need for sand and gravel aggregate which is unlikely to be met within the Tees Valley.

## 1. Introduction

### Joint Local Aggregates Assessment (LAA)

- 1.1 The National Planning Policy Framework (NPPF) requires mineral planning authorities to plan for a steady and adequate supply of minerals by preparing an annual Local Aggregate Assessment, either individually or jointly by agreement with other mineral planning authorities, based on a rolling average of 10 years sales data and other relevant local information, and an assessment of all supply options (including marine dredged, secondary and recycled sources).
- 1.2 Following from previous joint working to produce the Joint Tees Valley Mineral and Waste Development Plan Documents, which set the framework for minerals planning in the sub-region, the mineral planning authorities of Darlington Borough Council, Hartlepool Borough Council, Middlesbrough Council, Redcar & Cleveland Borough Council and Stockton-on-Tees Borough Council have agreed to work together in the production of this joint LAA.
- 1.3 A previous draft of this LAA was subject to consultation with neighbouring and nearby mineral planning authorities, the minerals industry and others parties with an interest in mineral planning and was submitted to the North East Aggregates Working Party for consideration in November 2017. This final version has been amended to take into account the comments made.
- 1.4 This LAA provides an assessment of the demand for and supply of aggregates in the Tees Valley, other relevant local information, and an assessment of all supply options.

### Managed Aggregate Supply System (MASS)

- 1.5 The Government recognises the need to maintain the main principles of Managed Aggregate Supply System (MASS). This system provides a mechanism to deliver long term planning for the future supply of aggregates and requires that Mineral Planning Authorities with an adequate supply of aggregates make a contribution to national as well as local supply. It also requires that areas with low levels of resource make some contribution. The LAA, as an assessment of supply and demand of aggregates, forms a key part of the system.
- 1.6 However, the Government considers that a steady and adequate supply of minerals should be delivered by decentralising more power to mineral planning authorities to determine the appropriate level of aggregate extraction, in keeping with its principles of a more localist approach to planning.

### Data Sources

- 1.7 Data has been gathered from a number of different sources including:
  - North East Annual Aggregate Working Party Reports.
  - The four yearly Aggregate Minerals Survey for England and Wales.
  - Report for the North East Aggregates Working Party Apportionment of North East Region Guidelines for Aggregates Provision Environmental Report (Entec, May 2010).
  - The Crown Estate, Marine Aggregates Summaries of Statistics.
  - Background evidence base for the Tees Valley Joint Minerals and Waste DPDs.
  - Information on mineral resources held by the British Geological Survey.
  - Neighbouring mineral planning authorities' Local Aggregates Assessments.

## The Tees Valley

- 1.8 This LAA covers all five Tees Valley authorities, apart from the area of Redcar and Cleveland that lies within the North York Moors National Park<sup>1</sup>. All are mineral planning authorities.
- 1.9 The Tees Valley is a sub-region of the North East region covering an area of 79,400 hectares and a population of 663,600 (mid-2012). The Tees Valley population has grown steadily since mid-2006 helped by a combination of positive natural change and a net inflow of international migrants (though this element is currently close to zero) which has offset the net outflow of residents to other parts of the UK. The population is projected to increase to 687,000 in 2024, a 3.5% increase. Plans for housing growth within the Tees Valley, if implemented, would result in a 37.6% increase in net housing completions (see Table 17).
- 1.10 The focus of the urban areas around the River Tees arose from the river's importance to the traditional industries of the area - steel, shipbuilding and chemicals. However, the Tees Valley has experienced considerable economic, physical and social change over the last 30 years and many of the traditional industries on which the local economy has depended have declined in importance or disappeared altogether. This has left high unemployment rates and large areas of derelict and vacant land in some of the urban areas and along the banks of the River Tees. More positively, the area has seen new growth in recent years, through the development of industrial estates and housing areas, investment in town centres and the expansion of the major road network.
- 1.11 Significant opportunities for growth exist, within the main urban areas including further city centre style developments in the existing town centres, in Middlehaven, and at Stockton Riverside and North Shore. In taking advantage of its location in relation to the A1 (M), East Coast Main Line and Durham Tees Valley Airport, Darlington can offer development as a physical and economic gateway to the Tees Valley. Hartlepool's successful regeneration of the docks area means further development opportunities for tourism and office employment. Redcar can build on the success of the chemical and energy sectors at the Wilton International site and Teesport, whilst at the same time increase opportunities for tourism at Coatham, Kirkleatham and Redcar Racecourse, and by strengthening the links to the North York Moors National Park and North Yorkshire and Cleveland Heritage Coast.
- 1.12 Parts of the sub-region, especially around the Tees Estuary and the coast, have a high ecological significance. Designated areas include the Teesmouth and Cleveland Coast Ramsar site and Special Protection Area, Sites of Special Scientific Interest and the Teesmouth National Nature Reserve.
- 1.13 In September 2011, the Tees Valley authorities adopted Joint Minerals and Waste Development Plan Documents (DPDs), which set out planning policies and site allocations for minerals and waste developments until 2026. The Minerals and Waste Core Strategy DPD contains the long-term spatial vision and strategic policies for minerals and waste developments. The Minerals and Waste Policies and Sites DPD identifies specific sites for mineral development and provides policies which will be used to assess planning applications.
- 1.14 Historically, there have been relatively low levels of aggregate production within the Tees Valley.

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<sup>1</sup> The North York Moors National Park Authority is a separate Mineral Planning Authority and has prepared a Joint LAA with North Yorkshire County Council, City of York Council and Yorkshire Dales National Park Authority.

## **Consultation**

- 1.15 As part of the preparation of this LAA the following stakeholders will be consulted on a draft of the document:
- Neighbouring and nearby mineral planning authorities (including North Yorkshire County Council, North York Moors National Park Authority, Yorkshire Dales National Park Authority, Durham County Council and other North East mineral planning authorities);
  - The North East Aggregates Working Party and its members;
  - Mineral operators;
  - The Marine Management Organisation;
  - The Crown Estate;
  - Other consultees with an interest in minerals planning.

## 2.0 Geology and aggregate resources

### Geology

- 2.1 Superficial deposits in the region are relatively uniform, consisting mostly of Glacial Till and, at the Tees Estuary, Fluvial Sands and Gravels. However, the underlying solid geology of the area is more varied.
- 2.2 Broadly, the underlying geological strata dip to the south east toward Middlesbrough. The oldest rocks are the Carboniferous Coal Measures, Magnesian Limestone and Millstone Grit series, which outcrop to the north and west of Darlington. Overlying these strata to the east are the Permian and Triassic Sandstones which include the Sherwood Sandstone, a major aquifer. The Permian and Triassic Sandstones form the main underlying rocktype from Darlington to the mouth of the Tees. To the south of the Tees, the youngest rocktypes are found around Middlesbrough and Guisborough. The solid strata in this area comprises the Keuper Marl (Mercia Mudstone) and the Jurassic Sandstones. It is these strata that also underlie the North York Moors National Park.

### Overview of aggregate resources

- 2.3 In terms of primary aggregates, extraction in Tees Valley has focussed on magnesian limestone and sand and gravel and these continue to be the deposits of main commercial interest in the Tees Valley.

### Sand and gravel resources and extraction

- 2.4 There are currently no active sand and gravel extraction sites within the Tees Valley. Extraction from the beach site at the North Gare in Hartlepool Borough has ceased and Stockton Quarry is inactive but still contains extractable reserves.
- 2.5 Information on sand and gravel reserves and production is contained within the annual monitoring reports produced by the North East Aggregates Working Party (NEAWP). However, to avoid making commercially sensitive information available, the figures published in these reports must be made up of at least three operators' individual figures. This means that no one operator's figures can be calculated. The only time that individual operator's figures can be shown is where there is written agreement from that operator. As the operators in the Tees Valley have not agreed to this, there are no published figures on how much sand and gravel has been produced and, therefore, how much sand and gravel is still needed to be produced.
- 2.6 The sand and gravel at the North Gare site is, in theory, constantly replenished by the actions of the tide bringing in material to replace that which is extracted. However, there is no guarantee that this process will continue and, as such, the site cannot be used as a source of permitted reserves. Furthermore, the site itself lies within an environmentally sensitive area. In environmentally sensitive locations such as this, there are provisions for reviewing and potentially amending or revoking existing planning permissions if they are deemed to be causing adverse effects on the designation. Natural England requested that the North Gare site undergo such a review. Beach sand extraction ceased in 2012, and there is no longer a license from the Crown Estate for extraction at the site.
- 2.7 In July 2015 a planning application<sup>2</sup> to allow an extension of the period of time for completion of the development was submitted for Stockton Quarry. This has allowed the identification of the amount of reserves at the quarry. It is estimated that there is around 20ha of land available for sand and gravel extraction. Information contained in the BGS Technical Report WF/00/06 - Mineral Resource Information for Development Plans Durham and the Tees Valley indicated that the site is located on reserves of concealed river sand and gravel resources, and glacial sand and gravel resources. An estimate of sand and gravel reserves at the site had been calculated at 2,478,600 tonnes<sup>3</sup>. However, the operators have

<sup>2</sup> Planning application 15/1860/VARY, Cemex UK Operations Ltd, 2015

<sup>3</sup> Entec (2009) Tees Valley Joint Minerals and Waste Development Plan Documents, Minerals Background Paper

stated that accessible reserves have been reassessed and are now calculated to be 1,280,000 tonnes<sup>4</sup>. The quarry is currently inactive and permission to work the site expired in July 2015. The application is held in abeyance whilst the applicants carry out further testing/feasibility work to establish if the quarry is viable. In April 2017 Cemex submitted a Scoping Opinion<sup>5</sup> for the proposed extraction of 1.78 million tonnes of sand and gravel, erection of mineral processing plant and associated ancillary infrastructure and restoration of site to nature and conservation flood meadows and reed beds with public access. Stockton Borough Council have not yet given an opinion, however an opinion is likely to be given early in 2018 and will thus be reported in the next LAA.

- 2.8 A site submission was made by Hanson Aggregates for land at High Coniscliffe near Darlington in August 2009, in response to the Publication Minerals and Waste DPDs. The site had previously been incorrectly submitted to Durham County Council for consideration within their Plan (permission for development of the site was previously refused in 1986 by Durham County Council for reasons including unallocated site, no demand, proximity to village and disturbance to residents, impact on landscape and grade 2 agricultural land). It was estimated that the site would provide for the extraction of 4.6 million tonnes of sand and gravel. However, the proposed site was not allocated because it was considered that it was not required to deliver the level of provision in line with the recommended sub-regional apportionment for Tees Valley at that time. An over provision of sand and gravel sites were also considered inappropriate given the policy of promoting the use of secondary aggregates within the DPDs. In addition, no planning application has come forward for this site. The site does contain a significant reserve of sand and gravel. Hanson still has an interest in the site and thus a planning application and/or further representations for inclusion in future Tees Valley Minerals and Waste DPDs cannot be dismissed.
- 2.9 However, the cessation of sand and gravel production from the North Gare extraction site and failure to activate Stockton Quarry has resulted in the inclusion of Policy MWP3, within the Minerals and Waste Plan. MWP3 deals with the provision of additional aggregates. The policy indicates that proposals for the extraction of aggregates will be supported where imports into the Tees Valley would be reduced and there would be no significant adverse impact on important environmental designations, with the Teesmouth and Cleveland Coast SPA and Ramsar site, the Teesdale Way, flood risk zones and green wedges specifically mentioned. At examination the Planning Inspector supported this approach stating ‘...in the event that North Gare continues to operate and/or Stockton Quarry becomes active, there would then be overprovision. Any planning application to extract sand and gravel would be subject to Policy MWP3 and other policies in the development plan. Consequently, despite the representation seeking a further allocation of sand and gravel at High Coniscliffe, I consider that the Policies and Sites DPD is sound in respect of the policies for aggregates extraction.’
- 2.10 Landings of marine sand and gravel also take place at Cochrane’s Wharf in Middlesbrough. However, economic conditions have resulted in Billingham Wharf, where sand and gravel was previously also landed, being mothballed by its operator (CEMEX). Further information and discussion on marine aggregates is included in Sections 4&5.

#### **Crushed rock resources and extraction**

- 2.11 There is one quarry producing crushed rock for aggregate use in Tees Valley. This is Hart Quarry in Hartlepool Borough, which is now operated by Breedon<sup>6</sup>. Permission for mineral extraction is due to expire in 2042. The BGS report Mineral Resource Information for Development Plans: Durham and the Tees Valley states that the Magnesian Limestone quarried from the site is used for less demanding aggregate uses. The limestone is quarried as a by-product as the primary function of Hart Quarry is the manufacture of high quality agricultural lime for export.

<sup>4</sup> Planning application 15/1860/VARY, Cemex UK Operations LTD, 2015.

<sup>5</sup> Application 17/0942/SOR, Cemex UK Operations LTD

<sup>6</sup> The operator of Hart Quarry changed in 2015 following the acquisition of Sherburn Group by Breedon.

- 2.12 A reassessment of reserves by the operator in 2009 estimated that there were reserves of 950,000 tonnes suitable for aggregate use.
- 2.13 Permission was subsequently granted in December 2011 for a southern extension to Hart Quarry. It was estimated when permission was granted that there would be a 50:50 split between aggregate and non-aggregate use, which would provide 1,320,000 tonnes of aggregate. Operator information suggests, however, that a much higher proportion of output is for high specification agricultural lime for export to Europe due to economic reasons and the development of markets for the mineral to be used as agricultural lime.
- 2.14 Assuming that the estimate of reserves in 2009 and sales since 2009 (as illustrated in Table 3) are both correct, when combined with the extension, this gives crushed rock reserves of 1.89 million tonnes for aggregate use in 2016. It should be noted that a significant part of the total crushed rock reserves is available for non-aggregate uses. The figures stated in Table 1 do not include the crushed rock reserves available for non-aggregate uses. The overall figure for 2016, inclusive of both categories is 3.73 million tonnes.

**Table 1: Estimated Crushed Rock Reserves for aggregate uses in the Tees Valley (000' tonnes)**

	2009	2010	2011	2012	2013	2014	2015	2016
<b>Crushed Rock Reserves</b>	950*	926#	2,222#	2,182#	2,154#	2,121#	1,982#	1,894#

Source: \*Operator figure and # Mineral Planning Authority estimate

- 2.15 There are likely to be better quality resources of magnesian limestone elsewhere within the Tees Valley, particularly in the Darlington area which contains extensive areas of the Lower Magnesian Limestone (Raisby Formation). Parts of this formation are relatively strong, durable and frost resistant and are suitable for concreting aggregates and coated roadbase materials.
- 2.16 During the preparation of the Minerals and Waste Joint Plan, the only site submission made relating to crushed rock provision was for an extension to Aycliffe Quarry, in County Durham, into the Darlington Borough Council area. However, this submission was later withdrawn as the operator wished to focus on other areas of work rather than minerals extraction. The reserves previously granted permission for extraction at Aycliffe Quarry have been exhausted and the site has closed for mineral extraction.

### 3. Aggregate sales

- 3.1 Annual sales information for both sand and gravel and crushed rock are published in the Annual Aggregates Monitoring Report produced by the North East Aggregates Working Party. These reports provide the best regular consistent source of information for the preparation of Local Aggregate Assessments. However, due to the way that information is collected sales information is normally only available on a regional or sub-regional level and it is not possible to identify sales from specific sites. Due to commercial confidentiality no primary data on the sale of aggregates is available for the Tees Valley and it is therefore necessary to make certain assumptions in calculating sales over a ten year period.

#### Land-won sand and gravel

- 3.2 Across the North East there has been a 5.8% decrease in the sale of land-won sand and gravel from 1,360 thousand tonnes in 2005 to 1,286 thousand tonnes in 2014. This decrease is considered to be mainly as a result of the economic downturn and a resulting reduction in the demand for primary aggregates. However in recent years levels of sales appear to have stabilised following a period of significant decline and a marked increase of 78.8% was seen between 2013 and 2016.
- 3.3 Over recent years the only site where sand and gravel has been extracted is the North Gare beach extraction site in Hartlepool. However, from 2012 this site has been inactive and is no longer licensed by the Crown Estate. The operator of North Gare has stated that the information they supplied to the NEAWP must remain confidential and therefore there is no publicly available figures to confirm the sales from this site. Instead the sand and gravel production figures for the Tees Valley and Tyne and Wear are combined in the NEAWP reports.
- 3.4 It is known that the site was previously operated under licence from the Crown Estate and this licence limited the total amount which could be extracted to a maximum of 48,000 tonnes per year. In order to establish an estimate of the sales figures to inform the Joint Minerals and Waste DPDs, the sub-regional apportionment figures for the period 2001 to 2016 were considered in the Minerals Background Paper (Entec, 2009). These apportionment figures were established in 2004 and were based on the existing permissions at that time. Tees Valley was apportioned a total equating to 10,000 tonnes per year and, as North Gare was the only operational site at that time, it was concluded that the site's sales leading up to 2004 were also in the region of 10,000 tonnes per year. Therefore, a figure of 10,000 tonnes per year was used as the basis for the Tees Valley's annual sales of sand and gravel in the Minerals and Waste DPDs.
- 3.5 In the Apportionment of North East Region Guidelines for Aggregates Provision 2005-2020 Environmental Report (Entec, 2010), information provided by Durham on their 2007 production, and the licensing agreement on North Gare, was used to calculate separate annual production figures for Durham and the Tees Valley. This estimated production of 40,000 tonnes per year in the Tees Valley.
- 3.6 For the basis of this assessment the lower estimate used in the adopted Minerals and Waste DPDs has been used for the years where mineral extraction took place at North Gare. However, figures should be treated with caution as actual sales may be higher. This illustrates the difficulty in calculating average sales when information is confidential.

**Table 2: Estimated sales of land-won sand and gravel for aggregate use in the Tees Valley (thousand tonnes)**

Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
North East England Total Sales**	1,360	1,325	1,037	926	757	757	869	713	716	873*	917	972
Estimated	10	10	10	10	10	10	10	0	0	0	0	0

<b>Tees Valley Sales</b>												
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Source: North East Aggregates Working Party Reports and Minerals Background paper, Entec (2009)

\*figure includes Mineral Planning Authority estimate for Tyne and Wear.

\*\* Figure includes County Durham, Northumberland, Tees Valley and Tyne and Wear.

**Table 3: Three year sales averages of land won sand and gravel for aggregate use in the Tees Valley (thousand tonnes)**

Period	2005-07	2007-09	2009-11	2011-13	2012-14	2014-16
<b>Estimated Tees Valley Sales Average</b>	10	10	10	3	0	0

### Crushed Rock Sales

- 3.7 Sales of crushed rock originating from the North East declined by 41% between 2007 and 2009 as a result of the economic downturn and remained at a similar level in the period from 2009 to 2013 reflecting the economic conditions. Sales have, however, increased by 50% between 2013 and 2016 as a result of some growth in construction activity. As previously stated, sales of crushed rock from the Tees Valley are confidential. However, using a number of sources, sales over a 10 year period have been estimated in the table below. Sales for the period 2013 to 2016 have been estimated with reference to the approximate regional increase of crushed rock sales for aggregate use of 48%.

**Table 4: Estimated sales of crushed rock for aggregate use in the Tees Valley (thousand tonnes)**

Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>North East England Total Sales</b>	5,740	5,652	5,689	5,079	3,379	3,462	3,433	3,181	3,569	4,135	4,533	5,356
<b>Estimated Tees Valley Sales</b>	83!	79*	79*	79+	24#	24+	24+	40!	28!	33+	39+	44+

**Source:** \* Apportionment of North East England Guidelines for Aggregate Provision, 2005-2020: Environment Report, + Mineral Planning Authority Estimate, # Collation of the Aggregates Mineral 2009 Survey and! Sherburn Stone (NE RAWP 2005 report and Statement, The County Durham Plan Examination in Public).

**Table 5: Three year sales averages of crushed rock for aggregate use in the Tees Valley (thousand tonnes)**

Period	2005-07	2007-09	2009-11	2011-13	2014-16
<b>Estimated Tees Valley Sales Average</b>	80	61	24	31	39

- 3.8 Due to the low levels of estimated sales in the Tees Valley and the low ten year sales average, three year sales averages have been considered to give a greater understanding of the sales trends for crushed rock. These averages are shown in Table 5.
- 3.9 It can be seen from Table 4 that sales of crushed rock for aggregates use in the Tees Valley have increased from 2014 following a period of lower sales during the period 2007 to 2013 due to the economic downturn. Production from Hart Quarry has varied considerably since 1971, generally in response to prevailing market conditions. Another factor which contributed towards reduced sales is competition from

Europe. It may also be influenced by waste policy which encourages the recycling of aggregates and increased efficiency in construction techniques.

- 3.10 Table 5 shows that sales during the 2012-2014 period were significantly lower than during the 2005-2007 period. It can be seen that there was some minor recovery with an increase of 41% between 2009-2011 and 2012-2014. However, this is as a result of increasing production of agricultural lime.
- 3.11 It should also be noted that the nearest mineral producing units to the Tees Valley, Aycliffe East Quarry in County Durham, ceased mineral production in 2013. The closure of this site is significant as it is assumed that due to its proximity, Darlington and Tees Valley were significant markets for crushed rock sold from the quarry.

#### 4. Marine-won sand and gravel and wharves

- 4.1 There are currently no areas licenced for the dredging of marine aggregates in North East England, with the closest area being the Humber dredging area. During 2014, 1.57 million tonnes of construction aggregate were dredged from a permitted license tonnage of 4.56 million in the Humber region, 0.43 million tonnes (27.3%) of which was delivered to the North East<sup>7</sup>. Over the fifteen year period from 1998 to 2012, 52.2 million tonnes were dredged from the Humber region<sup>8</sup>. The Crown Estate's Marine Aggregates Capacity & Portfolio document 2016, details that there are currently 59.14 million tonnes of primary marine aggregate reserves in the Humber dredging region, which at the 10 year average annual off-take would provide a reserve life of 25.6 years. Significant quantities of sand and gravel, potash and salt are transported in and out of the Tees Valley via the port and rail facilities in the area.
- 4.2 As illustrated in Table 6, it can be seen that sales of sand and gravel decreased markedly after 2008. Sales of marine-won sand and gravel from the Tees Valley decreased by 50% between 2008 and 2016, with sales from wharves in the North East also decreasing over this period. This decrease is considered to be mainly the result of the economic downturn in 2008-9. More recently sales had begun to recover, only slightly dipping in 2012/13 before increasing again in 2015. In 2016 sales decreased, a contributing factor for this decrease may be the result of initial economic uncertainty following the Brexit Referendum.

**Table 6: Sales of marine-won sand and gravel for aggregate use in the Tees Valley (thousand tonnes)**

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>North East England Total Sales</b>	998	563	678	509	491	451	536	570	499
<b>Tees Valley</b>	314.9	189.9	257.1	181.4	99.5	133.7	208.7	249.7	169.8

Source: North East: North East Aggregates Working Party Reports, Tees Valley: The Crown Estate Licenses, Summary of Statistics 2008-2013

- 4.3 There are a number of wharves in the Tees Valley capable of landing marine dredged sand and gravel. Cochrane's Wharf in Middlesbrough is identified as the only location in 2015 in the Tees Valley where marine dredged sand and gravels were landed. Economic conditions have resulted in Billingham Wharf being mothballed by its operator in 2012.
- 4.4 To allow sand and gravel landings to continue, the Minerals and Waste Policies and Sites DPD safeguards land connected to the existing wharves to ensure their operations are maintained and, if necessary, expanded. Cochrane's Wharf and Tees Wharf in Middlesbrough have been the location of much of the landings of marine-won sand and gravel in the Tees Valley. However, these wharves (plus Dawson's Wharf, Middlesbrough Wharf and Middlesbrough Port (North Wharf)) are all located within the Greater Middlehaven regeneration area, as identified in the Middlesbrough Regeneration DPD (2009). Whilst policies within the DPD would support the continued use of these wharves, the strategic Greater Middlehaven project would take priority over existing uses if there were risks to the delivery of regeneration initiatives.
- 4.5 The Minerals and Waste DPD also safeguards wharves at Teesport, Graythorp Yard and Billingham Reach Industrial Estate. The safeguarding of these three wharves is considered to provide adequate

<sup>7</sup> The area involved – 18<sup>th</sup> annual report, Marine Aggregate Extraction 2015

<sup>8</sup> Marine Aggregate Dredging 1998-2012, The Crown Estate

replacement capacity should a situation arise where Tees Wharf and Cochrane's Wharf are closed. Some of these wharves are already involved with the landing of sand and gravels imported from land-won sources outside of the Tees Valley, and have comparable size and facilities. This demonstrates that there is capacity to deal with current tonnage as well as any potential future increase.

- 4.6 The Marine and Coastal Access Act 2009 introduced a new approach for marine planning, designed to:
  - a. create a more integrated approach to effective marine management;
  - b. enable the sustainable use and protection of marine resources; and,
  - c. provide a clearer framework for consistent decision-making which affects the use of the marine environment.
- 4.7 As a consequence of the above Act, the 2011 Marine Policy Statement (MPS) recognises the importance of marine aggregates and supports their extraction, to the extent that this remains consistent with the principles of sustainable development. Production of the Marine Plan for the North East region commenced in 2016, with a call for issues with supporting evidence, including a series of workshops. Visioning and options development begins in the autumn 2017.
- 4.8 The MPS states that marine plan authorities should as a minimum make provision within Marine Plans for a level of supply of marine sand and gravel that ensures that marine aggregates (along with other sources of aggregates, including recyclates) contribute to the overarching Government objective of securing an adequate and continuing supply to the UK market for various uses.

## 5. Secondary and Recycled Aggregates

- 5.1 Information on the production and supply of recycled aggregates is included in the NE AWP reports. Sources of recycled and secondary aggregates include materials from ash from the Haverton Hill Energy from Waste Plant. Aggregate supply from the recycled ash from the EfW has increased as a result of new capacity being provided. However, the closure of the steelworks at Redcar will impact on supply from that source. Further analysis of the implications for the future supply of secondary aggregates may need to be carried out, as a consequence of this closure. Whilst recycled and secondary aggregates cannot replace quarried aggregates in all applications, they are typically used for lower grade uses such as fill. As construction activity increases, the demand for such materials will increase.
- 5.2 Table 7 sets out the current locations and types recycled and secondary aggregates in the Tees Valley. Tables 8 and 9 set out the sales information received for 2014 and 2016.

**Table 7: Location and Types of Recycled and Secondary Aggregates in Tees Valley (2014)**

Site	Location	Status	Materials
Cochranes's Wharf	Middlesbrough	Active	Construction, demolition and excavation waste
Dockside Road	Middlesbrough	Closed	Blast Furnace Slag
Haverton Hill EfW Facility	Stockton on Tees	Active	Incinerator Bottom Ash
Teesport	Redcar	Active	Blast Furnace Slag

Source: North East England Annual Aggregates Monitoring Report (2014)

- 5.3 The data set out in Table 8 should be treated with caution as not all producers in the North East of England responded to surveys. Also, the data does not include mobile crushers and screens, which are known to make a significant contribution in terms of construction and demolition waste recycled for aggregate use. Table 10 collates the sales information available (noting that data from 2015 is absent) and shows the average over the period 2012- 2016.

**Table 8: Sales of recycled and secondary aggregates from Tees Valley (2014)**

	Sales (thousand tonnes)
Construction and Demolition Waste	30
Incinerator Bottom Ash (Energy from Waste)	132
Slag: Blast Furnace and basic oxygen furnace	352
<b>Total</b>	<b>514.8</b>

Source: North East England Annual Aggregates Monitoring Report (2014)

**Table 9: Collated Sales Figures Recycled and Secondary Aggregates (2016)**

Site:	Haverton Hill Ash Plant	Cochrane's Wharf Middlesbrough	Teesport	Total
Construction and demolition waste	0	40,643	0	40,643
Energy from Waste plant - incinerator bottom ash	147,176	0	0	147,176
Slag	0	0	665,000	665,000
<b>Total</b>	<b>147,176</b>	<b>40,643</b>	<b>665,000</b>	<b>852,819</b>

Source: North East Aggregates Working Party 2016

**Table 10: Past Sales and Average**

	Sales (thousand tonnes)					Average
	2012	2013	2014	2015	2016	
<b>Construction and Demolition Waste</b>	31	30	30	N/A	40	32.75
<b>Incinerator Bottom Ash (Energy from Waste)</b>	79	121	132	N/A	147	118
<b>Slag: Blast Furnace and basic oxygen furnace</b>	414	377	352	N/A	665	452
<b>Total</b>	523	527	514	N/A	852	604

Source: North East England Annual Aggregate Monitoring Report (2012, 2013, 2014) & North East Aggregates Working Party 2016 - Aggregate Minerals Survey 2016

- 5.4 The use of secondary and recycled aggregates is acknowledged to be of some importance within the Tees Valley. The Spatial Vision, Strategic Objective B and Policy MWC1 c) in the Mineral and Waste Core Strategy DPD all look to promote the use of alternative aggregate materials over primary aggregates. As part of a review further work may be required to be undertaken to understand the extent to which the recycled and secondary aggregate produced in the Tees Valley could be used as a substitute to primary aggregates.

## 6. Movement of aggregates – imports/exports

- 6.1 Information on imports and exports of aggregates is contained in the Collation of the Aggregate Mineral 2014 Survey. Recorded details of sales from the Tees Valley and principal destinations are summarised in Tables 11 and 12 below:

**Table 11: Sales of marine sand and gravel and principal destination (2014)**

Origin	Tees Valley		North East		Elsewhere	
	Thousand tonnes	%	Thousand tonnes	%	Thousand tonnes	%
Middlesbrough	194	93	15	7	0	0

Source: Updated based on Aggregate Minerals Survey 2014

**Table 12: Sales of crushed rock and principal destination (2014)**

Origin	Tees Valley		North East		Elsewhere	
	Thousand tonnes	%	Thousand Tonnes	%	Thousand Tonnes	%
Hartlepool BC	48	76	12	20	2	4

Source: Updated based on Aggregate Minerals Survey 2014

- 6.2 The study also records imports of primary aggregates into the Tees Valley. Table 13 below illustrates imports of aggregates from other sub-regions within the North East and from other regions (inter-regional flows). This data is compared against consumption of aggregates within the Tees Valley. However, data should be treated with caution as operators cannot always be certain where their produce is sold. The study also notes that some caution should be used in interpreting consumption figures as they are calculated from the principal destination of aggregate flows. However, aggregates may subsequently be used within another region.

**Table 13: Imports of primary aggregates to the Tees Valley (2014) (thousand tonnes)**

	Imports	Consumption	Imports as % of consumption
Land-won sand & gravel	175	175	100
Marine sand & gravel	1	195	0.5
Total sand & gravel	176	370	47.6
Crushed rock	668	715	93.4
Total aggregates	844	1085	77.8

Source: Collation of the results of the 2014 Aggregate Minerals Survey

- 6.3 The table shows that 47.6% of sand and gravel consumption was imported, almost all of which was land-won. Given the availability of reserves at Stockton Quarry, which are not currently worked, it is considered that this may reflect the availability of high quality resources in neighbouring areas and economic decisions made by operators. Opportunities may exist for an increase in marine dredged sand and gravel. However, in the short-term this seems unlikely, particularly given the current mothballing of Billingham Wharf due to economic conditions. MWP3 supports appropriate new sites within the Tees Valley.
- 6.4 The Tees Valley imports 93.4% of crushed rock from elsewhere in the North East or another region, a large proportion of which will be from quarries in North Yorkshire. It is considered that this high level of imports may reflect the availability of high quality reserves in neighbouring areas, and is also likely to be influenced by the economics of buying from established operators and sites. The reliance on one quarry

and lack of high quality reserves in the Tees Valley is also considered to contribute to a high level of imports.

- 6.5 MWP3 supports appropriate new sites within the Tees Valley. However, given the historically low levels of mineral production and relatively low levels of interest for new sites within the Tees Valley, it is considered that the reliance on imports of land-won aggregates from elsewhere will be required to continue, particularly in the short to medium term, and cooperation with other areas will therefore remain important.

### Inter-regional flows

- 6.6 The Collation of the Aggregate Mineral 2014 Survey identifies complex inter-regional flows of aggregates between regions of England and Wales. Flows into the North East are illustrated in Table 14 below.

**Table 14: Imports of primary aggregates to the North East (2014) (thousand tonnes)**

Aggregate Minerals		Total	East Midlands	West Midlands	North West	Yorkshire & Humber	South Wales	Outside England & Wales
Sand and Gravel	Land-won	351	0	1	16	344	0	0
	Marine dredged	0	0	0	0	0	0	0
	<b>Total sand and gravel</b>	<b>351</b>	<b>0</b>	<b>1</b>	<b>16</b>	<b>334</b>	<b>0</b>	<b>0</b>
Crushed rock	Limestone/Dolomite	435	1	0	48	382	3	0
	Igneous rock	377	153	0	75	0	0	148
	Sandstone	24	0	0	10	14	0	0
	<b>Total crushed rock</b>	<b>835</b>	<b>154</b>	<b>0</b>	<b>133</b>	<b>396</b>	<b>3</b>	<b>148</b>
<b>Total</b>	<b>Total aggregates</b>	<b>1186</b>	<b>154</b>	<b>1</b>	<b>149</b>	<b>730</b>	<b>3</b>	<b>148</b>

Source:

- 6.7 The most significant imports of aggregates into North East England are crushed rock and land-won sand from Yorkshire and Humber: 396 thousand tonnes of crushed rock and 334 thousand tonnes of land-won sand and gravel.
- 6.8 It is considered that this reflects the availability of good quality resources in the northern part of North Yorkshire that are in close proximity to North East England. It is assumed that a significant proportion of exports from North Yorkshire to North East England are to the Tees Valley sub-region, reflecting the limited land-won production in this area and the economic constraints associated with transporting aggregate minerals over longer distances by road.

### Comparison to LAA 2016

- 6.9 Reflecting upon last year's 2016 LAA figures (based on the 2009 survey) there has been an increase in sales of marine sand and gravel within the Tees Valley and a decrease to elsewhere in the North East. Sales were previously split between wharfs at Stockton and Middlesbrough but sales based on the 2014 survey now solely originate in Middlesbrough.
- 6.10 Sales of crushed rock from Heart Quarry in Hartlepool have increased within the Tees Valley from 24 thousand tonnes in 2009 to 48 thousand tonnes in 2014. In 2014 14 thousand tonnes of crushed rock were being sold elsewhere from the site whereas in 2009 no sales were being made outside the Tees Valley.

6.11 A comparison of the aggregate imports relative to consumption rates are illustrated in Table 15 below.

**Table 15: Comparison of Imports of primary aggregates to the Tees Valley 2014 compared to 2009 (thousand tonnes)**

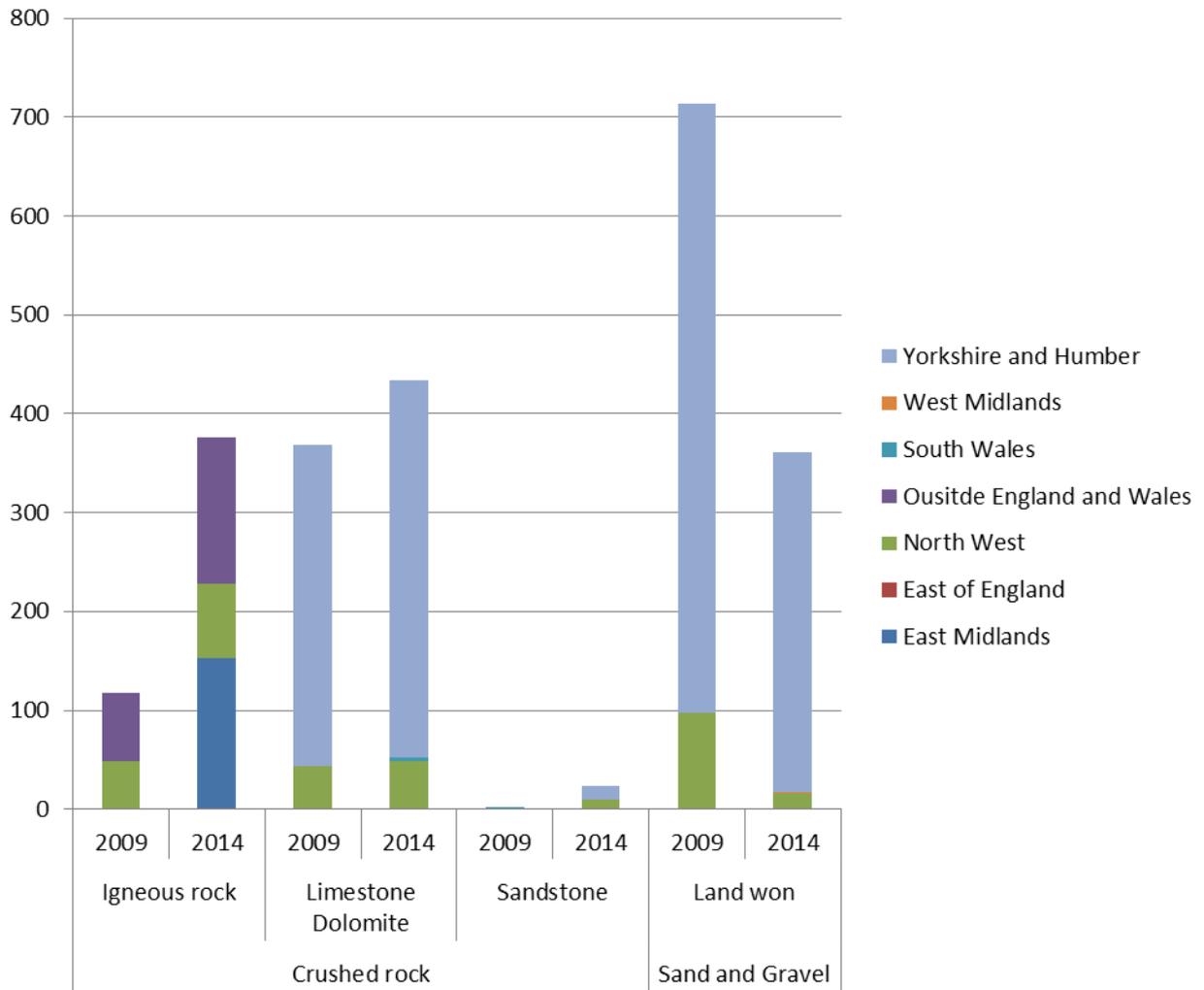
	2014 Minerals Survey			2009 Minerals Survey			Change		
	Imports	Consumption	Imports as % of consumption	Imports	Consumption	Imports as % of consumption	Imports	Consumption	Imports as % of consumption
<b>Land-won sand &amp; gravel</b>	175	175	100	262	262	100	-87	-87	No Change
<b>Marine sand &amp; gravel</b>	1	195	0.5	2	167	1.2	-1	+28	+0.7
<b>Total sand &amp; gravel</b>	176	370	47.6	267	428	62.3	-91	-58	+14.7
<b>Crushed rock</b>	668	715	93.4	369	393	93.9	+299	+322	+0.5
<b>Total aggregates</b>	844	1085	77.8	633	821	77.1	+211	+264	+0.7

Source:

6.12 The increase in consumption of marine sand and gravel and decline in consumption of land won sand and gravel has seen a significant reduction in the reliance on imports for sand and gravel products overall between 2009 and 2014. The Tees Valley remains heavily dependent on imports of crushed rock with the increased output of Heart Quarry only making a negligible difference to the overall percentage. In relation to total aggregate imports compared to consumption the Tees Valley still remains reliant on imports although some improvement is being made.

6.13 Comparing inter-regional flows it can be seen from Graph 1 below that imports of primary aggregates to the North East remain most common from the Yorkshire and Humber region. As noted already imports of Sand and Gravel have declined but the relative reliance on these aggregates coming from the Yorkshire and Humber region has remained. In relation to crushed rock the significant increase in imports of igneous rock from the East Midlands is a notable change between 2009 and 2014. Limestone/Dolomite interregional flows remain largely unaltered with the Yorkshire and Humber providing the majority of imported aggregate. There has been a small increase in sandstone imports.

**Graph 1: Comparison of Imports of primary aggregates to the North East 2014 compared to 2009 (thousand tonnes)**



**7. Assessment of future supply and demand**

**Apportionment**

7.1 The North East Aggregates Working Party has provided advice on how the regional figure for North East England (24 million tonnes of sand and gravel and 99 million tonnes of crushed rock) should be subdivided between each of the mineral planning authorities for the period 2005 to 2020. These guidelines for mineral production are summarised in the table below.

**Table 16: Recommended apportionment Tees Valley (2005-2020)**

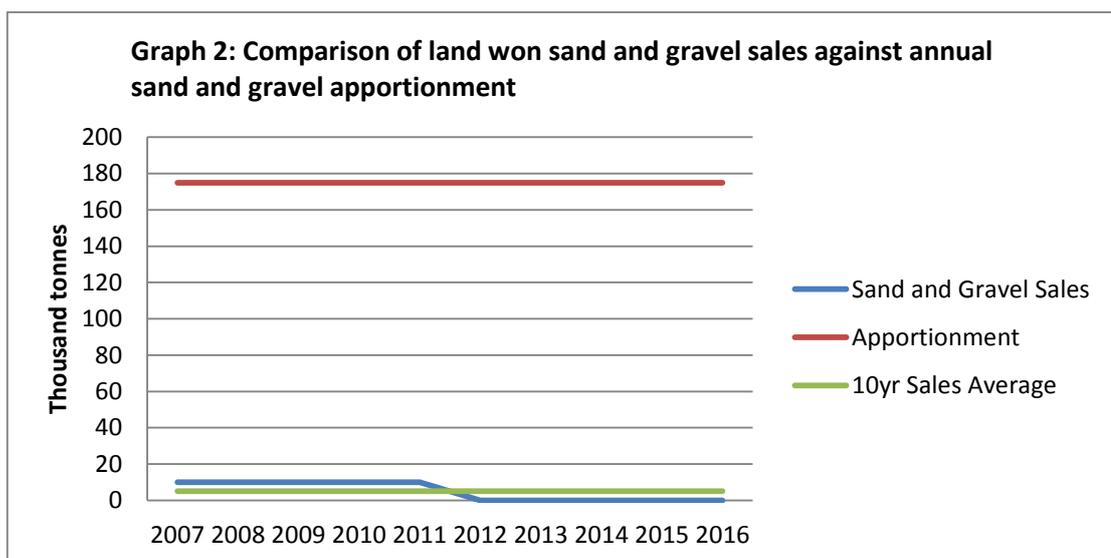
	Sand and Gravel (tonnes)		Crushed Rock (tonnes)	
	Annual	Total	Annual	Total
<b>Tees Valley</b>	175,000	2.8m	187,500	3.0m
<b>North East</b>	1.5m	24m	6.19m	99m

Source: North East England Annual Aggregates Monitoring Report

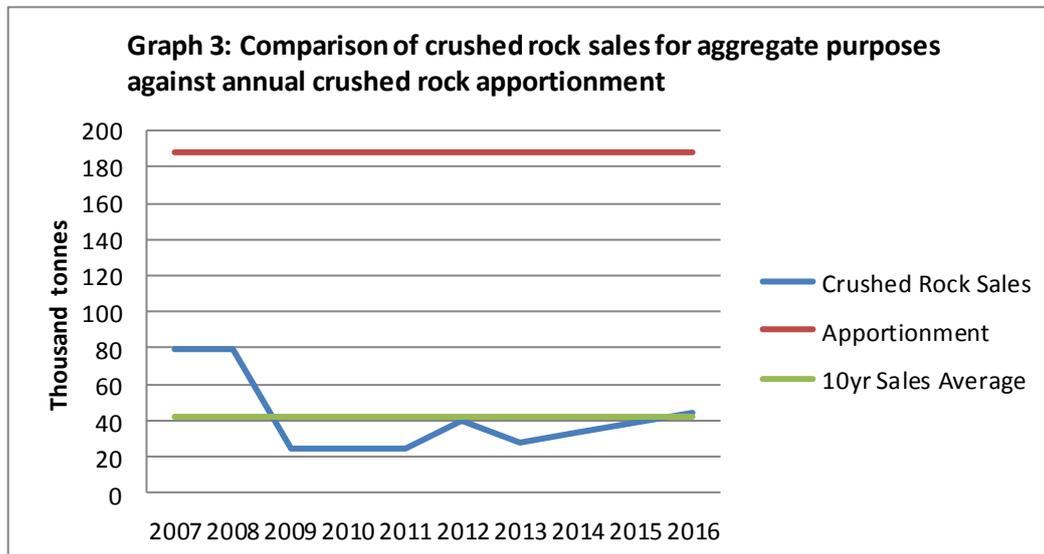
**Ten year sales average**

7.2 The sales information covering the 10 year period from 2007-2016 covers a period of both high and low economic activity. Stockton Quarry was inactive during the whole of this 10 year period and North Gare inactive since 2012. Sales of sand and gravel average at 5 thousand tonnes per year over a 10 year period and nothing per year over a 3 year period. Sales of crushed rock average at 41 thousand tonnes per year over this 10 year period, and 39 thousand tonnes over the 3 year period, which illustrates the issues in using the ten year sales average to calculate demand when there are only a limited number of sites.

7.3 The graph below illustrates the annual recommended apportionment for land-won sand and gravel against estimated sales for aggregate use in the Tees Valley over a 10 year period.



7.4 Graph 2 shows the annual recommended apportionment for crushed rock against estimated sales for aggregate use in the Tees Valley over a 10 year period. Sales are solely from Hart Quarry, which also produces significant quantities of agricultural lime.



7.5 As can be seen from the above graphs, sales of sand and gravel and crushed rock over the 10 year period are significantly below the recommended regional apportionment. Given the lack of sand and gravel sales in recent years, and the reliance on one quarry for crushed rock sales, it is considered that the 10 year sales average is not a good indicator of demand for aggregates in the Tees Valley.

7.6 National Planning Practice Guidance states that Local Aggregate Assessments must also consider other relevant local information in addition to the 10 year rolling supply, which seeks to look ahead at possible future demand, rather than rely solely on past sales. It is, therefore, considered that reported consumption of sand and gravel and crushed rock within the Tees Valley is adjusted to take into account future levels of growth may provide a more appropriate indication of levels of future demand (Table 18).

**Local Factors Influencing Demand**

**Major Development**

7.7 The A1 in North Yorkshire, south of the Tees Valley, is currently being upgraded. However, this is not expected to create a significant demand for aggregates from the Tees Valley.

7.8 A number of planning applications have been approved for the York Potash Project. These include proposals for a mine head in the North York Moors National Park, a mineral transport system, a minerals handling facility and harbour facilities in Redcar and Cleveland. Information in the Supplementary Environmental Impact Report Traffic Management Plan indicates that Teesside would be the likely source for bulk materials. The ‘Aggregates and Diesel demand Breakdown’ highlights the high volumes of aggregate potentially required. Further work will therefore be undertaken to understand the demand that has arisen from the proposed York Potash Project. This will inform future LAAs.

## Housing Growth

- 7.9 It is acknowledged that aspirations to increase housing supply in the Tees Valley would impact on the amount of aggregates required. A comparison has, therefore, been made between housing completions over the past 10 years and projected housing supply over the next 10 years.

**Table 17: Tees Valley housing completions and proposed housing completions (net)**

	Previous 10 year completions (2006/7 - 2015/16)	Proposed future 10 year completions (2016/17 – 2025/26)	Percentage change
Darlington	3,114	4,840 <sup>a</sup>	55.4%
Hartlepool	2,396	4,812 <sup>b</sup>	100.8%
Middlesbrough	2,554	4,375 <sup>c</sup>	71.3%
Redcar and Cleveland	2,134	3,151 <sup>d</sup>	47%
Stockton	5,452	8,927 <sup>e</sup>	63.7%
<b>Tees Valley Total</b>	<b>15,650</b>	<b>26,105</b>	<b>66.8%</b>

Source: <sup>a</sup> Darlington SHLAA 2015 and 2015/16 Update, <sup>b</sup> Hartlepool SHLAA 2015 and Five Year Housing Supply Amended 13.09.17, <sup>c</sup> Middlesbrough Council – Local Plan Requirement <sup>d</sup> Redcar & Cleveland SHLAA (August 2017) and <sup>e</sup> Stockton SHLAA 2017.

- 7.10 The rate of house building is forecast to be significantly higher over the next 10 years than over the previous 10 year period with a growth of 71.9%. This predicted increase is largely as a result of the stage of Local Plan preparation in the Tees Valley authorities, where a number of authorities are advanced in the preparation of new Local Plans or are proposing an increased annual housing requirement to assist in economic growth. Darlington, for example, is developing a new Local Plan process with the aim of boosting housing delivery with a target of 10,000 houses over a 20 period.
- 7.11 While it is noted that these levels of development are not certain to be achieved, there is a direct link between house building and the need for aggregates and as such it is considered that this need for additional aggregates should be recognised.

## Assessment of Demand

- 7.12 As previously noted the use of the 10 years sales average as a basis for calculating demand in the Tees Valley is considered inappropriate. The Collation of Aggregate Minerals 2014 Survey provides the most recent information in relation to the consumption of aggregates within the Tees Valley, which is considered to be a more appropriate basis for estimating future demand. Nevertheless, it is acknowledged that this figure is also likely to underestimate demand due to the amount of aggregates imported into the North East region which are unallocated to a specific sub-region. It is hoped that this issue can be addressed in future iterations of the LAA when updated survey data becomes available.

**Table 18: Tees Valley aggregate demand based on recorded consumption and estimates of future growth**

	Permitted reserves at 2016 (tonnes)	Consumption 2014 (tonnes)	Annual consumption with uplift for growth (tonnes)
Land won sand & Gravel	1,280,000	175,000	193,874
Crushed Rock	1,894,615	715,000	792,113

- 7.13 In Table 18, it is assumed that house building makes up approximately 15% of construction activity<sup>9</sup>. The growth factor calculated from predicted housing completions has, therefore, been applied to 15% of consumption in 2014 and then added to the consumption figure.
- 7.14 Whilst this is currently the most appropriate method of estimating future demand for aggregates within the Tees Valley, it is acknowledged that an uplift for growth based entirely on increased housing demand is likely to underestimate overall demand for aggregates. An increase in housing completions can be expected to lead to further demand for associated built infrastructure and future iterations of the LAA will consider how this can be accounted for to allow a greater understanding of future aggregate demand.

### Assessment of supply

- 7.15 Table 19 shows the crushed rock and sand and gravel landbank for the Tees Valley.

**Table 19: Landbank for crushed rock and sand and gravel in the Tees Valley**

	Permitted reserves at 2016 (tonnes)	Annual apportionment (2005-2020) (tonnes)	Landbank based on apportionment (years)	Landbank based on consumption (years)
Land-won sand & gravel	1,280,000	175,000	7.3	6.6
Crushed Rock	1,894,615	187,500	10.1	2.4

- 7.16 This table illustrates that there is a sub-regional landbank in the Tees Valley is slightly in excess of 10 years for crushed rock and more than 7 years for sand and gravel, as is required by the NPPF, where the calculation is based on the annual apportionment for the Tees Valley. However, future annual consumption of aggregates within the Tees Valley is expected to be much higher than the apportionment and calculating the landbank based on this figure results in a 2.4 year landbank for crushed rock and a 6.6 year landbank for sand and gravel. These figures are below the 10 year and marginally below the 7 year landbanks required by the NPPF.
- 7.17 It should also be noted that permission for sand and gravel extraction at Stockton Quarry lapsed in July 2015, potentially resulting in no permitted reserves in the Tees Valley. A planning application (15/1860/VARY) had been submitted to extend the life of the quarry until July 2018 but is currently awaiting a decision. Should permission not be granted for the extension of operations at Stockton Quarry, there will be no permitted reserves or landbank for sand and gravel within the Tees Valley.

<sup>9</sup> Construction Products Association Press Release, Monday 14 April 2014:  
<http://www.constructionproducts.org.uk/news/press-releases/display/view/associations-spring-forecasts-show-construction-activity-is/>

## 8. Future aggregate supply and demand

- 8.1 Annual surveys of aggregate sales and reserves by the North East Aggregate Working Party provide a basis for establishing future supply and demand. Specific data for the Tees Valley is limited, although for the North East of England the trends can be identified of downward sales of sand and gravel and crushed rock until 2013. It is considered that this was due to the decline in the construction industry as a result of economic conditions and the influence of more efficient construction techniques and increased use of recycled and secondary aggregates. Figures now show an increase since 2013 of 17% (600,000 tonnes) for crushed rock, and 22% (157,000 tonnes) for sand and gravel as reported in 2014 reflecting a growth in construction activity. Nevertheless, in both cases this increase in sales is still significantly lower than sales levels prior to the economic downturn.
- 8.2 The only crushed rock quarry operating in the Tees Valley is Hart Quarry which has granted permission for an extension of the time allowed for mineral extraction (until 2042) in 2011. Based on current calculations, this would provide a sufficient landbank. However, sales of crushed rock from the quarry have decreased and even in 2005, prior to the period of low economic activity, production would be insufficient to meet the annual sub-regional apportionment. This suggests that there will be additional needs for crushed rock in the Tees Valley which cannot be met by Hart Quarry.
- 8.3 During the preparation of the Minerals and Waste Joint Plan the only site submission made relating to crushed rock provision related to an extension to Aycliffe Quarry into the Darlington Borough Council area. However, this submission was later withdrawn as the operator wished to focus on other parts of their company's work rather than minerals extraction. Aycliffe East Quarry, in County Durham, subsequently ceased production in 2013. MWP3 of the Policies and Sites DPD provides a criteria based policy to guide other appropriate proposals coming forward for crushed rock provision.
- 8.4 The 2014 position for sand and gravel provision was that Stockton Quarry had approximately 1.28 million tonnes of permitted reserves but is not currently worked. This would be sufficient to maintain a 7 year landbank against the sub-regional apportionment. However, permission for the site expired in July 2015 and an application for the extension of time for operations until July 2018 has yet to be determined, potentially leaving the Tees Valley with no permitted reserves of sand and gravel.
- 8.5 The North Gare site is not currently being worked and the site itself lies within the Teesmouth and Cleveland Coast Special Protection Area and Ramsar site, the Teesmouth National Nature Reserve and the Seaton Dunes and Common Site of Special Scientific Interest. In environmentally sensitive locations such as this, there are provisions for reviewing and potentially amending or revoking existing planning permissions if they are deemed to be causing adverse effects on the designation. Natural England has requested that the North Gare site undergo such a review. The future of extraction at the site is therefore uncertain.
- 8.6 Core Strategy Policy MWC2 sets out a sequential approach for providing primary aggregate minerals, giving priority to production from existing extraction sites and sites with permitted reserves, and extensions to them. Given the lapse of planning permission and the uncertainty of the currently undetermined planning application at Stockton Quarry and lack of operations at North Gare, it is likely that new sites would be required to meet the sub-regional apportionment, which is significantly higher than the previous production in the Tees Valley. Policy MWP3 supports appropriate new proposals.
- 8.7 Given the availability of potentially suitable wharves on the Tees, and their safeguarding in the Minerals and Waste DPDs, there may be opportunities to increase landings of marine dredged sand and gravel. However, this is unlikely in the short term.

- 8.8 The Spatial Vision, Strategic Objective B and Policy MWC1 c) in the Minerals and Waste Core Strategy all look to promote the use of alternative aggregate materials over primary aggregates. As part of a review further work may be required to understand the extent to which recycled and secondary aggregates produced in the Tees Valley could be used as a substitute for primary aggregates.
- 8.9 Policy MWP 3 supports appropriate new sites, however previously there has been relatively low levels of interest from operators for new sites within the Tees Valley. Therefore, in order to meet demand for aggregates reliance on imports from North Yorkshire and other areas of the North East, particularly County Durham, are expected to continue, particularly in the short to medium term. Co-operation with other areas will therefore continue to be important.
- 8.10 The Local Aggregates Assessment for the North Yorkshire Sub-region recognises the strategic role of the area in supplying aggregates to the Tees Valley. The LAA identifies that there is good potential to maintain the overall supply of limestone crushed rock from the sub-region over the period to 2030, similar to those sustained in recent years.
- 8.11 For sand and gravel, in the absence of new reserves being brought forward in the North Yorkshire County Council (NYCC) area, current reserves of sand and gravel would be exhausted in the mid-term. This would have a substantial impact on supply into the North East region.
- 8.12 The LAA recognises that supply constraints outside the North Yorkshire sub-region, and the probable lack of opportunity for development of significant alternative sand and gravel resources within other areas of the sub-region, are likely to result in the strategic significance of NYCC's resources of concreting sand and gravel being maintained or increased over time. Maintenance of supply in both northwards and southwards distribution areas, and for building sand, will be important in helping to maintain an appropriate overall balance of supply of sand and gravel. In order to maintain current supply patterns for concreting sand and gravel without increasing overall haulage distances, it is likely that further sand and gravel provision in both the NYCC northwards and southwards distribution areas would be needed. It will, therefore, be important that the Tees Valley sub-region continues to co-operate and be involved with the North Yorkshire sub-region in the preparation of Local Aggregate Assessments and Mineral's Plans.
- 8.13 The Durham, Northumberland and Tyne and Wear Local Aggregate Assessment recommends that individual mineral planning authorities within North East England must continue to make provision to enable exports to continue. However, it also recommended that the joint LAA authorities should seek to make representations to the Tees Valley authorities upon their LAA to ensure that the Tees Valley seeks to become more self-sufficient.

## 9. A local approach to apportionment determination

- 9.1 The demand for aggregates in the Tees Valley is expected to remain higher than land-won aggregate sales, particularly in the short to medium term.
- 9.2 In recent years the emphasis on waste management policy has been on increased recycling, and there has been a reasonable amount of production of recycled secondary aggregates within the Tees Valley. However, recycled aggregates normally have limited uses and it is considered that the production of these materials will have reduced significantly following the closure of SSI steelworks. Further research may help to determine the extent to which these could replace primary aggregates but it is understood that, as a maximum, they would supply no more than 30%.
- 9.3 It is acknowledged that the planned increase in housing supply within the Tees Valley over the next 10 years will require additional aggregate resources and there may be additional demands for aggregates to support the York Potash project.
- 9.4 Sales of sand and gravel and crushed rock over the 10 year period are significantly below the recommended regional apportionment. Given the lack of indigenous sand and gravel sales in recent years, and the reliance on one quarry for crushed rock sales, it is considered that the 10 year sales average is not a good indicator of demand for aggregates in the Tees Valley.
- 9.5 The consumption of sand and gravel and crushed rock in the Tees Valley in 2014, combined with estimates of future growth, is considered to provide a much more realistic figure of future aggregate demand in the sub-region. This calculation indicates that the Tees Valley will require a significantly higher level of aggregates to meet future demand than is indicated by the annual apportionment for the Tees Valley. However, the Tees Valley has historically been unable to meet requirements for the extraction of aggregates. The area has relied heavily on a limited number of sites and all but one of these sites has either ceased production or has not yet been worked. It is, therefore, very unlikely that the area will be able to plan to meet the full levels of demand. In order to better reflect the actual availability of resources and potential delivery, it is proposed that the Tees Valley authorities seek to plan for resources based on the more pragmatic regional apportionment figures.
- 9.6 The use of the regional apportionment figure as an indicator of demand and potential sources which might be available is supported by the National Planning Practice Guidance, which states that sub-national guidelines will provide individual mineral planning authorities, where they are having difficulty in obtaining data, with some understanding or context of the overall demand and possible sources that might be available in their area. It further states that in those areas where apportionment of the land-won element has already taken place, those figures may be used as an indicator as to how much should be planned for.
- 9.7 This approach would provide a proposed annual provision of 175,000 tonnes for sand and gravel and 187,500 tonnes for crushed rock, giving landbanks of 7.3 years and 10.1 years respectively. Both of these figures are only marginally above the NPPF requirements.

## 10. Conclusions and recommendations

- 10.1 The 10 year sales averages of sand and gravel and crushed rock for the Tees Valley are considered to be very low, with no sand and gravel being produced in the area since 2012. This is due to the small number of sites in the area with only one crushed gravel site, which produces aggregates as a by-product, and the continued inactivity of the only two sand and gravel sites. As a result, the 10 year average sales forecast is considered to be an inappropriate indicator of future demand for aggregates in the Tees Valley.
- 10.2 Past consumption figures and estimated future growth in the Tees Valley indicate a high level of future demand but it is likely that this figure also underestimates demand due to aggregates being imported into the North East region which are not allocated to a specific sub-region. This high level of future demand suggests that the Tees Valley should be planning for a higher level of aggregate production in order to meet its needs than the Tees Valley regional apportionment. As relevant data comes on-stream further assessment of the level of demand in the Tees Valley will be carried-out.
- 10.3 However, there are concerns over the ability of the area to meet higher requirements for aggregate production due to a high reliance on a small number of sites, which include a site which has not yet been worked. Due to the limited potential of the Tees Valley to plan to meet the full level of need, it is considered that the sub-regional apportionment provides the most realistic calculation for the level of aggregate provision to be planned for. This is an annual figure of 187,500 tonnes of crushed rock and 175,000 tonnes of sand and gravel. In order to meet future need a review of the Tees Valley Minerals and Waste planning documents will be required, along with a 'call for sites'.
- 10.4 Based upon the sub-regional apportionment, the Tees Valley is able to meet requirements for a 7-year landbank for sand and gravel and 10-year period for crushed rock. However, the extension of permission at Stockton Quarry and the continuation of operations at North Gare remain in doubt, leading to significant uncertainty in relation to the existence of a landbank for sand and gravel. In addition, production of land-won aggregates remains low and it is recognised that additional sites will be needed to achieve the recommended levels. Policy MWP 3 is supportive of appropriate proposals where they would reduce the reliance on imports into the Tees Valley, there were no unacceptable environmental impacts and the needs cannot be met by existing allocations.
- 10.5 The import of marine dredged aggregates into the Tees Valley is likely to remain important, despite the mothballing of Billingham Wharf. There is capacity to increase supply from wharves within the Tees Valley, which will be further investigated, and wharves will continue to be protected.
- 10.6 The production and use of alternative aggregates is likely to remain important within the Tees Valley, and will continue to be promoted through policy.
- 10.7 Nevertheless, there is expected to be a continued reliance on imports of primary aggregates from North Yorkshire and other areas of the North East, particularly in the short to medium term. It is therefore important to continue to liaise with authorities which export aggregates to the Tees Valley.

## Appendix 1: Site details

### Sand and Gravel

#### North Gare (inactive)

- Location: Hartlepool;
- Mineral Planning Authority: Hartlepool Borough Council;
- Mineral extracted: sand;
- Planning status: original planning permission was granted in November 1955 (HAI/I- STNR 692). In January 1997 a ROMP was submitted H/MIN/0002/97 which was approved subject to conditions. The LPA are liaising with the agent with regards to the second review and are awaiting correspondence with regard to bird surveys.
- Expiry date for extraction based on current planning permission: on or before 21 February 2042.
- Relevant environment designations: Teesmouth and Cleveland Coast SPA. Natural England have requested that the site undergoes a review under the Habitats Directive.
- Other details: Previous crown licence was for 48,000 tonnes per year. There is currently no licence from the Crown Estate.

#### Stockton Quarry (inactive)

- Location: Near Thorpe Thewles
- Mineral Planning Authority: Stockton-on-Tees Borough Council
- Mineral extracted: permitted for sand and gravel extraction
- Planning status: Planning permission was originally granted for the extraction of sand and gravel, over 31ha, at Stockton Quarry by the former Cleveland County Council in August 1991 (Application ref: CS/2221/90). This permission has been varied a number of times, including to allow an extension of time for completion and the recycling of construction waste at the site. Application 01/1128/P granted permission for the period of time for completion to be extended until 27 July 2015. A planning application (15/1860/VARY) was submitted in July 2015, which seeks to further extend the period for completion until 27 July 2018. The application is held in abeyance whilst the applicants carry out further testing/feasibility work to see if the quarry is viable.
- Expiry date for extraction based on current planning permission: 27 July 2015
- Relevant environment designations: None. The southern area of the site is adjacent to but not within a Local Wildlife Site.

## **Crushed Rock**

### **Hart Quarry**

- Location: Hart Lane, Hartlepool
- Mineral Planning Authority: Hartlepool Borough Council
- Mineral extracted: magnesian limestone (as a by-product of agricultural lime manufacture)
- Planning status: Hart Quarry has existing planning permission which was originally granted by Durham Council in 1971 subject to conditions. The total area of the land covered by the permission is 113 hectares and the total area to be excavated is 10.8 hectares. Planning Application and Environmental Statement for an extension to the Hart Quarry and extended timescale for extraction previously approved under application CH/293/8 (Application ref: H/2009/0482). Approved November 2011. Review of conditions was granted in December 2011 (HFUL/1999/0320).
- Expiry date for extraction based on current planning permission: not later than 21 February 2042.
- Relevant environment designations: site is designated as a Local Wildlife Site.