ISLE OF WIGHT COUNCIL

Isle of Wight Local Aggregate Assessment 2021

August 2021

ISLE of WIGHT COUNCIL

Executive Summary

Introduction

This is the Local Aggregate Assessment (LAA) summary for the Isle of Wight. The purpose of the LAA is to detail the current and predicted situation on the Isle of Wight with respect to all aspects of aggregate supply. The geology on the Isle of Wight gives rise to sharp sand and gravel and soft sand. Aggregates are sourced from land-won resources, recycled aggregate and imports by wharves.

Land-won Aggregate

There were four active sand and gravel quarries in 2020 all focused in the central area of the Island. Soft sand resources are limited to just two sites on the Island.

Total sales of sand and gravel decrease from a significant high in 2019 but was still above the ten year average. The overall trajectory since 2011 whilst variable year to year, is one of increasing sales.

Recycled & Secondary Aggregate

There are no secondary aggregate sites. Sales of recycled aggregates continued to decrease from the 10 year high recorded in 2018, but still represented around 22% of total aggregate sales in 2020.

The total capacity for recycled aggregate is estimated to be in excess of 250,000 tonnes per annum.

Marine Sand and Gravel

Due to the Island now having 2 operational aggregate wharves, marine sand and gravel sales are now confidential, but have fallen in 2020. This is part of an overall decreasing trend in sales, from a peak recorded in 2016.

Based on total aggregate wharf imports for 2020 it is possible to estimate there was a spare capacity at wharves on the Island of some 74%. This is a slight increase on the previous 2 years, where for both 2018 and 2019 spare capacity was at 67%.

Crushed Rock

The Isle of Wight relies on imports of crushed rock, with sales now confidential due to the closure of Kingston wharf. There is a reserve of Limestone present on the Island at the inactive site, Prospect Quarry although this material is only suitable for constructional fill and therefore does not meet the Island's needs.

The pattern in sales of crushed rock over both the ten and three year period has been erratic, with the absence of any sales in 2014 being the extreme in terms of a year's performance difference from the average. In contrast sales in 2016 were at their highest over the last ten years. The last three years of sales are closer to the overall downward trend in sales over ten years, but still variable.

Future Aggregate Supply

There is a significant amount of uncertainty in terms of future housing provision within the authority area. This is due in part to Government's White Paper on planning reforms and local evidence on the

constrained nature of both the ability to deliver housing and the local, self-contained housing market. This provides a potential variation in annual housing targets of anywhere from 400 units per annum to over 1000.

Based on current plan provision, permitted reserves total 475,437 tonnes with a landbank of 4.7 years in 2020. The declining landbank is to be expected given the current local mineral plan was adopted in 2012 and is programmed for replacement in the next 2 to 3 years.

Conclusions

It is considered that the Isle of Wight's local aggregate provision will not impact the wider South East region as a whole. Whilst it is recognised that the Isle of Wight is not meeting the required landbank based on its local requirement, this is due for review in the near future and there is significant spare capacity from alternate sources (primarily marine-won).

Summary – Isle of Wight Council 2021 (for the calendar year 2020)										
	2020 Sales (Mt)	**Average (10-yr) Sales (Mt)**	**Average (3-yr) Sales (Mt)**	**Trend (10-yr sales)**	**Trend (3-yr sales)**	**LAA Rate (Mt)**	**Reserve (Mt)**	**Landbank (years)**	**Capacity (Mtpa)**	**Comments**
Soft Sand	C	C	C			C	C	C	C	Insufficient long-term return data on individual sub-categories of Sand & Gravel to be able to supply detail.
Sharp Sand & Gravel	C	C	C			C	C	C	C	
All Sand & Gravel	0.103	0.082	0.105	⇧	⇧	0.082	0.475	5.7	0.106	Sand and Gravel sales have decreased, but are still above the 10 year average, contributing to increasing 3 and 10 year trends.
Crushed Rock										There is a supply of Limestone on the Island however this is used for infill and is only present at one site which is currently inactive.
Recycled / Secondary Aggregates	0.053	0.052	0.072	⇧	⇩	0.052			0.17	Recycled and Secondary Aggregates continues to decrease in sales from the 2018 high, which explains both the overall increasing 10 year trend, but also the 3 year decrease from this peak.
Marine Sand & Gravel	C	0.092	0.82	⇩	⇩	0.092			C	There has been a reduction in sales in both Marine Sand and Gravel and Crushed Rock, continuing the downward 10 and 3 year trends.
Rock Imports by Sea	C	0.025	0.020	⇩	⇩	0.025				
Comments	Sales from all aggregate sources have decreased from the previous monitoring year. While the largest decrease by volume was in land-won sand & gravel, proportionately the largest decrease was in crushed rock. The remaining permitted reserves for land-won sand and gravel are below the 7 year landbank, using the 10 year sales average gives a landbank figure between 5.5 and 6 years. There is a significant amount of available alternative infrastructure capacity for aggregates on the Isle of Wight. The Isle of Wight has no rail depots									

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1. Introduction

1.1 The purpose of this Local Aggregate Assessment (LAA) report is to detail the current and predicted situation on the Isle of Wight with respect to all aspects of aggregate supply.

1.2 The National Planning Policy Framework (NPPF)[1] sets out the requirement for local authorities to produce an annual LAA, stating;
'*Minerals planning authorities should plan for a steady and adequate supply of aggregates by: preparing an annual Local Aggregate Assessment, either individually or jointly, to forecast future demand, based on a rolling average of 10 years' sales data and other relevant information, and an assessment of all supply options (including marine dredged, secondary and recycled sources)*'.

1.3 The Isle of Wight Council adopted the Isle of Wight Core Strategy[2] (including Waste and Minerals) and Development Management Document Development Plan Document in March 2012. The Core Strategy provides minerals (and waste) planning policy on the Isle of Wight until 2027. The Isle of Wight Council is preparing a new plan called the Island Planning Strategy. The Local Development Scheme (LDS) sets out the programme for preparing the Island Planning Strategy and other main planning documents that will form part of its local plan, known on the Isle of Wight as the Island Plan. This will include a separate Minerals and Waste Plan, the preparation of which is due to be commence in 2022.

1.4 It is important to note that the data used in the preparation of this report predominantly comes from the annual monitoring of aggregates sales by the Isle of Wight 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 and recycled aggregate processing sites.

1.5 This report has been prepared on the basis of the revised (May 2017) guidance on LAA published by the Planning Officers Society and the Mineral Products Association. In addition the regionally specific guidance provided by the SEEAWP *Local Aggregates Assessments: Supplementary Guidance*, 2019 has also been used.

How the LAA has been developed

1.6 Given the strategic nature of minerals, both in terms of their importance to supporting virtually all forms of development and their geographical distribution leading to the movement of materials from source to point of demand, it is important that the LAA is developed collaboratively.

1.7 The council has sought to work collaboratively with other bodies in the preparation of this LAA, in order to satisfy Section 110 of the Localism Act. In particular the council has maintained an informal ongoing relationship with Hampshire County Council, due to being the nearest 'neighbouring' Mineral Planning Authority (MPA) and the one most likely to be affected by strategic mineral supply decisions taken on the Island. Furthermore, it also provides links to the mainland both in terms of aggregate wharves, but also as the MPA whose area contains all the vehicular ferry

[1] National Planning Policy Framework (2021) - Para 213 National Planning Policy Framework (publishing.service.gov.uk)
[2] Island Plan – Isle of Wight Core Strategy (including Waste and Minerals) March 2012 https://www.iow.gov.uk/azservices/documents/1321-Core%20Strategy%20-%20Adopted%20Mar%202012.pdf

ports to the Island. The geographic proximity also results in a similar geology and consistency in approach between the MPAs on evolving issues is more likely to provide certainty to the mineral industry.

1.8 Evidence the council has supports the minerals targets set out in this assessment, informed by the adopted mineral policies of the Island Plan core strategy, to be appropriate for the Island. This is likely to be the last LAA that makes reference to these targets in this context, given the current plan review process the council is undergoing (as referenced above).

Consultation

1.9 A draft version of the LAA was submitted to SEEAWP for consideration in the October 2021 meeting of the AWP, with further comment from the SEEAWP meeting on 7th December 2021. The main points in relation to the LAA are;

- LAA rates should in future be referred to as Aggregate Provision Rate (APR);
- Where an MPA has reported low landbanks, such as in this LAA, the MPA needs to emphasise the mitigations identified to address this;
- Addressing supply deficits through SoCG, with an awareness that this is an evolving matter at both national and AWP level;
- The Island is currently looking at a diminishing reserve of sand and gravel;
- Although the AWP's secretary comments are correct about trend ('*There is a trend of increasing sand and gravel sales, which in 2020 were above the 10-year average …*'), in terms of telling the whole story there is a need to have a look at what the 3 year and 10 year averages are indicating;
- The size and separation of the Isle of Wight is a special case, nevertheless, the APRs (LAA rates) could be reviewed so aggregates requirements can be clarified.

Data limitations

1.10 The Isle of Wight suffers in mineral reporting from its relatively small size, both in comparison to some of its neighbouring MPAs and with regards to the low numbers of quarries, wharves and operators.

1.11 This has had consequences in terms of how mineral information on the Isle of Wight is reported. The first is that due to the limited number of quarries, wharves and operators, often figures reported through annual monitoring have not been able to be published due to commercial confidentiality. The second is that where mineral reporting has occurred at a higher than MPA level, figures for the Island have often been aggregated into that of Hampshire (or wider) making analysis of such information with regards to the implications for the Island impossible with any degree of certainty.

1.12 Both of these data limitations have been recognised independently, through consultation on previous LAAs, by the technical secretary to the AWP of which the Island is a member, and the BGS.

2. Aggregate Supply and Demand

Geology of the Isle of Wight

2.1 The geology of the Isle of Wight gives rise to the following mineral deposits (as shown on Figure 1):

- Sand and Gravel;
- Limestone;
- Chalk; and
- Brick Clay

2.2 In simplest terms, the geological deposits that occur on the Island can be divided between superficial and solid deposits, as detailed below. The superficial deposits (including sand and gravel) occur across the Island and are categorised in Table 1.

Table 1: Superficial Deposits across the Island

Deposit	Description
River Terrace Deposits	Occur at several levels in most of the major valleys on the Island. These broadly comprise older, raised river terrace sequences (sometimes called 'Plateau Gravels') and younger, flood plain terraces associated with, and underlying, present day alluvium
Angular flint gravel (clay with flints)	Occur on the summits and upper slopes of the Chalk Downs in the central and southern parts of the Island.
Sub-alluvial gravel	Occur beneath the alluvium of the main valleys on the Island and are compositionally similar to river terrace deposits.
Storm beach gravel	Occur from Sconce Point to Bouldnor in the west of the Island. The form of these deposits is dictated by the east-west longshore drift which prevails along this coast and are generally made up of fine to coarse flint gravels, grading seawards into finer sands and silty clays.
Blown sand	The largest area of blown sand is in the south of the Island, on top of a vertical cliff between Atherfield and Chale, at a height of approximately 50m above sea level and consists of disintegrated Lower Greensand Group up to 7m in thickness.

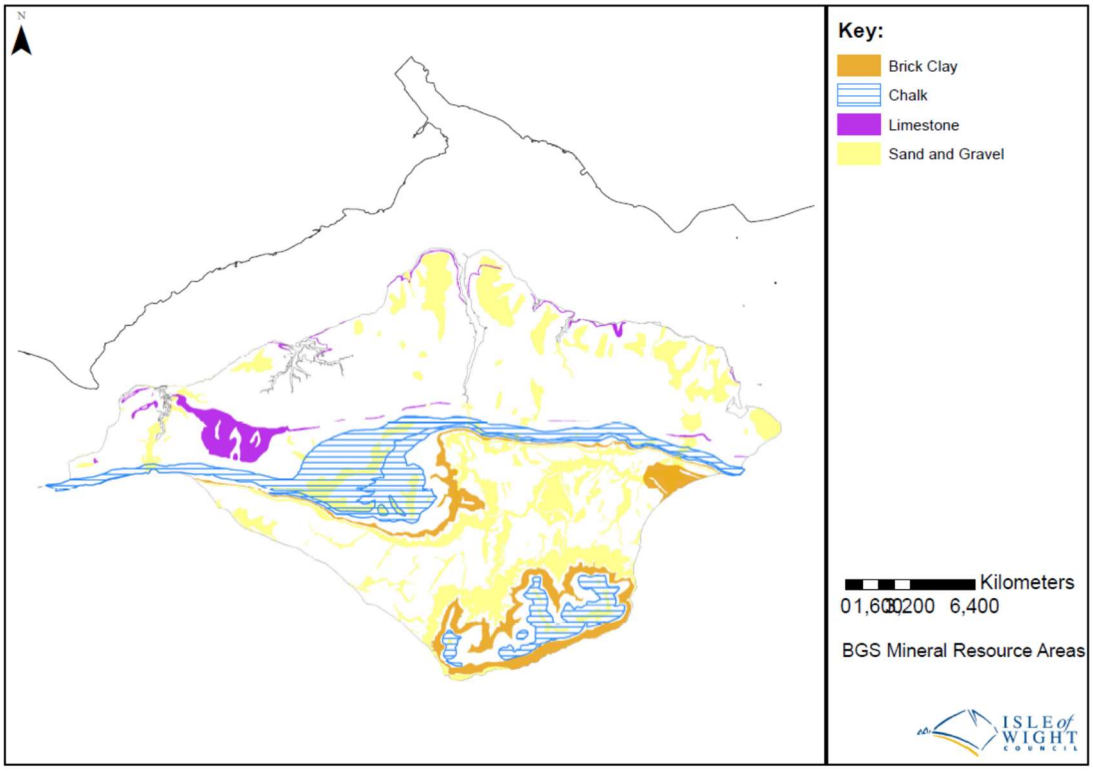
2.3 The solid geology (including chalk, and the Sandrock Formation within the Cretaceous Lower Greensand Group) of the Island generally run from east to west along the length of the Island perhaps best demonstrated by the chalk forming Culver Cliff in the east, central Downs in the middle and the Needles to the west of the Island.

Mineral Resources on the Island

2.4 In conjunction with the Department for Communities and Local Government (CLG)[3], the British Geological Survey (BGS) published a technical report CR/02/130N2 in 2002 and has prepared mineral resource mapping to provide information regarding mineral resources on the Isle of Wight for planning purposes (see Figure 1).

[3] Known as the Office for the Deputy Prime Minister at the time.

Figure 1: British Geological Survey Mineral Resource Areas



2.5 The "*Assessment of the Potential for Mineral Sites on the Island, Site Options Report*" (October 2010) identified the minerals that exist on the Island, as summarised in Table 2 below and discussed their previous and current extraction.

Table 2: Summary of minerals existing on the Island

Mineral	Information regarding extraction and need
Sand and gravel (including superficial deposits such as river terrace deposits, sub-alluvial gravel, storm beach gravel and bedrock sands such as the Cretaceous Lower Greensand Group).	Deposits of sand and gravel can be found across the Island. Resources of gravel can be mainly found in the river valleys, whereas construction sand is provided in the bedrock sands which occur east west across the south of the Island. Currently extraction takes place across the Island.
Brick clay – the Weald Clay Formation	This was previously extracted at Sandown; however no brick clay is now produced on the Island.
Chalk – Grey and White Chalk sub-groups	The chalk resource runs across the length of the Island with the majority of extraction in the White Chalk sub-group. It is understood there are three active sites extracting chalk for constructional fill and agricultural lime.
Limestone – Bembridge Limestone Formation	This resource is located in the west, north and east of the Island. There are substantial permitted reserves of this mineral at Prospect Quarry, Shalcombe. Although permitted only nominal amounts are extracted per annum, due to the relatively poor quality of the limestone.
Hydrocarbons – oils, gas and coal	Much of the Island was explored for oil and gas in the 1970s and while there is currently limited oil and conventional gas prospectivity, five new (December 2015) PEDLs[4] for the Isle of Wight have been

[4] PEDL – Petroleum Exploration and Development License

	awarded[5]. Therefore the possibility of further interest exists, as new technologies become established.
Building stone	Although local stones have been previously used, the Isle of Wight has no commercially significant building stone resources.

2.6 Historically, much of the Island's land-won aggregate production has come from the central and eastern areas of the Island. Certainly this is where the majority of sand and gravel has been won. While there is one small quarry producing high quality sand in the west of the Island (using the River Medina as a natural north-south central divide), for the most part, to date chalk has been the main material won in this area.

2.7 As existing sand and gravel deposits have been worked out, new permissions have been sought and granted, again in the central and eastern areas of the Island. No new chalk permissions have been granted for at least the last five years (probably beyond ten years) reflecting an overall decline in demand and sufficient existing reserves.

2.8 Other crushed rock reserves (some grades of chalk are used locally as construction fill where this is acceptable, such as agricultural tracks etc.) extracted on the Island includes limestone. There are permitted reserves of limestone at one site on the Island; however production is at a very low level. There were no recorded sales in 2020.

2.9 The demand for other minerals such as those used in building has been considered (as part of the Assessment of the Potential for Mineral Sites on the Island, Site Options Report, October 2010) by the council's Conservation and Design section. They have concluded that although resources such as flint and brick earth have an important role to play in restoration and maintenance of the Island's structures and that quarrying these would reduce the pressure upon reclaimed materials from other buildings, it is considered that these are not of strategic importance in terms of demand with quarries of these indigenous resources being redundant and replicas being available.

Land-won Sand and Gravel

2.10 The sales figures of sand and gravel on the Island for the most recent 10 year period are detailed in Table 3 below. The overall trend is one of generally increasing sales since 2011. There are variations, with two distinct peaks in 2015 and 2019. Whilst sales fell between 2015 and 2017, sales figures for 2019 hit a significant high of over 135,000 tonnes (64% above the 10 year average), while sales for 2020 returned closer to the overall increasing trend in sales (see Figure 2).

Table 3: Land-won sand and gravel sales in the Isle of Wight, 2011 – 2020 (tonnes)

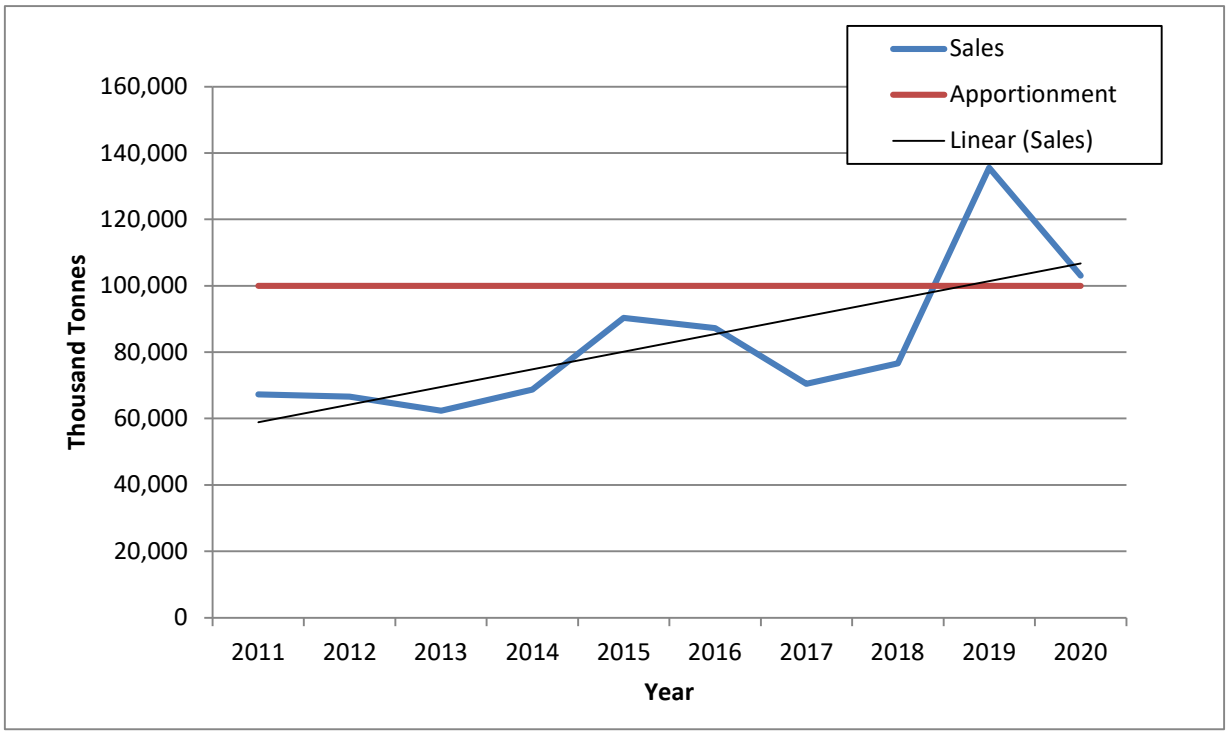
Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Ave.
Sales	67303	66600	62407	68760	90306	87263	70431	76625	135612	103055	**82836**
								76625	135612	103055	**105097**

2.11 Figure 2 provides a comparison of the Island's land-won sales figures over the period 2011 – 2020 against the council's apportionment. It can be seen that over this period total sand and gravel sales move from not meeting the level of apportionment given to the Island, to exceeding the

[5] Information taken from OGA 14th Onshore Licensing Round Offers by Operator which can be viewed here as a Microsoft Excel Spreadsheet document

apportionment figure for the two most recent reporting years (2019 & 2020). Sales in the last three years have been highly variable, with 2018 being well below the apportionment figure of 100,000 tonnes per annum, 2019 being well in excess with a sales 10 year high and 2020 remaining above the apportionment figure, but well below the high of the previous year.

Figure 2: Comparison of land-won sand and gravel sales and the apportionment on the Isle of Wight



2.12 In contrast 2019 sales in the South East[6] of 4.26mt are 7% below those of 2018, which were at their highest since 2009, while the comparative 10-year and 3-year average sales trends are about parity i.e., +/-5% of each other. Regionally sales of sand and gravel have remained relatively stable and while sales have generally remained stable on the Island, albeit a gradual increase, the last 3 years have seen significant fluctuation. Similar to the Isle of Wight, sales in neighbouring Hampshire have fluctuated year on year over the last 10 years, with a peak in 2018 (as opposed to 2019 for the Island).

2.13 The potential issue raised in previous LAAs concerning the appropriateness of the apportionment figure, being that sales have never achieved this target since it was set in 2008, no longer seems relevant. While only the last 2 years of sales have exceeded the apportionment in the last ten years, the overall trend indicated sales passing this figure around 2019. The development of a new minerals and waste plan for the Isle of Wight will provide the opportunity to reconsider what is an appropriate apportionment figure, taking into account the overall trend in sales for the last ten years.

214 The nature of the most recent sales seems to indicate an uncertain period in terms of local activities dependent upon the supply of minerals. Other than overall provision, this makes it difficult to anticipate future demand over the short term (so next 2 to 5 years). The next two to three year monitoring period will be important in determining if the overall trend in increasing sales over the last decade is stabilising or set to continue.

[6] South East England Aggregates Working Party Annual Report 2019 (January 2021)

2.15 The growth policies for the Island remain, the principle one being the target 520 housing units per annum and therefore Section 4 of this assessment looks at how the Island Plan Core Strategy is performing in relation to delivering development and how this correlates to land-won sand and gravel sales.

Current supply

2.16 The supply of land-won aggregates on the Isle of Wight was from four of the five permitted sand and gravel extraction sites, the details of which are presented in Figure 3 and Table 4.

Figure 3: Active sand & gravel sites on the Isle of Wight

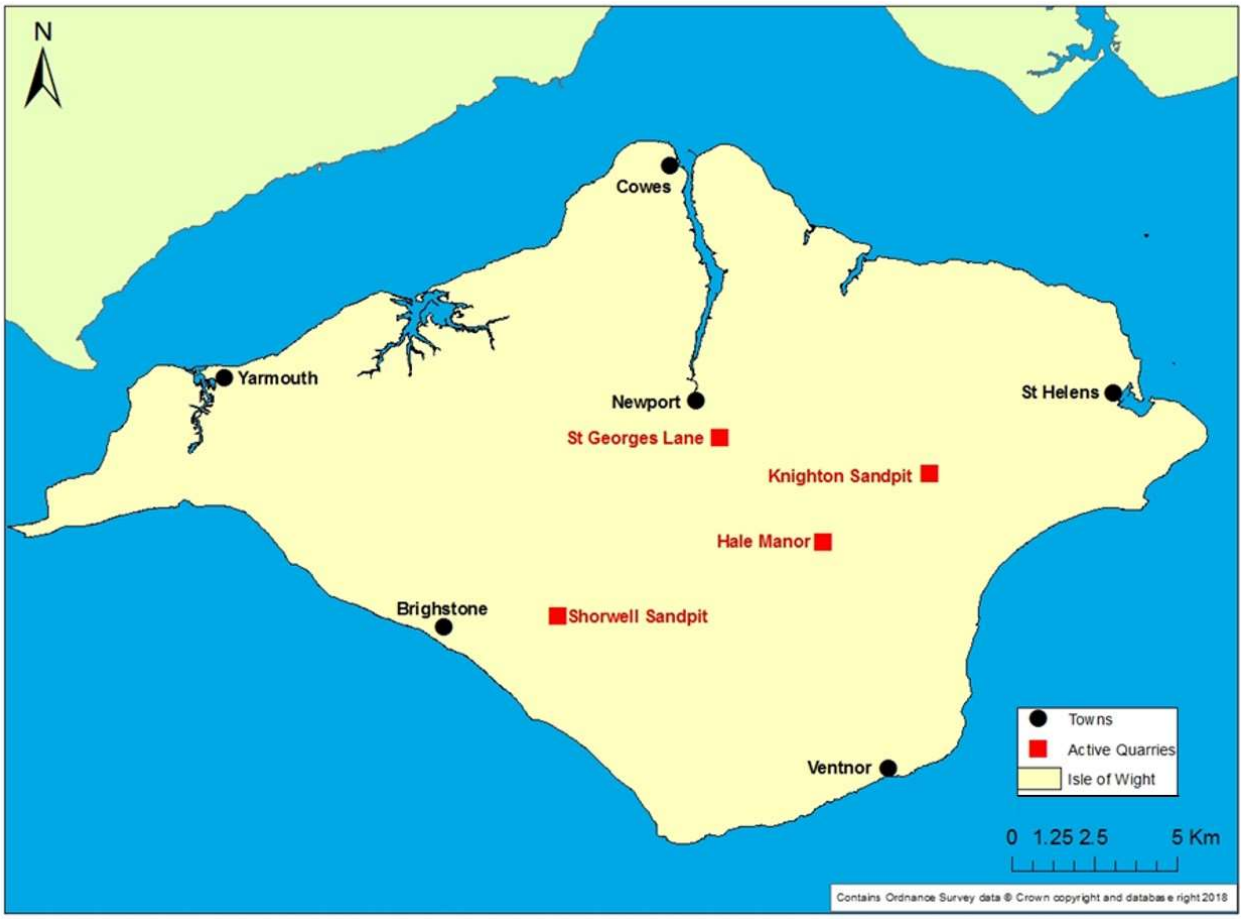


Table 4: Permitted sand and gravel quarries on the Isle of Wight

Site	Operator	Aggregate	Active production in 2020
Shorwell Sandpit	Haslett Farm/Draper	Soft sand	Yes
Knighton Sandpit	Knighton Sandpit Ltd	Sharp & soft sand	Yes
Cheverton Chalk & Gravel Pits	Cheverton Aggregates	Gravel	No
St Georges Down/Blackwater	Wight Building Materials Ltd*	Sharp sand & gravel	Yes
Hale Manor Farm Quarry	Wight Building Materials Ltd	Sharp sand & gravel	Yes

*Formerly Bardon Vectis (Aggregate Industries)

2.17 Taking into account all reserves for aggregate use (as reported through the latest annual mineral monitoring in 2020), these five sites represent a total sand and gravel reserve of approximately 475,437 tonnes. There have been no mineral related permissions during 2020.

Table 5: Isle of Wight Reserves at 31 December 2020 (tonnes)

Mineral	Soft sand (building sand)	Sharp sand & gravel	Sand & gravel or hoggin for construction fill	Total for aggregate use
Sand & gravel	c	c	c	475437
	Permitted 2020			nil
Total				475437

AM2020

Isle of Wight Imports

2.18 The 'severance' factor of being an island MPA does have a significant and unique influence on the movement of aggregates across the MPA boundary. The Island currently does not export any aggregates. However, as well as being a producer of sand and gravel the Isle of Wight supplements this production with imports.

2.19 With regards to sand and gravel these imports are exclusively marine-won, with some being landed directly on the Island from point of extraction, while amounts can come via aggregate wharves in neighbouring Hampshire. There is no other movement of sand and gravel into the Island from any other Mineral Planning Authority Area. Marine-won imports are discussed further under Marine-won sand and gravel and in Section 4.

Long-term capacity

2.20 As at 31st December 2020, the council had permitted sand and gravel reserves of 475,437 tonnes as reported through the AM2020 survey returns. Table 6 presents various landbank lengths for the Island for both the most recent reporting period (2020) and the two previous years. The three levels of apportionment used are;

- 100,000tpa as agreed through the proposed changes guidelines;
- 82,836tpa based on average sales for the last 10 years; and,
- 103,055tpa based on the sales for the latest reporting period (2020)

Table 6: Isle of Wight landbanks (years)

Permitted Reserve (tonnes)	Date	Proposed Changes Guidelines (0.1mtpa)	2011-20 average sales (82,836tpa)	2020 sales (103,055tpa)
671,045	31.12.18	6.7	8.1	6.5
594,717	31.12.19	5.9	7.2	5.8
475,437	31.12.20	4.7	5.7	4.6

2.21 The Island's permitted reserves are below the seven year landbank indicator. Based on current (2020) sales the Island has just over four and half years' worth of permitted reserve. However, given the ten year high in sales of 2020 and how far above the current trend, using the ten year sales average (82,836t as opposed to 103,055tpa) seems more realistic, giving a landbank figure of 5.7 years. Additional capacity for land-won aggregate is discussed in Section 4.

Crushed Rock

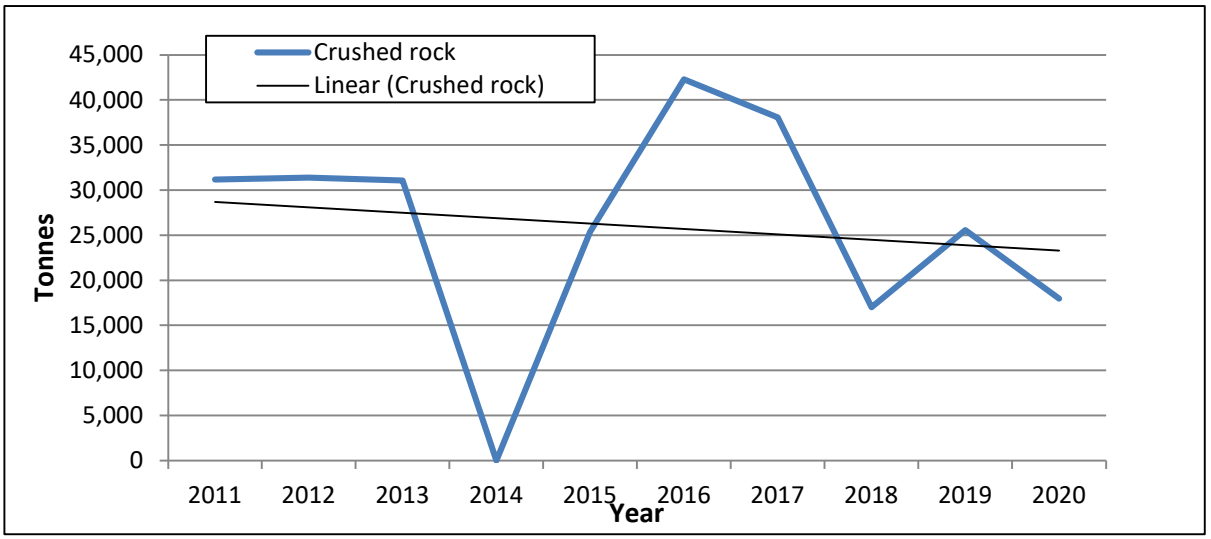
2.22 Crushed rock sales are primarily from imports via the Island's two aggregate wharves (both located on the River Medina). Having just two aggregate wharf operators does mean that reported figures are subject to confidentiality.

Table 7: Marine imported crushed rock (tonnes)

	10 Year Average	3 Year Average
Crushed Rock Sales (Tonnes)	**25,986.92**	**20,164**

2.23 The pattern in sales of crushed rock over both the ten and three year period has been erratic (see Figure 4), with the absence of any sales in 2014 being the extreme in terms of a year's performance difference from the average. In contrast sales in 2016 were at their highest over the last ten years. The last three years of sales are closer to the overall downward trend in sales over ten years, but still variable.

Figure 4: Crushed rock sales on the Isle of Wight



2.24 In addition to imported material there is a relatively sizeable reserve of Limestone present on the Island at the inactive site, Prospect Quarry. However, this material is only suitable for constructional fill and therefore does not meet the Island's needs.

2.25 While not formally reported through the annual monitoring process the provision of chalk locally does play a role and recorded sales for 2020 were equivalent to 38% of the marine imported crushed rock. That is not to say that the sales of chalk displace those of crushed rock, while there may be some cross-over in use, the two products are different. Use (and therefore demand) of chalk is understood to be primarily driven by the rural nature of the Island, providing materials for constructional fill and agricultural lime.

Marine-won Sand and Gravel

2.26 Marine-won sand and gravel is a major source of primary aggregate on the Island and is also the principal alternative source to land-won sand and gravel. The marine-won sand and gravel that is

landed on the Isle of Wight is dredged primarily from the English Channel and landed at wharves located on the Medina Estuary (see Figure 3).

2.27 The mineral rights for marine sand and gravel are owned by the Crown Estate, up to the edge of the continental shelf. It is understood that the Island receives the vast majority of its marine aggregates from the 'South Coast' region.

2.28 The Crown Estate report, 'Marine aggregates Capability & Portfolio 2020' states with regards to supply;
"*Onshore resources are becoming increasingly constrained, particularly in the South East of England and London. The marine aggregate industry meets around 20% of the sand and gravel demand for England and Wales*."

2.29 The Crown Estate report provides an analysis by region and the following key points summarise the report's commentary on the South Coast region;

- 7.83 million tonnes can be extracted from 15 licences;
- Current estimates suggest there are 23 years of primary marine aggregate production permitted;
- 1 application for licence could, if approved, increase the permitted tonnage by 0.3 million tonnes;
- During 2019 82% of material extracted from the region was delivered to the South Coast.

Table 8: Current reserves and permitted offtake for the South Coast region (million tonnes)

Region	Total current primary reserves*	10 year average annual offtake	3 year average annual offtake	Peak average offtake during 10 year period	Annual permitted offtake	Regional reserve life in years @ 10 year average annual offtake
		Primary (construction aggregate)				
South Coast	79.46	3.40	3.51	3.92	7.83	23.37

Extract from Marine Aggregates Capability & Portfolio 2020, The Crown Estate

2.30 The Crown Estate stated in response to consultation on the first LAA (2012) that "*existing licences within viable steaming time to Cowes will be able to provide as much sand and gravel as the current wharves can process and more than meet the whole demand for construction aggregate in the Isle of Wight*." Based upon the above figures it can be assumed that this remains the case.

2.31 Due to the closure of Kingston Wharf in 2018, the sales for Isle of Wight wharves are now confidential. The 3 and 10 year average sales for marine sand and gravel are set out below.

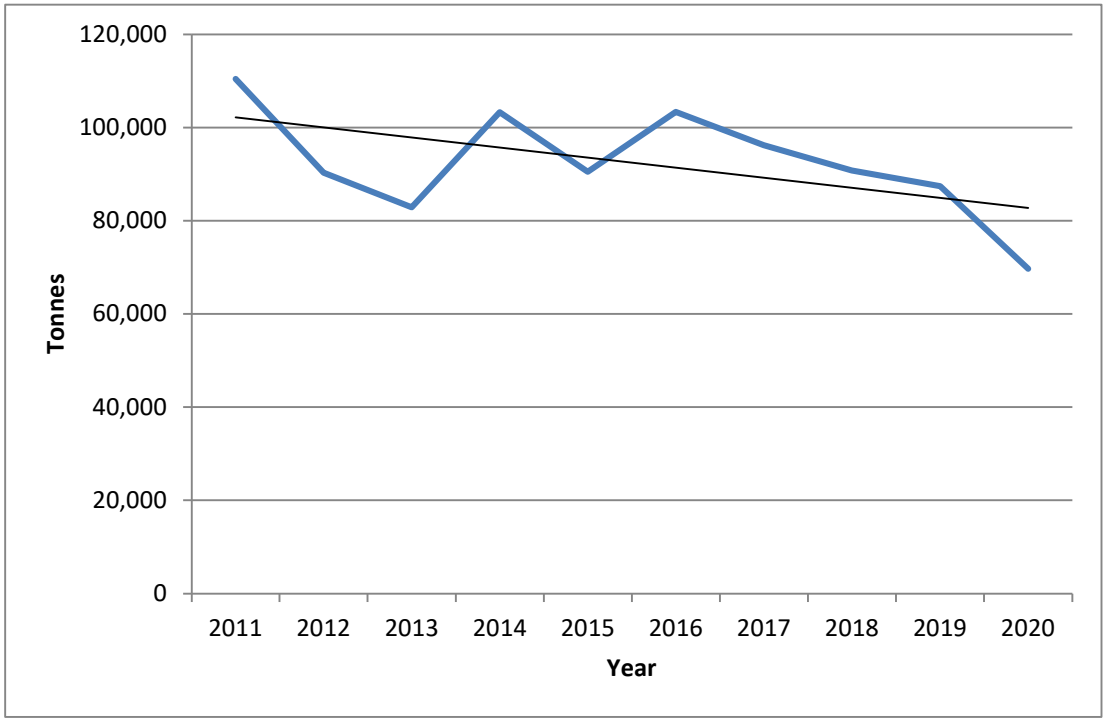
Table 9: Marine-won sand & gravel sales on the Isle of Wight

	10 Year Average	3 Year Average
Marine-won Sand & Gravel	**92,462**	**82,602**

2.32 It is difficult to identify any clear trend (in contrast to land-won sand and gravel sales), although there does seem to be a pattern of rise and fall over a number of years, with an overall decreasing trend. Comparing the 10 and 3 year sales averages reveals a more significant decrease over the last

three years. One of the three Island aggregate wharves closed in 2018 which may be related, certainly there would be a loss in potential capacity. More insight can be gained by a comparison to the performance of indigenous land-won sales of sand gravel (see section 4).

Figure 5: Marine-won sand & gravel sales on the Isle of Wight (thousand tonnes)



Island Aggregate wharf capacity

2.33 Based on total aggregate wharf imports for 2020 it is possible to estimate there was a spare capacity at wharves on the Island of some 74%. This is a slight increase on the previous 2 years, where for both 2018 and 2019 spare capacity was at 67%. This reflects the decrease in sales of marine-won aggregate in 2020.

2.34 Due to the limited number of wharves and the confidentiality issues this raises, it is not possible to discuss any further detail on capacity and limitations, and the generalisations made here about Island aggregate wharves should not be applied at the individual site level. See Section 1 for further information on the data limitations of the LAA.

Recycled and Secondary Aggregate

2.35 Recycled and Secondary Aggregate sales are collected yearly as part of the surveys carried out by mineral planning authorities, there were three active recycled aggregate sites on the Isle of Wight in 2020. There were no secondary aggregate sites.

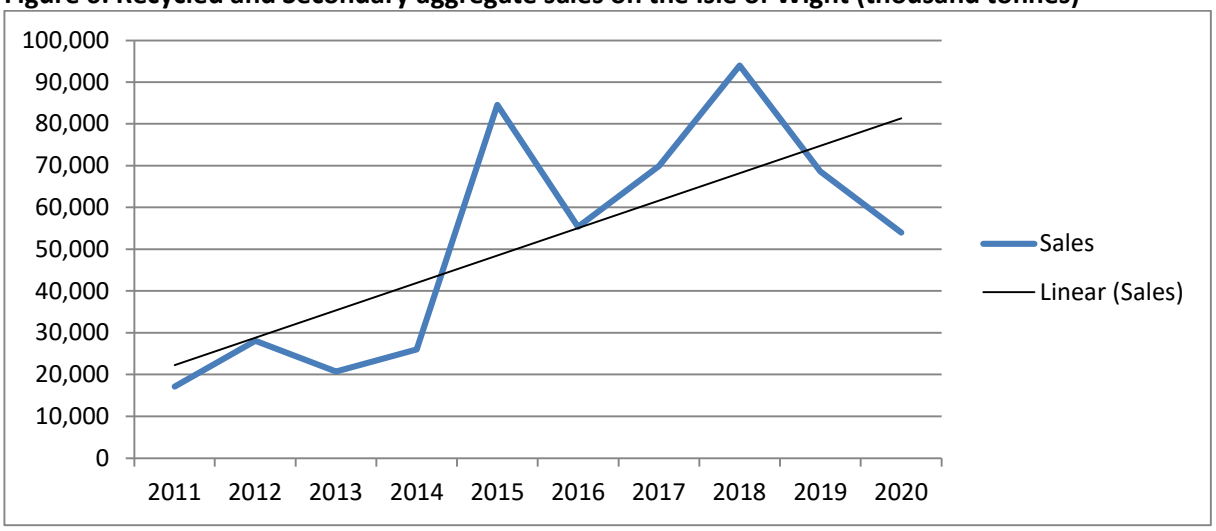
2.36 The sales figures of recycled and secondary aggregates on the Isle of Wight for the most recent 10-year period, 2011 - 2020, are detailed below.

Table 10: Recycled & secondary aggregate production on the Isle of Wight 2011 – 2020 (tonnes)

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Ave.
Sales	17,179	28051	20703	26021	84552	55363	69912	94000	68639	53941	**51,836**
								94000	68639	53941	**72,193**

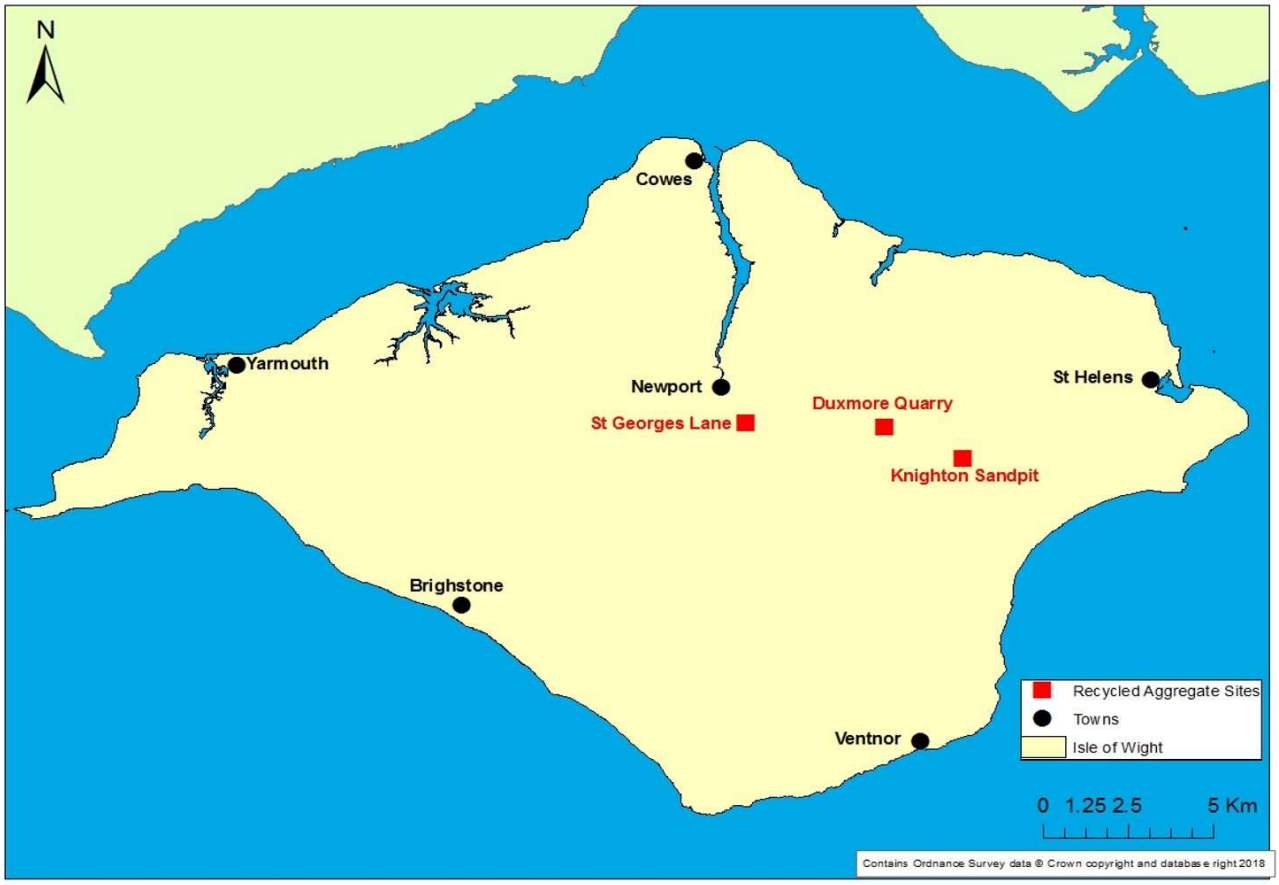
2.37 The sales of recycled and secondary totalled just under 54,000 tonnes, which is a significant decrease when compared to the previous year (68,600t for 2019) and continues a downward pattern in sales from a 10 year high recorded 3 years ago in 2018. The 2020 sales figure is much closer (just above) to the 10 year average than in comparison to the 3 year average which is substantially higher (at 72,193 or 25% increase on 2020). This reflects the impact of the recently recorded 10 year peak falling within the last 3 years of recorded sales and a subsequent decline in both 2019 and 2020.

Figure 6: Recycled and Secondary aggregate sales on the Isle of Wight (thousand tonnes)



2.38 The total capacity for recycled aggregates processing on the Isle of Wight is 180,000 tonnes per annum. However, when accounting for sites which did not respond to the survey, temporary permitted sites as well as potential unauthorised sites, the total capacity is likely to be higher.

Figure 7: Location map of active recycled aggregate sites on the Isle of Wight



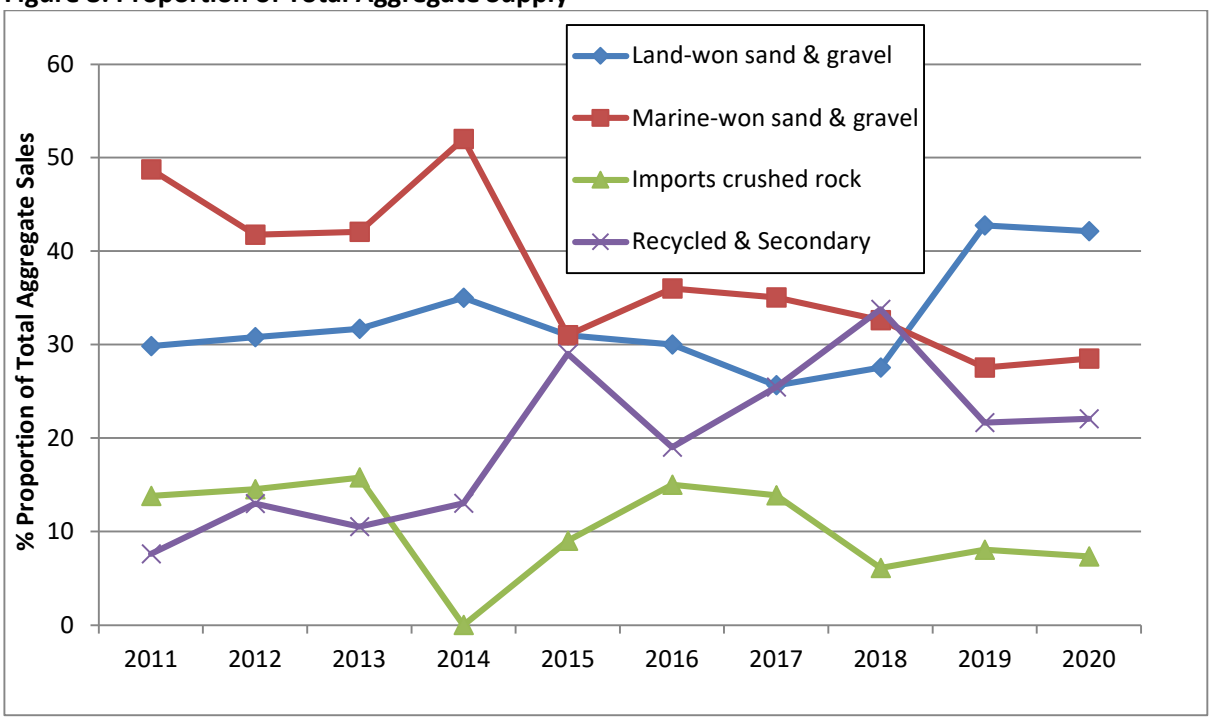
3. Total Aggregate Supply

3.1 The supply of aggregates on the Isle of Wight is based on a balanced supply arising from different sources; land and marine-won sand and gravel, recycled and secondary aggregate, and imported crushed rock. This supply ensures that reliance is not placed on any one source. Table 12 presents the ten-year average sales of each aggregate source to the Island and Figure 7 shows the proportion of the total supply that each of those sources represents.

Table 11: Total Aggregate Sales on the Isle of Wight, 2008 – 2017 (Thousand tonnes)

Aggregate	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Average 2011-20
Land-won sand & gravel	67	66	62	68	90	87	70	76	135	103	**82**
Marine-won sand & gravel	110	90	82	103	90	103	96	90	87	69	**92**
Imports crushed rock	31	31	31	0	25	42	38	16	25	17	**25**
Recycled & Secondary	17	28	20	26	84	55	69	94	68	53	**51**
Total	**225**	**216**	**197**	**198**	**290**	**288**	**274**	**278**	**317**	**244**	**254**

Figure 8: Proportion of Total Aggregate Supply



3.2 Table 13 provides a comparison of the 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 on the Isle of Wight

Type/source of aggregate	Average annual sales (2011-20)	Identified annual capacity	Balance
Land-won sand and gravel	82,836	100,000	**17,164**
Marine-won sand and gravel	92,462	c	**65%**
Imported crushed rock	25,530		
Recycled/secondary aggregate	25,986	255,000	**229,014**
Total	226,814	c	**67%**

All figures in tonnes

3.3 The identified annual capacity for marine-won sand and gravel and imported crushed rock has been merged, reflecting use of the same wharf resources to land the mineral, regardless of its type or source.

3.4 In respect to land-won sand and gravel, while the identified capacity is currently sufficient to meet the average sales, the last 2 years of sales have exceeded this. While the 10 year sales average is below the identified capacity of 100,000tpa, the average for the last 3 years of sales is above. This combined with an overall increasing trend in sales, a permitted reserve below 7 years and shrinking and no new permissions within the monitoring year indicates that there is some urgency to both reconsider the capacity figure and from this identify future provision to provide some certainty of future supply from this source.

3.5 The council is due to start preparation of a new Minerals and Waste Development Plan Document in April 2022. This will be the mechanism by which the apportionment figure (and thereby land-won sand and gravel capacity) is determined as well as sources for future supply. However, given both the timescales for plan preparation and adoption and the various permitting processes associated with new indigenous supply, the council in it's role as the MPA may need to engage the local mineral operators prior to the plan-making process being complete, to understand exiting reserves and capacity and future intentions.

3.6 Table 13 demonstrates there is a significant amount of available alternative infrastructure capacity for aggregate on the Isle of Wight, considered to be sufficient to meet the Island's needs should this be required. This is discussed in section 4.

4. Future Aggregate Supply and Demand

4.1 The supply of land-won aggregate in England is based on the Managed Aggregate Supply System (MASS) which assists MPAs in planning for a steady and balanced supply of aggregates. Hitherto MASS is based on aggregate 'guidelines' published from time to time, from which Aggregate Working Parties – comprising industry, MPAs and Government representatives provide advice to MPAs. Current advice on the amount of land-won aggregate supply, or 'apportionment' for the Isle of Wight is 0.1 mtpa (or 100,000 tpa) subject to testing in the preparation of local mineral plans.

4.2 The MASS system has been subject to review following the publication of the NPPF. This has resulted in the publication of guidance on the Managed Aggregate Supply System which recognises the principles of the MASS but alongside the need to determine aggregate apportionments locally. The guidance sets out the LAA 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 LAA:

- 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.

4.3 Policy SP9 (Minerals) of the core strategy sets a figure of 0.1 million tonnes per annum of land-won sand and gravel. Monitoring returns for the period 2011 – 2020 show on average the Island has been producing 82,836 tonnes of sand and gravel per year. While the overall trend is one of generally increasing sales since 2011, there are variations, with two distinct peaks in 2015 and 2019. Annual sales over the last ten years have ranged from around 62,000 tonnes to over 135,000 tonnes.

4.4 Looking at the 3 year trend gives a different picture of more significant change over a shorter period of time, with erratic year on year sales, from a low of over 76,000 tonnes to the high of over 135,600 tonnes in 2019, to the most recent sales of 2020 of 103,000 tonnes. There will almost certainly be some implications on sales as a result of the global pandemic, but the peak in 2019 cannot be attributed to this being pre-pandemic, while the continuing strong sales in 2020 are surprising given the periods of inactivity (e.g. furlough) and uncertainty (e.g. supply chain and labour issues).

4.5 In terms of performance against the apportionment figure then certainly the last three years of sales can be viewed positively, although the implications of sales exceeding 100,000 tonnes over the last two years has had an impact on permitted reserves and the remaining landbank which is less than 7 years.

4.6 While the average of ten years sales data has been discussed in Section 2, other relevant local information included in the consideration of future demand for aggregates is the provision of new housing on the Island and associated infrastructure investments. Sand and gravel are used in the

construction industry for purposes such as the making of concrete and mortar or for roadstone or drainage material. The level of construction, including house building and infrastructure, therefore largely drives the demand for sand and gravel and are key local factors to consider when determining a provision figure for the Isle of Wight.

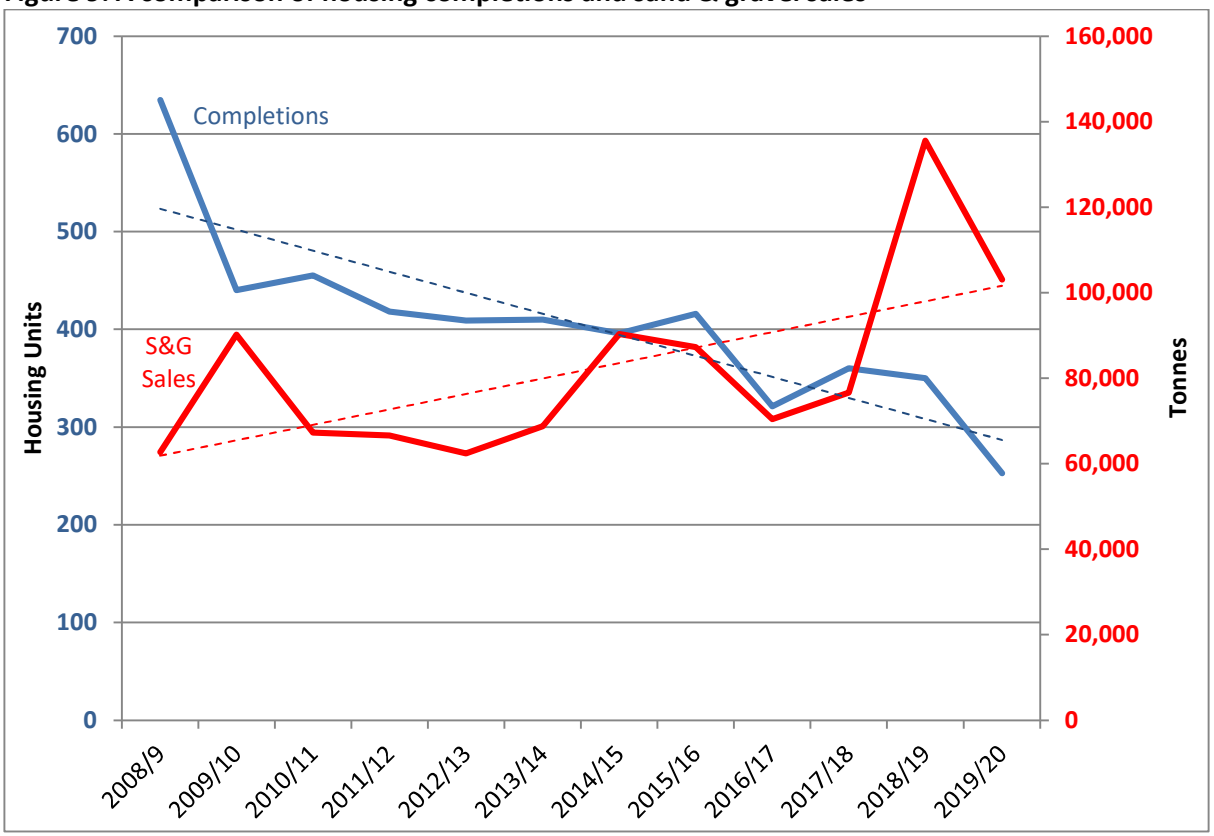
4.7 Since 2012 there has been a significant shortfall in the delivery of housing on the island against the identified annual housing number in the local plan. A total of 3,361 homes have been completed in the same 9 year period as a shortfall of 1,319 homes.

Table 13: Comparison of annual housing completions against identified requirement

Year	12/13	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	Total
Homes required	520	520	520	520	520	520	520	520	520	**4680**
Actual homes built	409	410	396	417	321	360	350	253	445	**3361**

4.8 As can be seen from Figure 8, housing completions on the Island for the period 2008/09 to 2019/20 have overall been in decline. Previous LAA work suggests that the level of housing completions mirrors to some extent the demand for sand and gravel. While the overall volume of sales of aggregate has been increasing, there does appear to be some relationship between the number of housing units completed and aggregate sales.

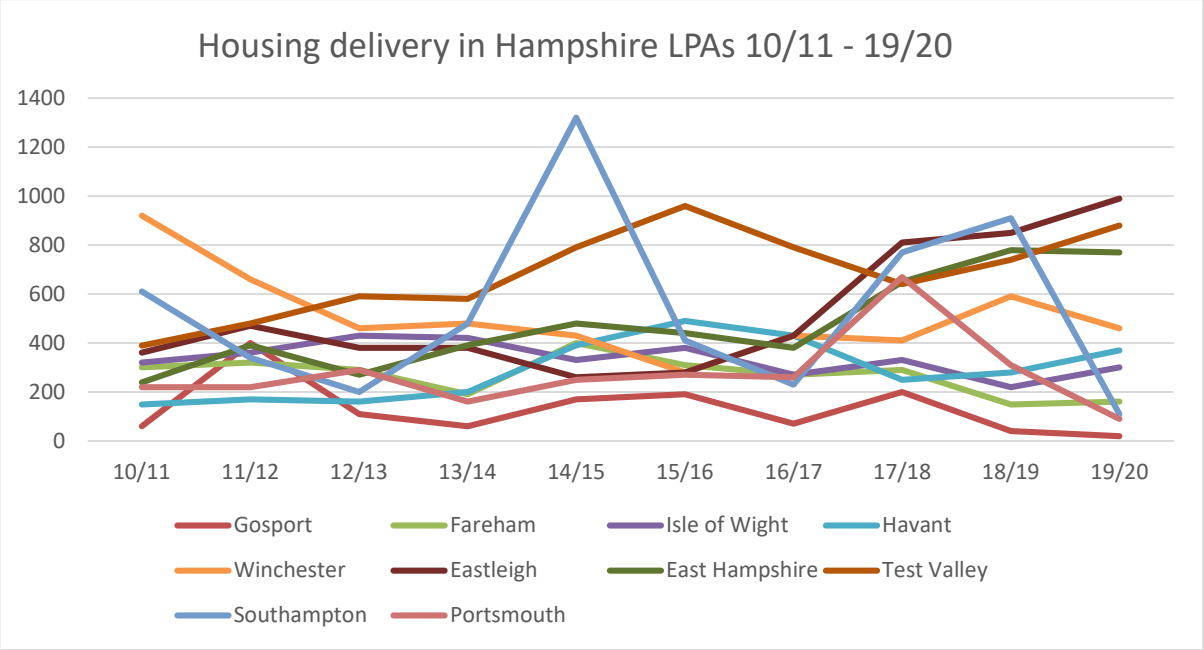
Figure 9: A comparison of housing completions and sand & gravel sales



4.9 Analysis of IWC monitoring data indicates that there seems to be a 'ceiling' to the delivery of housing on the Island, as it has averaged 373dpa since adoption of the Core Strategy, 378dpa in the last 10 years and 461dpa in the last 20 years.

4.10 One indicator of this 'ceiling' is that housing delivery is fairly consistent on the island, with less fluctuations between 'high' and 'low' years. Reviewing this consistency when compared to housing markets in the region shows that across all Hampshire local planning authorities in the last 10 years, the IOW is the most consistent in terms of delivery rates and shows the least amount of 'peaks and troughs' experienced by mainland authorities, as shown on the graph below. Fluctuation between the highest and lowest delivery years is the least on the IOW out of all 10 Hampshire authorities. This is partly reflective of minimal reliance on large, strategic sites built out by major national housebuilders, which can provide greater volatility to delivery rates.

Figure 10: Housing delivery across Hampshire from 2010/11 – 2019/20



4.11 Another indicator is the 'conversion rate' between permissions granted and units completed. The IWC has granted planning permission for 5,702 homes in 9 year period since adoption of Core Strategy, at an average of 634dpa. With an average completion rate of 373dpa, this gives a 'conversion rate' of 59% which is high when gauged against other similar sized local authorities[7], suggesting the housing market is operating at capacity.

4.12 This then raises the question that if the housing sector has been consistent in delivery (regardless of whether this is viewed as under-delivery) what has caused the recent rise in aggregate demand and the significant spike in sales of indigenous land-won sand and gravel in 2019 and remaining high in 2020? Future years monitoring will help to determine any more intimate relationship between these two potential indicators, including any potential time-lag element enabling the reporting of one (e.g. sand and gravel sales) to provide some insight into the other (housing completions). The council will continue to consider the usefulness or otherwise of such comparison, while engaging with local mineral operators to determine if there was any one singular cause for the peak in aggregate sales in 2019.

Contingency planning

4.13 To contribute to the delivery of the mineral target (i.e. 100,000tpa sales of sand and gravel) and following technical work and assessments of sites promoted to the council, the council has

[7] The Island Plan - Service Details (iow.gov.uk) – IWC Assessment of Supply Report, Three Dragons 2020

allocated six sites. The assessment of the potential for mineral sites on the Island was undertaken between February 2009 and October 2010 and full details of this assessment work can be viewed in the 'Assessment of the Potential for Mineral Sites on the Island – Site Options Report' (Entec UK Ltd, October 2010). The assessment has been used to inform the selection of sites for allocation, as listed in Table 14.

Table 14: Land-won provision on the Isle of Wight to 2027

	Total sand & gravel (tonnes)
Annual Apportionment	100,000
Total Plan Requirement: Annual apportionment x plan period (16yrs)	1,600,000
Permitted Reserves	
Sub-total	475,437
Allocated sites	
MA1: Crockers Farm	
MA2: Lavender Farm	
MA3: Cheverton Farm	c
~~MA4: Blackwater Quarry (western extension)~~	
MA5: Cheverton Gravel Pit	
MA6: Blackwater Quarry	
Sub-Total	1,770,000*
Total	
Permitted reserves + Plan sites	2,245,437
Contingency	
Total	645,437
Annual	80,679

*Estimated tonnage of aggregate in areas allocated in policy SP9 of the Adopted Core Strategy

4.14 Based on permitted reserves and allocated sites, the council has a sufficient provision of land-won sand and gravel to meet the apportionment figure adopted by the (core strategy) plan, over its lifetime. There is a significant over provision, primarily as a result of permitted reserves. This over-provision provides the council with a significant contingency from which to deal with any likely continuing increase in demand as has been recorded in the last 2 years.

4.15 There is existing capacity at the Island's aggregate wharves. While the significance of this capacity with regards to the importation of crushed rock is already recognised, there has been an ongoing shift in supply of sand and gravel, from a majority of indigenously sourced land-won, to marine-won, to back to land-won (see Table 15 below). 2015 was the first monitoring period in ten years where the provision from land-won and marine-won had been equal. Subsequently for 2016 the balance of supply shifted back to a marine-won majority, with the recent peak in land-won sales also coinciding with a shift back to land-won. This would seem to indicate that there is a relationship between these 2 sources of supply, but other than changes in percent provision further work will be required to better understand this. This is likely to be critical in providing both contingency and resilience in supply.

4.16 As existing and allocated sand and gravel sites are worked out and deposits become increasingly constrained, the shift to marine-won may well increase, in which case the total capacity of the Island wharves will be critical. This is likely to be beyond the existing planned timeline (i.e. post 2027) but underlines the strategic importance of the two aggregate wharves to the Island and highlights a potential vulnerability should either of these assets be lost.

Table 15: Indigenous land-won vs marine-won sand and gravel sales

Year	Land-won	Marine-won	% split of total provision (land/marine)
2004	144,400	91,000	61/39
2005	C	118,000	n/a
2006	117,000	148,000	44/56
2007	87,997	136,000	39/61
2008	88,000	100,308	47/53
2009	62,713	75,516	45/55
2010	90,163	112,000	45/55
2011	67,303	110,000	38/62
2012	66,600	90,303	42/58
2013	62,407	82,838	43/57
2014	68,760	103,276	40/60
2015	90,306	90,460	50/50
2016	87,263	103,313	46/54
2017	70,431	96,211	42/58
2018	76,625	c	46/54
2019	135,612	c	61/39
2020	103,055	c	60/40

4.17 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 and has shown there to be significant available capacity. The sales of recycled and secondary aggregate over the last 10 years have increased, with a peak in 2018 where this source was proportionately the single most significant source. Similar to marine-won this highlights the importance of sources other than land-won sand and gravel and how broad the range in supply of aggregates on the Island is, despite year-to-year variations.

4.18 In terms of future capacity provision for hard rock imports to the Island, future opportunities do exist, as identified in the current aggregate wharf capacity. As discussed previously, this capacity is shared, primarily with marine-won sand and gravel, so the sum requirements of all resources using the wharves will need to be considered in order to have an understanding of any impacts provision of one material type might have on the supply of another. Certainly more work can be done to better understand the balance of imports and to see if the identified capacity can be attributed in any way to mineral type. Further investigation needs to be carried out to update the understanding on the uses of indigenous chalk and it's relationship, if any, to crushed rock sales.

5. Implications of Local Approach

5.1 The Island apportionment has been tested and verified at the local level by key stakeholders, including significantly the Island's mineral operators. The Isle of Wight is unique in being an MPA with no adjoining MPA area. As such it operates in relative isolation and independence, with comparatively little inter or intra-regional flows of aggregate. This effectively takes away the need to more accurately reflect market areas. The levels of provision and demand set out in this LAA also demonstrate that the Island's local aggregate provision will have very little effect when considering these elements in the context of a regional market basis.

5.2 However, at the MPA level there are some issues with the apportionment figure. Primarily that the overall trend in sales of land-won sand and gravel on the Island based upon the most recent ten years exceeding the apportionment in 2019 and the last 2 years of sales have been in excess of this 100,000t figure. If sales in the near future continue in excess of the existing apportionment this will provide a start point from which to reconsider the existing apportionment and any new approach (including apportionment) as part of the evidence base work for the mineral local plan in 2022.

5.3 The recent increase in land-won sales has been accompanied by a shrinking permitted reserve, such that the Island does not have a 7 year landbank for land-won sand and gravel. This highlights two issues in terms of supply. The first is the range in sources of supply and how their contributions have varied, but all have been important, indicating potential relationships that may provide resilience through alternatives. The second is the unfulfilled potential of the remaining allocated mineral sites. Again, as part of the baseline work the council will review these sites to understand any reasons as to why they have not yet come forward and the likelihood (or otherwise) of them doing so. This will then inform a new search for mineral sites. The council in it's role as an MPA will prioritise verifying the existing permitted reserve and the intentions of mineral operators on the Island in the immediate future in terms of how diminishing reserve's will be replaced and or supplemented.

6. Conclusions and future actions

Main Conclusions

6.1 Based on permitted reserves and allocated sites, the council has sufficient provision of land-won sand and gravel to meet the apportionment figure adopted by the (core strategy) plan, over its lifetime. There is a significant over provision, primarily as a result of permitted reserves. This over-provision provides the council with a significant contingency from which to deal with any likely continuing increase in demand as has been recorded in the last 2 years.

6.2 There is sufficient capacity through both the landing of marine-won and secondary and recycled aggregates to be able to provide further flexibility and resilience in supply, certainly in the short to medium term. However should the rising trend in sales of land-won sand and gravel continue, particularly if sales continue above the 10 year average as has been recorded in the last two years, then there will be greater urgency to review, identify and deliver future sources of supply.

Summary of findings

6.3 The following points summarise the main findings of the 2020 LAA;

- Sales from all aggregate sources have decreased from the previous monitoring year; while the largest decrease by volume was in land-won sand & gravel, proportionately the largest decrease was in crushed rock;
- The remaining permitted reserves are below the 7 year landbank, using the 10 year sales average gives a landbank figure between 5.5 and 6 years, whilst using the local apportionment figure lowers this to less than 5 years;
- There is a significant amount of available alternative infrastructure capacity for aggregates on the Isle of Wight;
- The ongoing shift in supply of sand and gravel, from a majority of indigenously sourced land-won, to marine-won, to back to land-won over the last 10 years and beyond.

Future actions

6.4 As a result of this assessment the following actions have been identified, ideally to be carried out over the next monitoring year, in order that the outcomes may inform the next (2021) LAA;

- Check areas allocated under local mineral plan policy SP9 for mineral extraction have not been permitted and/or developed;
- Confirm remaining permitted reserves of sand and gravel and associated landbank;
- Investigate the recent increase in sales of land-won sand-gravel above the 10-year average;
- Liaise with the Environment Agency for an update on permits and recycling activity.