

# **Medway Local Aggregates Assessment 2023**

**12th Report**

**Final**

**December 2024**

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### *Executive Summary 2023*

The Medway Local Aggregates Assessment is an annual report that monitors the supply and demand for aggregate in Medway. This is the twelfth Local Aggregate Assessment (LAA) produced for Medway, in line with the requirements set out in the National Planning Policy Framework (NPPF) and in accordance with the Planning Practice Guidance (PPG). This LAA is based on data reported for the 2023 calendar year.

Aggregate is essential to the functioning of society. Aggregate is used in the construction of buildings and infrastructure such as housing, roads, railways and flood defences. Monitoring the demand for, and supply of, aggregate is essential to ensuring that a 'steady and adequate supply' is maintained to meet current and future needs.

In compiling information on the demand for aggregates and supply options in this LAA, the council has considered a range of available data sources; with the annual aggregate monitoring survey, designed by the South East England Aggregates Working Party (SEEAWP), of local operators being a key source of data. Due to the limited number of active quarries, it is not possible to publish annual land won sales data due to commercial confidentiality.

This report also takes account of the latest four yearly national Aggregate Monitoring Survey that took place in 2020 and surveyed aggregate sales in 2019. The next national Aggregate Monitoring Survey took place in 2024 and surveyed aggregate sales in 2023. Data from this survey informed this LAA though data on imports and exports has not yet been published.

### **Land-won Aggregate**

Sharp sand and gravel is the only land-won aggregate actively being extracted in Medway. There are currently two permitted quarries for the extraction of sand and gravel in Medway, one inactive and the other commencing extraction in 2017, becoming fully operational in 2018.

Current permitted reserves of sand and gravel have increased to 441,000 tonnes due to reassessment, and this, together with reduced sales have resulted in a significantly increased landbank from 5.1 years in 2022 to 9.25 years in 2023 (based on an Aggregate Provision Rate equivalent to the 3-year average sales value). It is important to note that while the landbank calculation takes account of the reserves at the inactive site, the likelihood of these ever being worked is uncertain due to a proposed development (granted outline planning permission in 2021) that could result in their sterilisation.

A draft of the emerging Medway Local Plan 2041 included proposed Areas of Search for the extraction of land won sharp sand and gravel.

### **Recycled and Secondary Aggregate**

According to the Environment Agency Waste Data Interrogator (WDI) 2023, three sites produced recycled aggregate in 2023. In 2022 a longstanding aggregate producer reported sales of recycled aggregate from its site for the first time however it appears that this may have been a one off event. A further site was granted permission in 2018 and was expected to start operations in 2023, however the site is still not operational.

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Data published in the WDI suggests around 54,000 tonnes of recycled aggregate was produced in 2023. A Waste Needs Assessment prepared in 2020 to support the emerging Medway Local Plan suggested that at that time the permitted capacity for recycled aggregates production in Medway was around 135,000tpa. Recent data indicates that the capacity of sites active in 2023 is around 75,000tpa with the site yet to start operations having capacity of 75,000tpa. Total permitted capacity has therefore been taken as around 150,000tpa.

### Marine-won sand and gravel

Medway's wharves continue to demonstrate their regional importance, reporting 1.867 Mt of marine-won sand and gravel sales in 2023, a marginal decrease on sales reported in 2022.

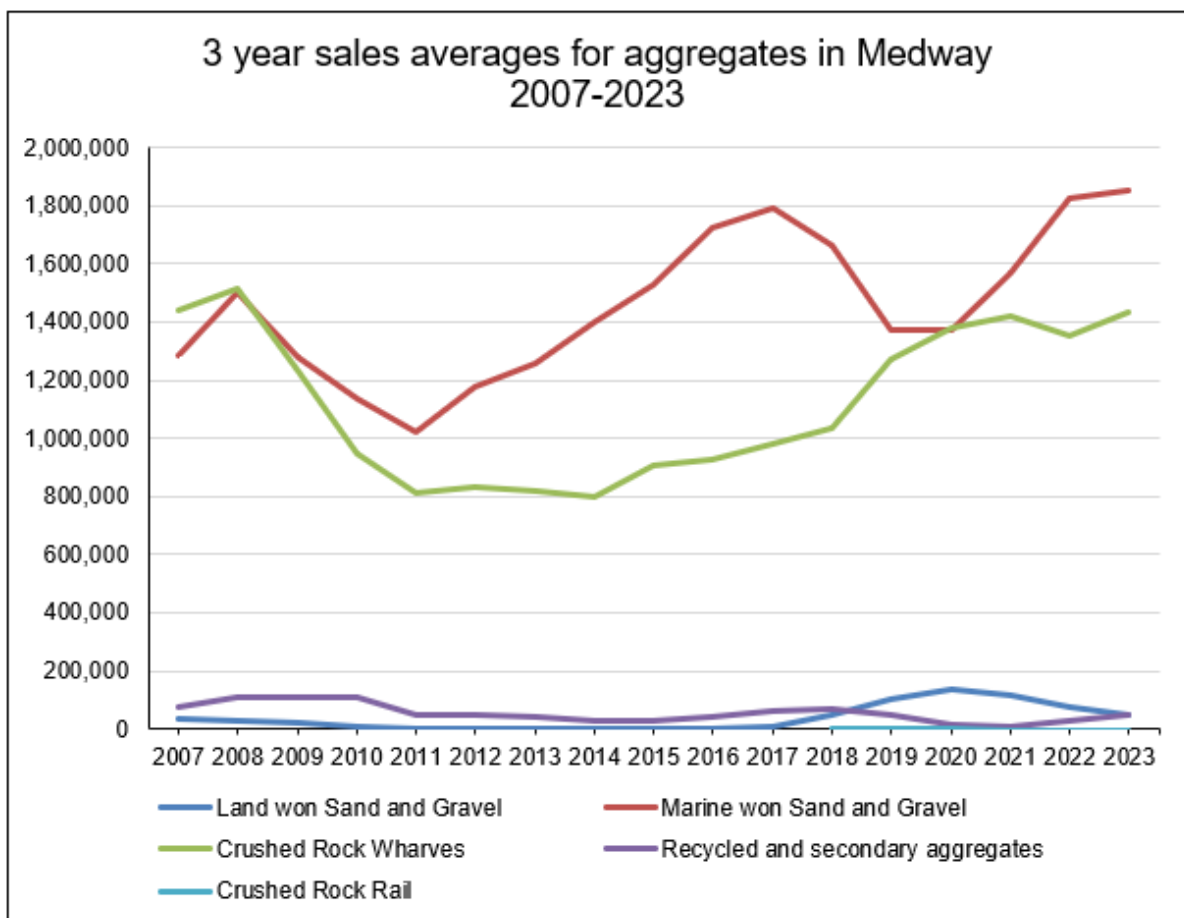
For the first time in several years, sales of marine-won soft sand were reported in 2023 however this was at a minimal level.

### Imported Crushed Rock

Imports of crushed rock to wharves increased to 1.509Mt, continuing at a level above the 3 and 10 year sales averages.

Total annual sales of aggregates from wharves in 2023 (3.376Mt) exceeded that achieved in any one of the last fifteen years.

The overall trends in aggregate production in Medway are shown in the figure below.



### **Demand**

The council has analysed a range of sources to project any trends that may be emerging that would influence demand for aggregate. The population of Medway is projected to increase significantly. Medway experienced its highest rates of housing delivery in 2019/20, 2020/21 and 2021/22, at 1,130, 1,082 and 1,102 new homes, respectively with a slight decline to 958 in 2022/23. Housing delivery at this high level is expected to continue in the short to medium term. Nationally, house building is not expected to increase significantly beyond current levels in 2022 and 2023 in the short to medium term. A number of significantly large regional infrastructure projects are also expected to increase demand though recently announced delays to certain projects will mean the demand will not materialise as soon as expected. The UK economy is expected to achieve modest growth in the next few years with the new Labour government setting out ambitious targets for housing and infrastructure which may see increasing growth in the demand for aggregates at least in the medium term.

### **Conclusion**

Medway plays a strategic role in regional aggregates supply through the wharves located on the River Medway and the Thames estuary.

Land won reserves of sand and gravel are depleting, however this is more than compensated for by increased levels of imports at Medway's wharves.

The council will plan positively for the steady and adequate supply of aggregate through the emerging Local Plan in order meet the needs of the local and regional markets.

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### Summary – Medway Council (for the calendar year 2023)

Quarry Sales	2023 Sales (Mt) & Trend <sup>1</sup>	Average (10-yr) Sales & Trend <sup>1</sup>	Average (3-yr) Sales & Trend <sup>1</sup>	APR (Mt) <sup>2</sup>	Reserve (Mt)	Landbank (years)	Allocations (years)	Capacity (Mtpa)	Comments <sup>3</sup>
Soft Sand									No known reserves
Sharp Sand & Gravel	c	57,259 ↑	47,671 ↓	0.048 ↓	0.441 ↑	9.25 ↑	n/a	>0.200	Two quarries, one inactive. APR taken as 3 year average in light of sales pattern. Reserves at inactive quarry may be sterilised in future.
All Sand & Gravel <sup>4</sup>	c	57,259 ↑	47,671 ↓	0.048 ↓	0.441 ↓	9.25 ↑	n/a	>0.200	See above
Crushed Rock									No known reserves

## Medway Local Aggregate Assessment 2023

Aggregate Infrastructure Sales	2023 Sales (Mt) & Trend <sup>1</sup>	Average (10-yr) Sales & Trend <sup>1</sup>	Average (3-yr) Sales & Trend <sup>1</sup>	APR <sup>2</sup> (Mt)	Reserve (Mt)	Landbank (years)	Allocations (years)	Capacity (Mtpa)	Comments <sup>3</sup>
<b>Recycled / Secondary Aggregates</b>	54,173	41,624 ↑	47,451 ↑	n/a				0.150 ↑	New operator producer reported sales of RA for the first time. 2021 & 2022 sales recalculated. Closed Kingsnorth Power has a stock of approx. 1.4mt m <sup>3</sup> coal derived fly ash
<b>Marine Sand &amp; Gravel</b>	1.867 ↓	1.663 ↑	1.853 ↑	n/a				4.3	Established importation and distribution facilities with potential for growth. The capacity is combined total for all wharves across all aggregate types
<b>Rock Imports by Sea</b>	1.509 ↑	1.215 ↑	1.433 ↑	n/a				4.3	Established importation and distribution facilities with potential for growth. The capacity is combined total for all wharves across all aggregate types
<b>Rail Depot Sales (Sand &amp; Gravel)</b>	n/a	n/a	n/a	n/a				0.56	Established aggregates rail depot linked to wharf used to export aggregate. Sand and gravel is not imported by rail
<b>Rail Depot Sales (Crushed Rock)</b>	n/a	n/a	0.000	n/a				0.100	Established aggregates rail depots linked to wharf used to export aggregate. Crushed Rock is not imported by rail

### General Comments<sup>6</sup>

The supply of aggregates in Medway is currently sufficient, with the existing importation facilities providing a high percentage of aggregates for the wider London and South East area. Total annual sales of aggregates from wharves in 2023 continued to notch up (3.377Mt) exceeding the level in any one of the last fifteen years.

A revised assessment of permitted recycled aggregate production capacity indicates a slight increase to 150ktpa from a 2020 estimate of 135ktpa. Extraction of sand and gravel from the only productive quarry at Kingsnorth has continued and while reserves remain limited operator survey returns suggest an increase which is likely due to a reassessment. The landbank is 9.25 years based on the 3 year sales average (the APR rate). The relatively small reserve at the other permitted sand and gravel quarry may be sterilised by impending non mineral development. The Local Plan allows for additional reserves but no interest has been shown by industry for some time. The Regulation 18 consultation document seeks to safeguard resources and infrastructure and identify Areas of Search for sand and gravel extraction.

In common with much of the South East, there is high demand for housing in Medway and there have been relatively high rates of delivery in recent years.

Other major construction projects proposed in the wider South East region which may place demands on aggregate supplied from Medway include Ebbsfleet Garden City, Lower Thames Crossing, Thames Tideway Tunnel, Crossrail 2, HS2 and Silvertown Tunnel.

### Notes:

1. **Trend** – indicates whether the average sales are (compared with the previous year's LAA average sales) increasing (upwards arrow), declining (downwards arrow) or no change (level arrow).
2. **APR = 'Aggregate Provision Rate'** – The APR is the level of sales used to estimate future requirements and is based on historic sales and other relevant local information. The term 'LAA Rate' has previously been used for the Aggregate Provision Rate.
3. **Comments** – Comments explain possible anomalies e.g. peculiarities about current sales, landbank limitations, important infrastructure changes, soft sand sales at wharves, origins of aggregate imports by sea/rail etc.
4. **All sand and gravel** – soft sand and sharp sand and gravel taken together.
5. **Shading** applied where aggregate supply source is not relevant.
6. **General Comments** – this provides the overall picture with reference to demand, factoring in export requirements and sustainability of supply – landbank, allocations, infrastructure capacity – to meet this. This includes whether an appropriate contribution is being made to what are understood to be the aggregate supply that is required of the area and an analysis of the adequacy of the current local plan and whether this should be reviewed.
7. **'c'** denotes where sales data is not published due to commercial confidentiality.



- 1.1. Aggregate minerals such as sand and gravel and crushed rock are used as construction materials, and therefore are intrinsic to the nation's development, maintaining infrastructure and supporting economic growth. Local Aggregate Assessments (LAA) play an important role in the coordination of planning for the supply of minerals to meet the country's needs. As the Mineral Planning Authority for Medway, Medway Council is obliged to prepare an LAA for its area in line with requirements set out in the NPPF (2023) (Paragraph 219) and the PPG.
- 1.2. Paragraph 219 of the NPPF states Minerals Planning Authorities should prepare: *'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 local information, and an assessment of all supply options (including marine dredged, secondary and recycled sources)'*. The LAA is submitted to the regional Aggregate Working Party which prepares an annual report for the National Aggregate Coordinating Group (NACG)<sup>3</sup>. The national group should consider whether the totals provided by the area Aggregate Working Parties make appropriate provision to maintain a steady and adequate supply of aggregate. This process seeks to ensure the coordination of minerals planning at a strategic level.
- 1.3. This is the twelfth LAA produced for Medway. Much of the data used in the preparation of this LAA comes from the annual monitoring of aggregates sales in Medway undertaken by Medway Council on behalf of the South East England Aggregate Working Party (SEEAWP). In 2024, larger operators in Medway were surveyed by the British Geological Survey as part of its work in preparing the 2023 Aggregate Minerals Survey for Great Britain on behalf of government. The annual Aggregate Monitoring (AM) survey collects sales data from active aggregate extraction sites, minerals wharves, minerals rail depots and recycled and secondary aggregate processing sites. Returns for 2023 were received from all the main aggregate producers in Medway. Data for recycled aggregate sites has been obtained using the Environment Agency 2023 Waste Data Interrogator.
- 1.4. Due to the size of Medway, and the limited number of quarries, related data is restricted and cannot be disaggregated to identify sales in any one year due to agreements made with industry operators concerning commercial confidentiality. This is reflected in the data is presented in this report.

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<sup>3</sup> The National Aggregate Coordinating Group (NACG) is responsible for coordinating the supply and demand of aggregates (such as sand, gravel, and crushed stone) across the UK. The NACG consists of representatives from various sectors, including: Mineral Planning Authorities (MPAs); National Government Agencies; Industry Representatives and other stakeholders and experts with expertise in aggregates, planning, and environmental impact.

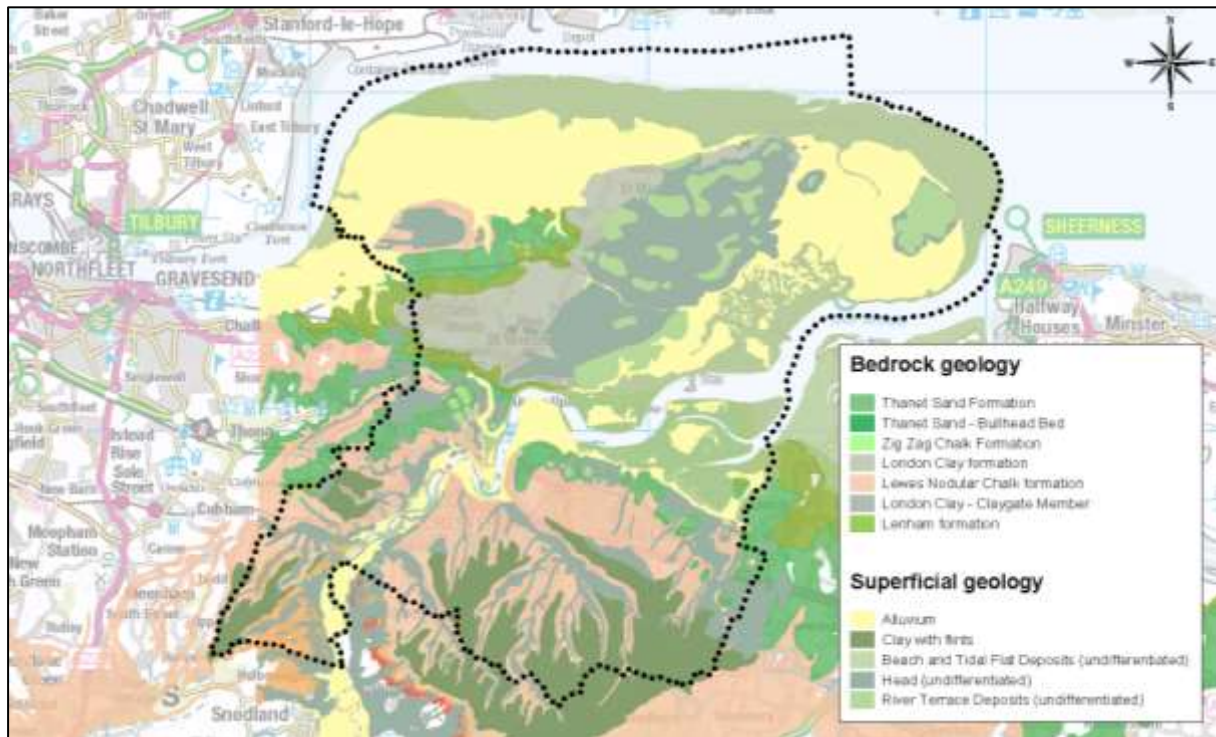
2.

Land-won Aggregate

## Geology of Medway

2.1. The sand and gravel deposits in the Medway area are primarily concentrated on the Hoo Peninsula as a result of post-glacial melt water outwash deposition found in a series of 'river terraces', trending roughly from north west to south east across the peninsula's ridge, and on the Isle of Grain. There are also more recent water-lain deposits covering areas of land on the eastern and north-western marshes of the peninsula that include some sand and gravel seams. The deposits have not been significantly reworked by natural processes since their deposition and have a sand to gravel ratio and particle characteristics that makes them generally attractive for high specification value added concrete production. An overview of Medway's geology is provided in Figure 1. Note that the sand and gravel deposits considered of economic interest are those shown as 'River Terrace Deposits (undifferentiated)'.

Figure 1: The Geology of Medway

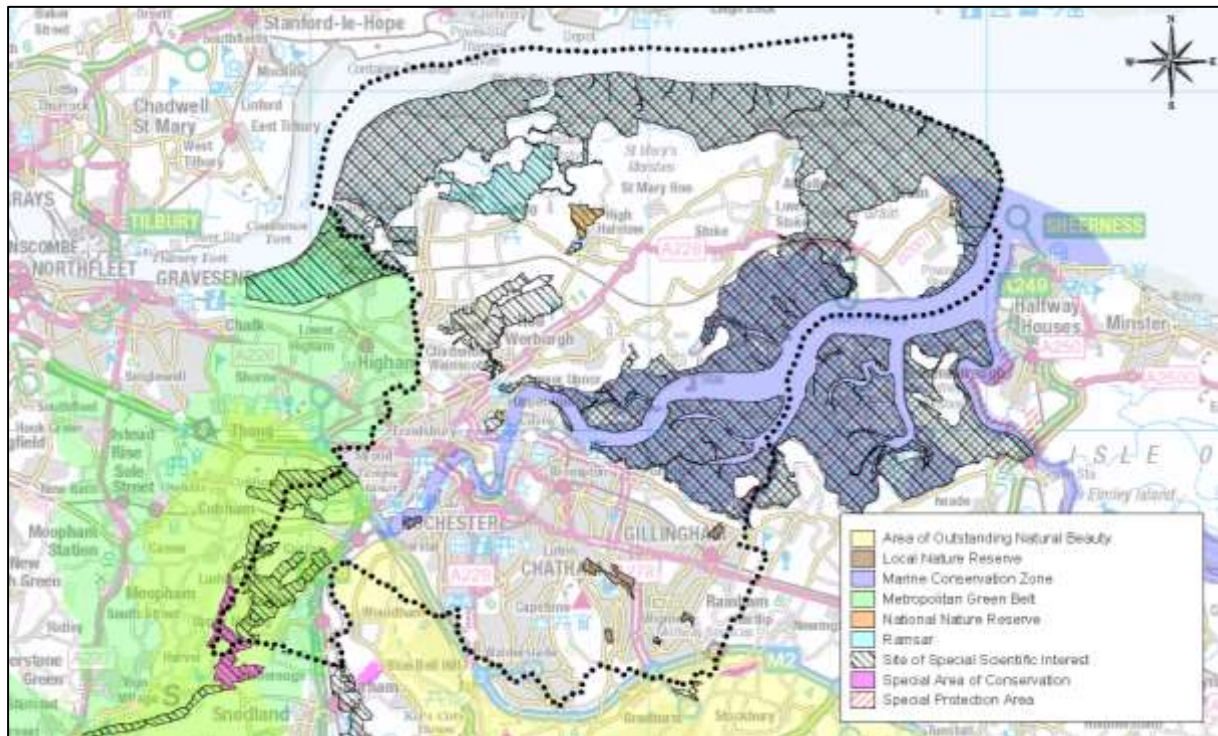


## Environmental and Landscape Designations

2.2. Medway covers an area of 26,886 hectares (including rivers and coastal areas), and within this area are several landscape and environmental designations that could constrain where minerals supply activities (including extraction) could take place. These designations include: Special Protection Areas; Ramsar sites; Special Areas of Conservation; Area of Outstanding Natural Beauty; Green Belt; Sites of Special Scientific Interest; Marine Conservation Zones; National Nature

Reserves; Local Nature Reserves; and, Local Wildlife Sites. The extents of the environmental and landscape designations in Medway are provided in Figure 2.

**Figure 2: Environmental and Landscape Designations in Medway**



### Extraction of Minerals

- 2.3. Within Medway's geology there are a range of minerals that have the potential to be economically viable for extraction. These deposits include sand and gravel, chalk, London clay and brick clay<sup>4</sup>. Extraction for these minerals has predominantly taken place around the river edge and across the Hoo Peninsula, but there have only been limited operations in recent years for the extraction of London clay and sand and gravel.
- 2.4. The present total remaining permitted reserve of sand and gravel for extraction in Medway is 0.441Mt. This is derived from Kingsnorth Quarry to the south east of the village of Hoo St Werburgh operated by Tarmac, and a small reserve at Perry's Farm in Grain, operated by J Clubb Ltd. The locations of the two permitted quarries are shown in Figure 3.
- 2.5. Kingsnorth Quarry is now operated by Ingrebourne Valley Ltd and includes a ready-mix concrete plant on site. Extraction commenced in 2017 and cumulatively 200,000 tonnes per annum of material can be removed from the

<sup>4</sup> London clay and brick clay are not aggregate minerals. Chalk may have uses as an aggregate but is generally not extracted for this purpose.

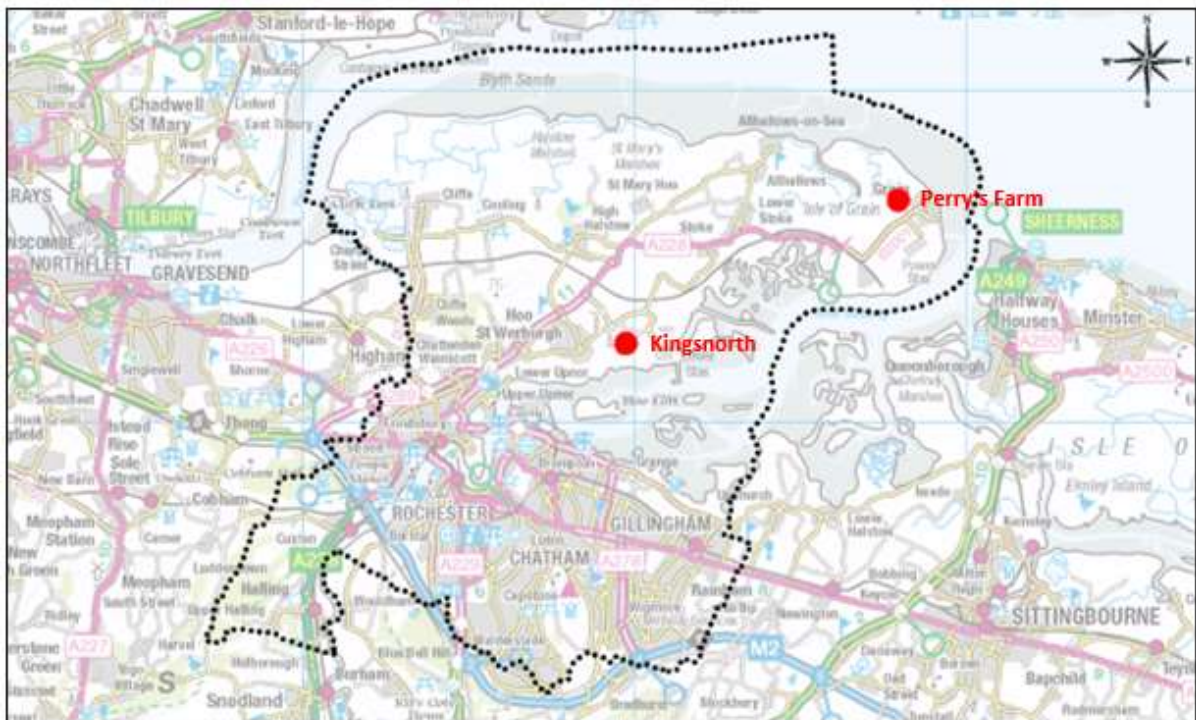


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site. It is currently the only operational quarry in Medway. The current permission for extraction at Kingsnorth Quarry expires on 1 May 2027.

- 2.6. In 2021, outline planning permission was granted at Perry's Farm for development associated with an interconnector to create a link between the UK and German electricity networks. Unless prior extraction takes place, this development will sterilise some, if not all the mineral reserve associated with the quarry permission at the inactive Perry's Farm site.
- 2.7. Research to support mineral planning work in Medway has provided an indication of the significant available resources in the area that could be exploited to help meet future demand. The emerging Local Plan seeks to safeguard the resource from sterilisation.

**Figure 3: Quarries in Medway**



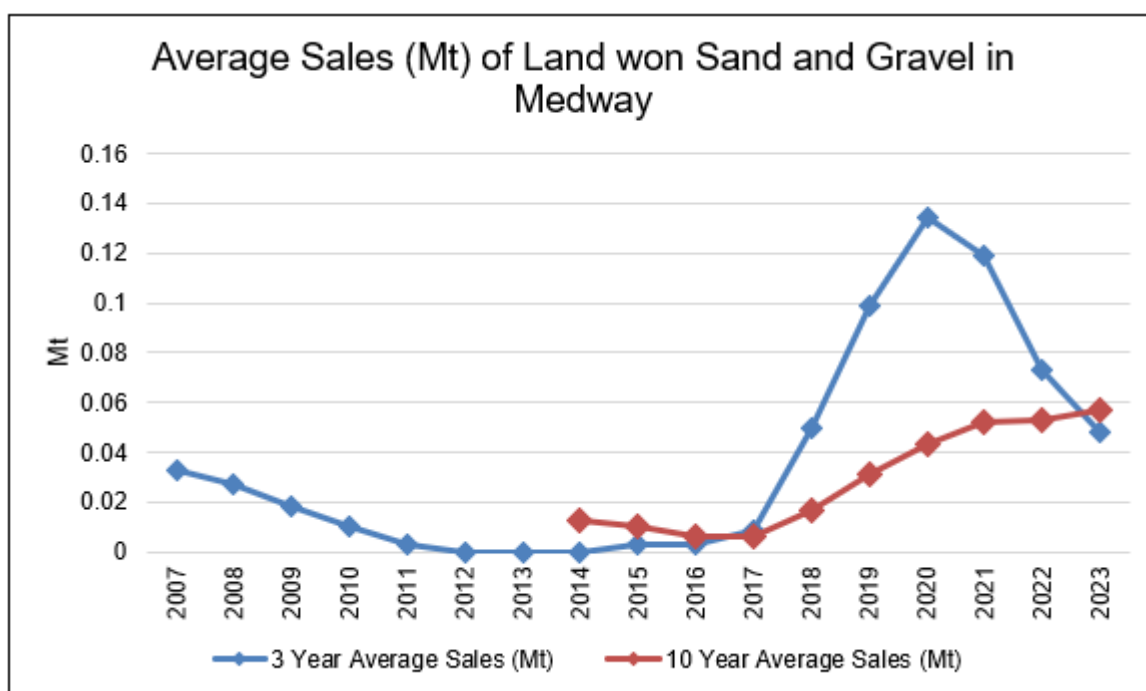
- 2.8. As noted above, due to the limited number of quarrying sites in Medway, it has not been possible to publish annual levels of sales of locally won sand and gravel. However, the council has been able to use data provided to the Aggregates Monitoring survey to produce a 3-year and 10-year average sales figure.
- 2.9. The current 10-year average sales for aggregates from quarries in Medway is 0.057 million tonnes per annum (Mtpa) and the 3-year average sales is 0.048Mtpa. The 3-year and 10-year average sales data for land-won aggregate since 2007 is presented in Table 1 and Figure 4.

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**Table 1: 3-year and 10-year average sales (Mt) for land-won aggregate in Medway**

Year	3-year average sales (Mt)	10-year average sales (Mt)
2007	0.033	n/a
2008	0.027	n/a
2009	0.018	n/a
2010	0.010	n/a
2011	0.003	n/a
2012	0	n/a
2013	0	n/a
2014	0	0.013
2015	0.003	0.010
2016	0.003	0.006
2017	0.009	0.006
2018	0.050	0.017
2019	0.1	0.031
2020	0.134	0.043
2021	0.119	0.052
2022	0.073	0.053
2023	0.048	0.057

**Figure 4: Average Sales (Mt) of Land won Sand and Gravel in Medway**



2.10. Table 1 and Figure 4 demonstrate how the 3-year average sales gradually decreased due to the decline in minerals extraction to 2014. More recent increases in the 3-year average sales to levels not seen for well over 10 years reflect the commencement of extraction at Kingsnorth Quarry in 2017. The last

three years decrease in the 3 year average reflects a slowdown in extraction from this site.

### Landbank

- 2.11. Medway is required to maintain a 7-year land bank for sand and gravel. Permitted reserves are estimated to be 0.441 Mt. The current landbank, calculated using the 3-year average sales, is now 9.25 years. The landbank has increased significantly since last year (5.1 years) due to a decrease in the 3 year sales average. Using the 10-year average sales the landbank increases to 7.7 years. As extraction activity only restarted in 2017, it is still considered appropriate to use the 3-year average sales to inform the Annual Provision Rate, as this better reflects the current supply and demand status of land-won aggregates in Medway.
- 2.12. Medway's geology means there are no soft sand or crushed rock resources and therefore, it is not possible to maintain separate landbanks for land-won crushed rock or soft sand.
- 2.13. Saved Policy CA6 in the Kent Minerals Local Plan Construction Aggregates (1993) identifies Areas of Search for the extraction of aggregate within which suitable sites for sharp sand and gravel extraction may be found. [The emerging Local Plan for Medway](#) is proposing several similar areas of search.

### 3. Aggregates

#### *Recycled and Secondary*

- 3.1. Materials defined as recycled or secondary aggregates are derived from demolition and construction waste, industrial by-products such as power station ash, colliery spoil, and blast furnace slag and slate. These materials can be used as substitutes for aggregates, such as in concrete production, or as fill.
- 3.2. The use of recycled and secondary aggregates is critical to the sustainable management of primary mineral resources. In line with government policy to secure the valuable finite resources of materials required for development, Medway Council promotes the use of such alternatives in place of primary aggregates.
- 3.3. In 2023, recycled aggregate was reported as being produced from three active sites in Medway. One of these is a new site that commenced operations in 2023. Sales from an established aggregates operator that reported sales of recycled aggregate from its site for the first time in 2022 did not report sales in 2023 and so it appears this may be a one off. A fourth facility, that was granted planning permission in 2018, is still yet to start operating.

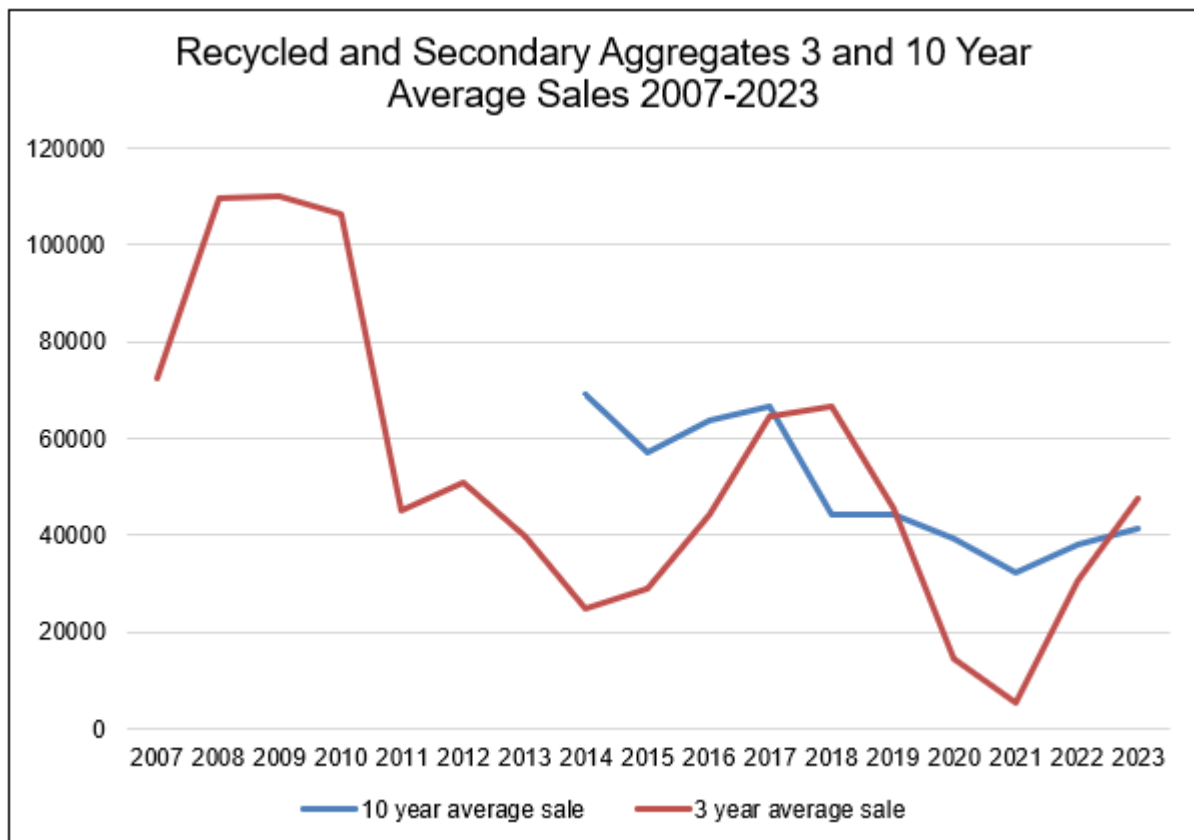
## Medway Local Aggregate Assessment 2023

- 3.4. Operators of waste management facilities with an Environmental Permit are required to make returns of waste inputs and outputs from their sites to the Environment Agency. For some sites, the waste reported includes Construction and Demolition waste that is processed on site to produce recycled aggregate. The Environment Agency Waste Data Interrogator (WDI) is a database that reports all the waste returns and so can also be used to estimate the production of recycled aggregate. The WDI that includes 2023 data was published in September 2024 and was used to estimate sales in 2023. Use of the WDI to estimate production of recycled aggregates is consistent with guidance updated by the National Waste Technical Advisory Board Chairs and Aggregate Working Party Chairs Aggregate Working Parties in January 2024.
- 3.5. A Waste Needs Assessment prepared in 2020 to support the emerging Medway Local Plan suggests that the permitted capacity for recycled aggregates production in Medway is around 135,000tpa. Recent data indicates that the capacity of sites active in 2023 is around 75,000tpa with the site yet to start operations having capacity of 75,000tpa. Total permitted capacity has therefore been taken as 150,000tpa.
- 3.6. In 2023, the 3-year and 10 year average sales increased. Sales for 2022 were found to have been underestimated and so have been revised for this LAA. Table 2 provides the average sales since 2007 and this is presented as a line chart in Figure 5.

**Table 2: Sales (Mt) of recycled and secondary aggregate in Medway**

<b>Year</b>	<b>3-year average sales (Mt)</b>	<b>10-year average sales (Mt)</b>
<b>2007</b>	0.073	n/a
<b>2008</b>	0.110	n/a
<b>2009</b>	0.110	n/a
<b>2010</b>	0.106	n/a
<b>2011</b>	0.045	n/a
<b>2012</b>	0.051	n/a
<b>2013</b>	0.040	n/a
<b>2014</b>	0.025	0.069
<b>2015</b>	0.029	0.057
<b>2016</b>	0.044	0.064
<b>2017</b>	0.065	0.067
<b>2018</b>	0.067	0.044
<b>2019</b>	0.046	0.044
<b>2020</b>	0.015	0.040
<b>2021</b>	0.006	0.032
<b>2022</b>	0.031	0.038
<b>2023</b>	0.047	0.042

Figure 5: Average Sales (t) of Recycled and Secondary Aggregate in Medway



- 3.7. In addition to the above sales, significant amounts of recycled aggregate may arise from the operation of mobile plant, such as crushers and screeners, during demolition and construction activity within Medway.
- 3.8. The emerging Local Plan includes policies which allow new sites to be developed which involve the production of recycled aggregate and also safeguards existing ones.
- 3.9. Coal-derived fly ash is a secondary aggregate that can be used in various applications including those related to the construction of housing and infrastructure. A change to the National Planning Policy Framework in July 2021 recognised Coal-derived fly ash in single use deposits as a mineral resource of local and national importance. Approximately 1.4 million cubic metres of Coal-derived fly ash is present in a deposit at the disused Kingsnorth Power Station. From the mid 1990's, this material was sold as a secondary aggregate for use in breeze block manufacture and other construction products, though this practice ceased in 2014 soon after the closure of the power station in 2012. The UK Quality Ash Association has recognised the deposit at the disused Kingsnorth Power Station as a potential future source of secondary aggregate<sup>5</sup>. While there are no plans to recover/use this material at present this may change in future.

<sup>5</sup> [http://www.ukqaa.org.uk/wp-content/uploads/UKQAA\\_SECONDARY\\_MATERIAL.pdf](http://www.ukqaa.org.uk/wp-content/uploads/UKQAA_SECONDARY_MATERIAL.pdf)



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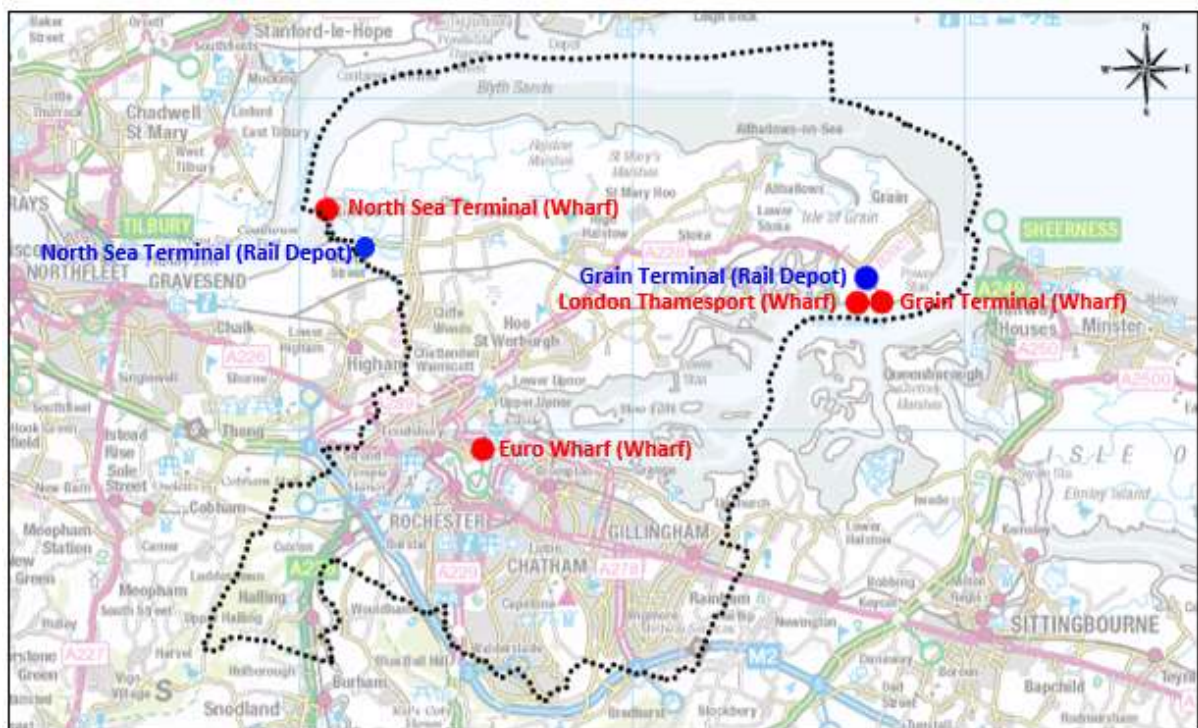
### Wharves and Rail Depots

4.1. Medway makes a critical contribution to the South East's infrastructure for the importation of aggregates, particularly marine dredged sand and gravel. The scale of the importation makes Medway's wharves of regional and national significance. There are four wharves currently in operation:

- Grain Terminal, Isle of Grain (wharf and rail depot): operated by Aggregate Industries.
- North Sea Terminal, Cliffe, Rochester (wharf and rail depot): operated by Brett Aggregates.
- Euro Wharf, Frindsbury, Rochester: operated by Heidelberg Materials UK.
- London Thamesport, Isle of Grain: operated by Medway Aggregates.

The location of the wharves and rail depots in Medway is provided in Figure 6.

**Figure 6: Wharves and Rail depots in Medway**

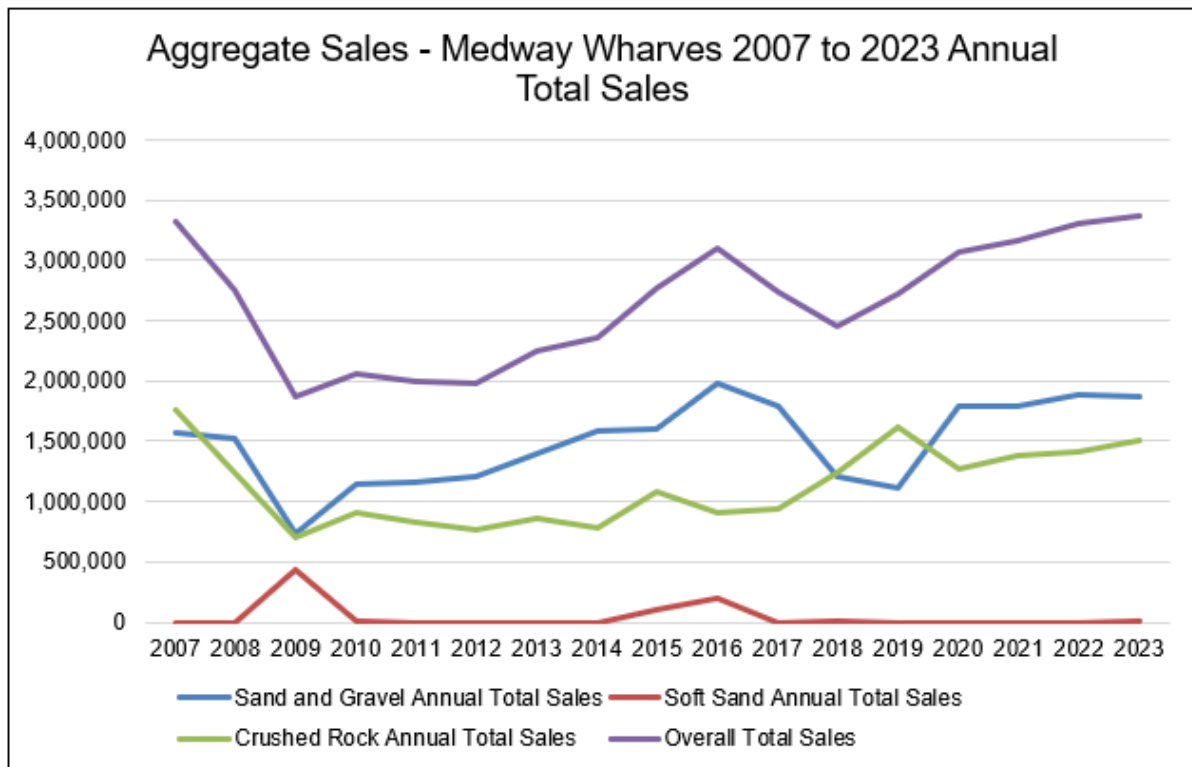


4.2. Collectively, these six facilities make a significant contribution to the importation of minerals into London and the south east.

4.3. Medway's wharves are amongst the largest in Kent and Medway and have the greatest capacity (approximately 4.3 million tpa). The wharves are operating within their capacity levels and so offer the ability to increase production in response to market demand. Figure 7 shows sales at wharves since 2007.

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Figure 7: Sales (t) of Aggregates through Wharves in Medway



4.4. The total sales of aggregates from wharves in 2023 was 3.377Mt which was a slight increase on 2022 and exceeded the level of sales achieved in any one of the last fifteen years. This was due to a slight increase in sales of crushed rock in 2023.

### Marine-won Sand and Gravel

4.5. The table below provides an indication of the role wharves in Medway play in the importation of marine won aggregate to wharves in the south east.

Table 3: Marine won aggregates sales and landings: 2022 (thousand tonnes)

Source: South East England Aggregates Working Party Annual Report 2022

Mineral planning authorities <sup>6</sup>	Sales 2022	Sales 10-year average	Sales 3-year average	Landings <sup>7</sup> 2022	Landings 10-year average	Landings 3-year average
Medway and Kent	3,799	3,277	3,489	3,660	3,300	3,301
East and West Sussex	1,613	1,588	1,641	1,511	1,299	1,384
Hampshire and Isle of Wight	907	1,592	1,849	1,203	1,425	1,298

<sup>6</sup> MPAs grouped to maintain confidentiality of an individual company's data.

<sup>7</sup> Landings data published by Crown Estate

## Medway Local Aggregate Assessment 2023

<b>South East England</b>	6,319	6,457	6,979	6,373	4,374	5,983
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- 4.6. Medway receives sand and gravel from several dredging regions; those located in British waters have their minerals rights owned by the Crown Estate. The region most proximate to wharves in Medway is the Thames region. In 2024 the Crown Estate reported<sup>8</sup> that, at the end of 2023, the Thames dredging region had around 22 years of permitted aggregate production capacity.
- 4.7. The sale of marine-won sand and gravel in Medway is presented in Table 4 and Figure 8. In 2023, the level of sales was recorded at 1.867Mt<sup>9</sup> which represents a marginal decrease on the previous year but remains above both the 3-year and 10-year average sales. The sales level achieved was the third highest recorded in the last 17 years.

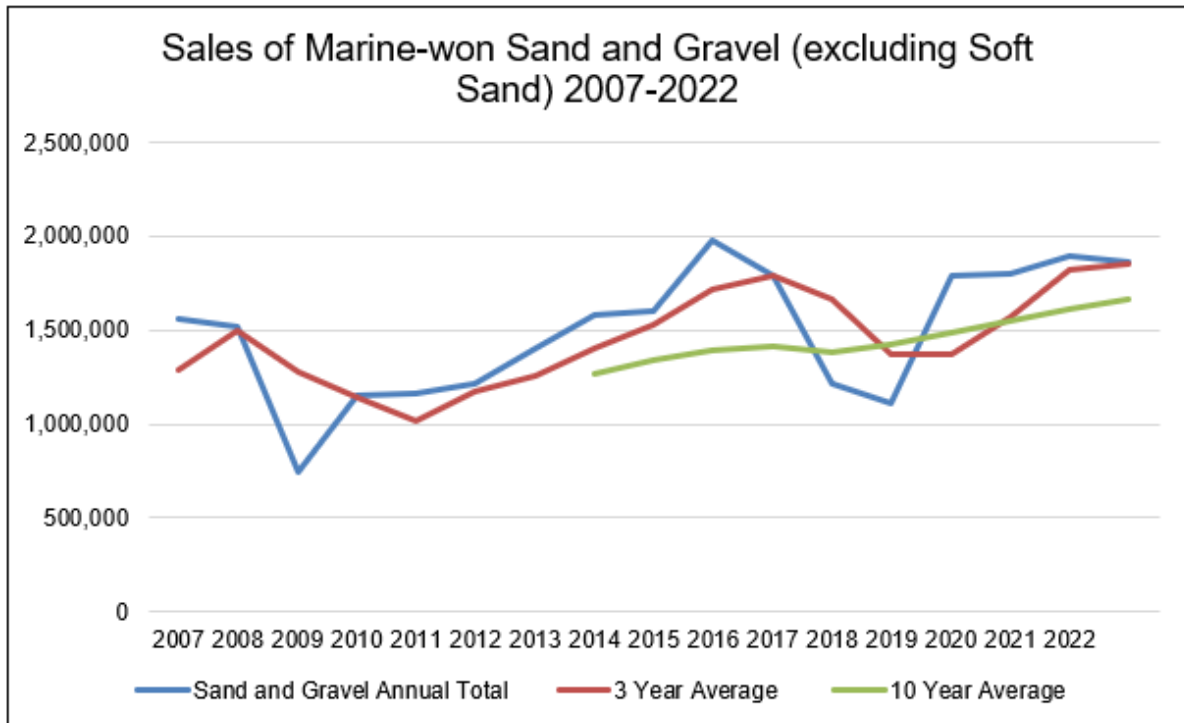
**Table 4: Sales (Mt) of Marine-won Sand and Gravel at Wharves in Medway**

<b>Year</b>	<b>Annual sales (Mt)</b>	<b>3-year average sales (Mt)</b>	<b>10-year average sales (Mt)</b>
<b>2007</b>	1.565	1.286	n/a
<b>2008</b>	1.518	1.502	n/a
<b>2009</b>	0.740	1.274	n/a
<b>2010</b>	1.152	1.231	n/a
<b>2011</b>	1.167	1.020	n/a
<b>2012</b>	1.215	1.178	n/a
<b>2013</b>	1.400	1.261	n/a
<b>2014</b>	1.586	1.400	1.264
<b>2015</b>	1.597	1.527	1.336
<b>2016</b>	1.978	1.720	1.392
<b>2017</b>	1.794	1.790	1.415
<b>2018</b>	1.213	1.662	1.384
<b>2019</b>	1.115	1.374	1.422
<b>2020</b>	1.786	1.372	1.485
<b>2021</b>	1.797	1.567	1.548
<b>2022</b>	1.893	1.826	1.616
<b>2023</b>	1.867	1.853	1.663

<sup>8</sup> [Marine Aggregates Summary of Statistics 2023, Crown Estate, 2024](#)

<sup>9</sup> Crown Estate data for landings of marine won aggregate indicates that 1,812,553 tonnes was landed in 2023. N.B. landings and sales are not the same.

**Figure 8: Sales (Mt) of Marine-won Sand and Gravel (ex-soft sand) through Wharves in Medway**



4.8. The 2019 national Aggregate Minerals Survey<sup>10</sup> states that in 2019, of all the marine won sand and gravel landed at wharves in South East, 23% was landed at wharves in Medway. Of the sand and gravel landed in Medway, 32% was utilised in Kent and Medway, 10% in the South East and 14% elsewhere (44% was not allocated a destination). Data from the 2023 national Aggregate Minerals Survey will be used to update the position in next year's LAA.

### Marine-won Soft Sand

4.9. It is likely that the demand for soft sand in the South East will increasingly need to be met by imports into the area and from marine won sources due to its scarcity and moreover by constraints upon its extraction. To help provide a detailed analysis of soft sand supply in the region, sales figures of marine-won soft sand are separated out from those of marine-won sand and gravel.

4.10. Sales of marine-won soft sand from wharves in Medway since 2007 is shown in Figure 7. Minimal soft sand sales were reported in 2023. Figure 7 shows that such sales have been sporadic and are at a relatively low level which may indicate that material is imported for a particular project or use where it is considered suitable to use marine-won soft sand in place of land-won material.

<sup>10</sup> <https://www.gov.uk/government/publications/aggregate-minerals-survey-for-england-and-wales-2019>

## Medway Local Aggregate Assessment 2023

Further discussions with aggregates operators may provide insight into its use and the fluctuating nature of the sales data.

### Crushed Rock

- 4.11. Medway does not have any natural hard rock resources and therefore relies on imports of crushed rock such as limestone and granite to meet demand for this type of aggregate. Other areas similarly rely on imports and Medway's wharves and rail depots help facilitate supply to them.
- 4.12. Crushed rock arrives in Medway mainly through the wharves. In the past imports of limestone from Torr Works Quarry in Somerset were received at the rail depot at Grain to support infrastructure projects around Medway. Granite arrives at the wharves from Scotland (Glensanda Quarry) and Norway. Crushed rock is distributed to other areas beyond Medway, including London, by road and rail.
- 4.13. Due to commercial confidentiality, sales of imports from the rail depots cannot be broken down other than by a 3-year sales average. As records of sales began in 2014 it is possible, for the first time, to report a 10-year average sales value (8,725 tonnes). To avoid double counting of the supply of aggregates from Medway, the reported sales from rail depots relate solely to aggregate that has been imported by rail and not that which is exported from Medway as the sales have already been reported as landings at Grain and the North Sea terminal at Cliffe.
- 4.14. Sales data for crushed rock through wharves and the rail depot are presented in Table 5 and Figure 9. In 2023, sales of crushed rock through Medway's wharves were reported as 1.508 Mt; an increase on the sales recorded in 2022 and continuing the increasing trend. The 2023 sales are greater than the average 3-year sales and the 10-year average sales.

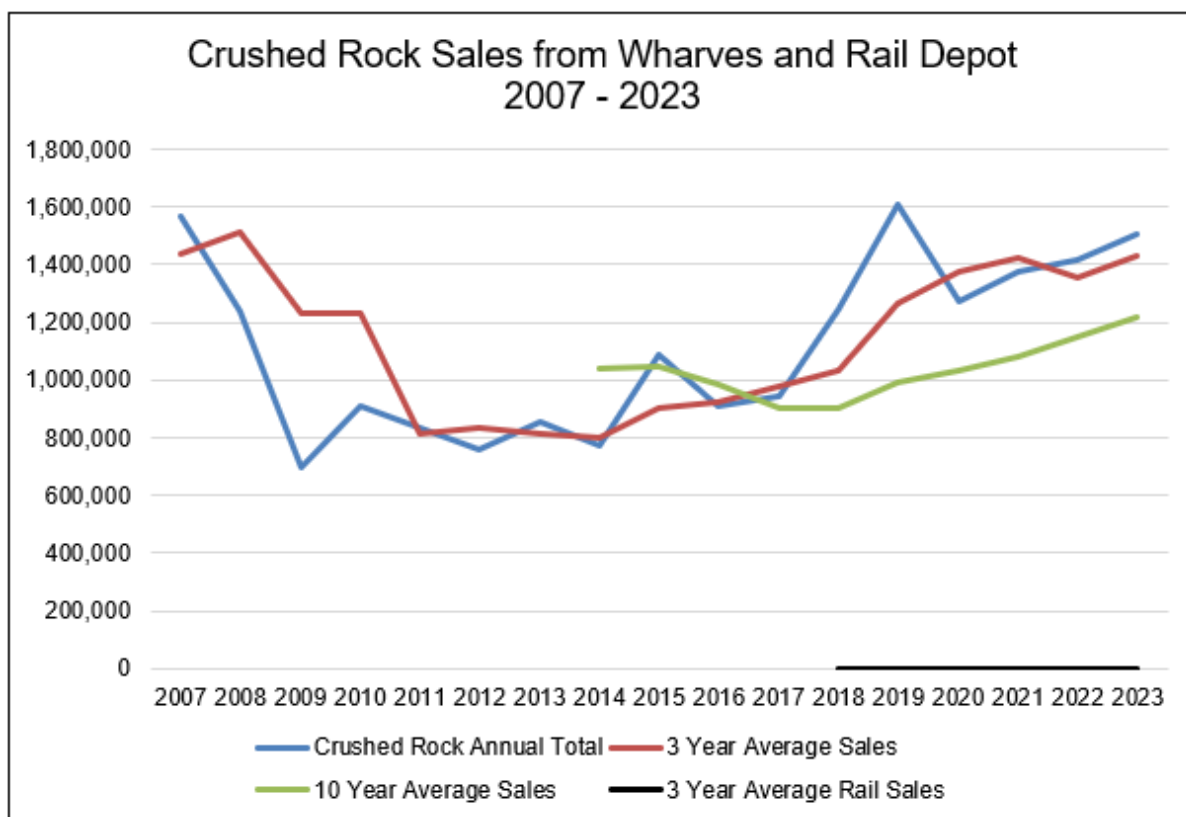
**Table 5: Sales (Mt) of crushed rock through wharves and rail depot in Medway**

Year	3-year average sales (Mt): Rail depot	10-year average sales (Mt): Rail Depot	Annual sales (Mt): Wharves	3-year average sales (Mt): Wharves	10-year average sales (Mt): Wharves
2007	n/a	n/a	1.756	1.437	n/a
2008	n/a	n/a	1.240	1.511	n/a
2009	n/a	n/a	0.696	1.231	n/a
2010	n/a	n/a	0.909	0.948	n/a
2011	n/a	n/a	0.833	0.813	n/a
2012	n/a	n/a	0.761	0.834	n/a
2013	n/a	n/a	0.856	0.817	n/a

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<b>2014</b>	n/a	n/a	0.775	0.797	1.038
<b>2015</b>	0.056	n/a	1.086	0.906	1.045
<b>2016</b>	0.025	n/a	0.912	0.924	0.982
<b>2017</b>	0.005	n/a	0.945	0.981	0.901
<b>2018</b>	0.004	n/a	1.247	1.035	0.902
<b>2019</b>	0.003	n/a	1.611 <sup>11</sup>	1.268	0.994
<b>2020</b>	0.002	n/a	1.277	1.379	1.030
<b>2021</b>	0.000	n/a	1.374	1.421	1.085
<b>2022</b>	0.000	0.018	1,414	1.355	1.150
<b>2023</b>	0.000	0.008	1.508	1.432	1.215

**Figure 9: Sales (Mt) of crushed rock through wharves and the rail depot in Medway**



### 5. Sales

#### Overview of Aggregate

- 5.1. In order to provide an overview of aggregate sales in Medway, average 3-year sales of aggregates from all sources are presented in Figure 10 below.
- 5.2. Relatively low levels of sales of land-won sand and gravel decreased further past 2011 until 2015 when sales restarted; this upward trend continued with extraction at Kingsnorth Quarry, however this is only temporary as the limited remaining reserves become exhausted, indeed a decline in the 3 year sales average has recently been observed.

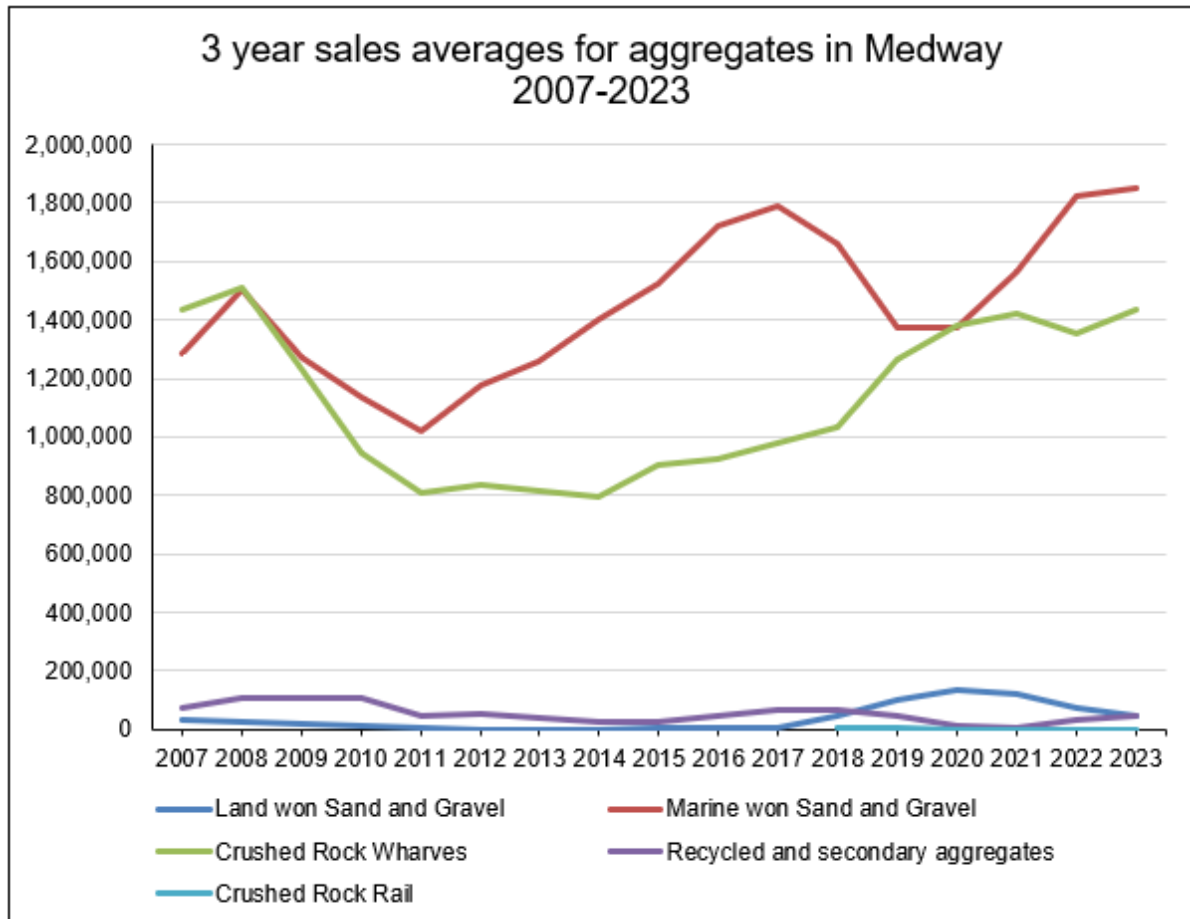
<sup>11</sup> Value taken from BGS AMS 2019



## Medway Local Aggregate Assessment 2023

- 5.3. While sales of marine won sand and gravel declined in 2018 and 2019, data for 2023 shows that rebound in sales has been maintained. Imports of crushed rock via wharves had increased steadily and now appear to be plateauing.
- 5.4. Recycled and secondary aggregate sales have made a steady but minor contribution to overall sales.

**Figure 10: Amalgamated average 3-year sales (Mt) for aggregates in Medway**



6.

Future Aggregate Supply

**Future Housing and Development**

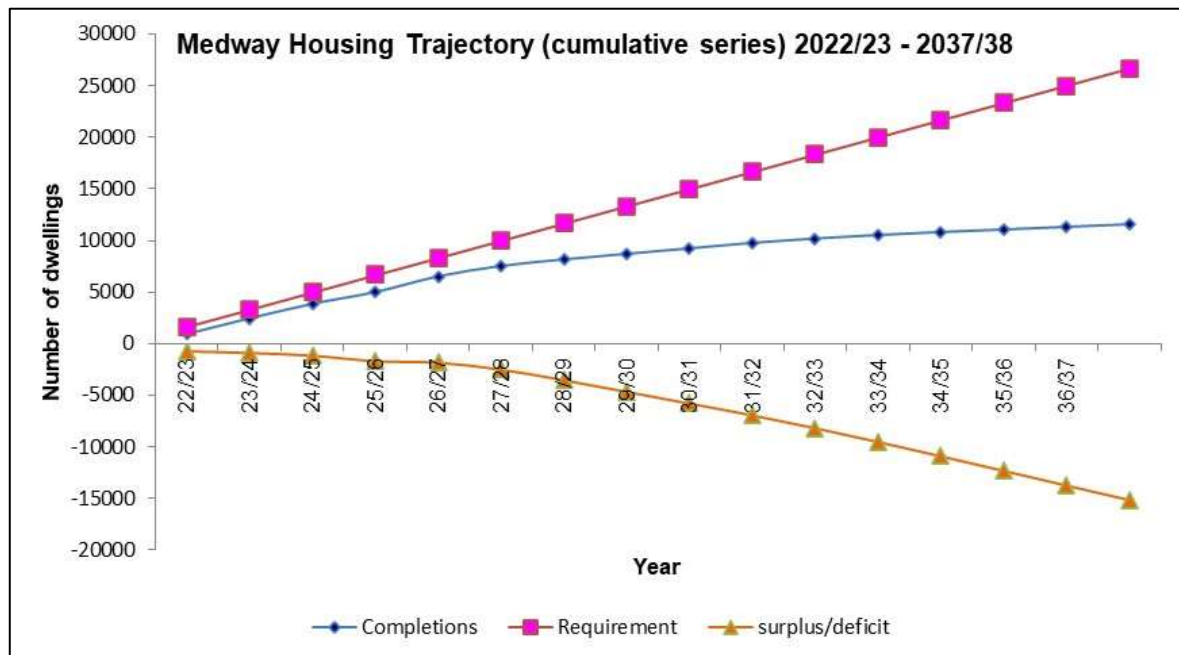
6.1. At March 2024, the government's assessment of Local Housing Need for Medway was 1,658 homes per year (based on the latest affordability ratio).

6.2. Although rates of housebuilding are currently below the level of identified housing need, there was a dramatic increase in 2019/20 when the net number of homes delivered increased from 647 in 2018/19 to 1,130, since then this increase has been sustained with 1,130 delivered in 2019/20, 1,082 in 2020/21, 1,102 in 2021/22 and 958 in 2022/23. The latest Medway Housing Delivery Test Action Plan (June 2024) notes that the highest rates of housing delivery in Medway's history was experienced during these four years.

6.3. The Action Plan reports that various issues such as supply chain issues, skilled worker shortages and increased costs have dampened the housing market. This follows a period of significant price increases. There was a decrease in the net number of new dwellings in 2022/23 but not to lower levels seen before 2020. However, there are significant sites being developed in Medway and the market is perceived to be strong, and Medway seen as a highly desirable place to develop housing.

6.4. Figure 11 shows projected housing completions of new homes in Medway to 2037/38.

**Figure 11: Medway Housing Trajectory 2022/23 to 2037/38<sup>12</sup>**



<sup>12</sup> Source: Medway Annual Monitoring Report 2023



- 6.5. The Regulation 18 consultation document (published in July 2024) noted that there are huge pressures on housing in Medway and the supply of new housing is central to the new Local Plan. The population trend identified in the Regulation 18 consultation document is set out in the table below.

**Table 5b: Population Trend 2024 to 2041**

2024	2041	Change	% Change
282,049	291,445	+ 9,396	+ 3.3

*Source: Office for National Statistics (2020). Subnational population projections: 2018-based.*

- 6.6. More broadly the new Labour Government has made an objective to increase housebuilding (specifically to 300,000 homes per year) one of its key aims and is proposing updates to the National Planning Policy Framework and legislation to help achieve this. Consultation on a revised National Planning Policy Framework in July indicated that the target for housing in Medway could decrease slightly to 1,644 based on a new proposed method of calculating need.
- 6.7. In addition to housing, the latest employment land needs assessment indicated a need for around 320,000 sqm of office / industrial and warehousing floorspace up to 2040. This equated to approximately 69ha of employment land. The Council is in the process of preparing an update to its employment land needs assessment to inform the new Plan.
- 6.8. The Council is collating evidence as part of the preparation of the Local Plan, which includes identifying the infrastructure and services needs linked to growth. Regionally, a number of planned infrastructure projects are likely to put increased pressure on the supply of aggregates through Medway, including:
- **Lower Thames Crossing:** A 13-mile new road and bored tunnel crossing under the River Thames between the east of Gravesend and Tilbury. The Government decision on granting consent for the Lower Thames Crossing has been delayed until May 2025.
  - **Crossrail 2:** A proposed major new rail route through London between Surrey and Hertfordshire.
  - **Thames Tideway Tunnel:** A 16-mile drainage and sewerage tunnel currently in construction under much of the tidal section of the River Thames through central London.
  - **Silvertown Tunnel:** A new road tunnel beneath the River Thames between the Greenwich Peninsula and west Silvertown.
  - **High Speed Rail 2:** A high-speed rail link being constructed between London and Birmingham (Phase 1) although the Phase 2 line to Manchester has been shelved.
  - **Housing and infrastructure delivery across Kent:** Includes in the region of 178,600 additional homes (2011-31) and the provision of 163 extra form entries for schools (2017-23). This includes development associated with Ebbsfleet Garden City.

6.9. In order to deliver the projects noted above, Medway will endeavour to maintain a landbank and ensure that infrastructure, essential for the import and distribution of aggregate, is safeguarded through the application of appropriate planning policy.

## Economy

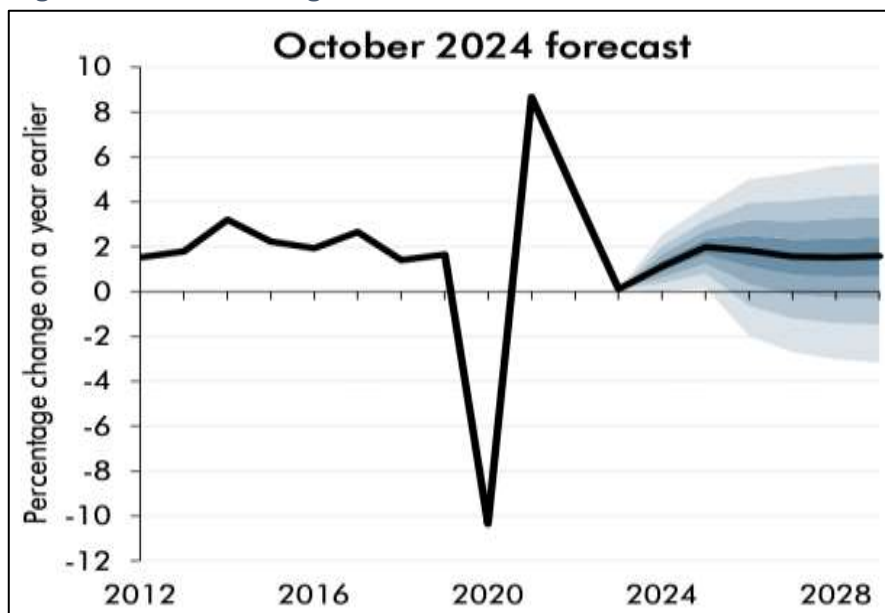
6.10. Economic forecasts are considered useful for providing an overall contextual picture and an indication of potential aggregate demand. This is because a growing economy is more likely to require greater supplies of aggregate (and vice versa).

6.11. The Office for Budgetary Responsibility (OBR) October 2024 forecasts for UK GDP until 2028<sup>13</sup> are included in Table 5a and illustrated in Figure 11a below.

**Table 5a OBR forecasts for GDP 2024-2028**

	2024	2025	2026	2027	2028	2029
<b>GDP % growth forecast</b>	1.1	2.0	1.8	1.5	c.5	1.6
<i>GDP % growth forecast (March 2023)</i>	1.8	2.5	2.1	1.9	n/a	n/a

**Figure 11a Real GDP growth forecast<sup>14</sup>**



6.12. These forecasts were published in October 2024 and take account of the new Labour government's spending plans as set out in its October budget.

<sup>13</sup> Economic and fiscal outlook – October 2024 (OBR) <https://obr.uk/economic-and-fiscal-outlooks/>

<sup>14</sup> Economic and fiscal outlook – October 2024 (OBR) <https://obr.uk/economic-and-fiscal-outlooks/>

- 6.13. The Mineral Products association published its latest '[Regional overview of construction and mineral products markets in Great Britain](#)' in October 2024 which considers the state of the aggregates market and considers potential future growth. It includes the following summary:

*'The expected recovery in construction activity will give a boost to demand for construction materials such as aggregates, ready-mixed concrete, asphalt and mortar. The MPA forecast indicates a gradual recovery in mineral product sales from 2025, assuming housing bounces back and other construction sectors pick up. The upturn will be from a low base, following three years of decline'.*

- 6.14. The above information about the need for housing, infrastructure and the current and future performance of the economy suggests that demand for aggregate is likely to be maintained and may well increase in the short to medium term.

### **Landbank**

- 6.15. As reported in Section 2, the current landbank for land-won sand and gravel is 9.25 years, based on the 3-year sales average; this decreases to 7.7 years when applying the 10-year sales average. The landbank shows an increase on 2022 but this is due to a decrease in the 3 year sales average (used as the 'Aggregate Provision Rate' (APR)) reflecting lower rates of extraction observed at Kingsnorth Quarry in recent years as well as a reassessment of reserves.
- 6.16. Significant deposits of sand and gravel exist across the Hoo Peninsula; the council will actively plan to safeguard these areas through the emerging Local Plan in order to help ensure that a steady and adequate supply of aggregates is maintained. The emerging Local Plan also seeks to identify specific Areas of Search within which it may be possible to identify suitable sites for the working of sharp sand and gravel.

### **Capacity**

- 6.17. The Aggregate Monitoring Survey includes a survey of site capacity to assist planning for future demand. Details of capacity against the recorded 3-year average sales are detailed in Table 6.
- 6.18. Sales against capacity data indicate sufficient headroom to accommodate a significant level of demand, with a capacity gap at the wharves of 34%. There is potential for capacity to be substantially increased with space available for additional wharf facilities at London Thamesport. A new wharf came into operation in 2017 which increased capacity by 150,000 tonnes per annum.

## Medway Local Aggregate Assessment 2023

**Table 6: Sales of aggregates (Mt) against capacity (Mt)**

		2019	2020	2021	2022	2023
Land-won sand and gravel	Average 3-year sales of land-won sand and gravel (Mt)	0.1	0.134	0.119	0.072	0.048
Land-won sand and gravel	Total annual capacity (Mt)	>0.200	>0.200	>0.200	>0.200	>0.200
Land-won sand and gravel	Percentage of sales against capacity (%)	<50	<67	<60	<36	<24
Recycled and secondary aggregates	Average 3-year sales of recycled and secondary aggregate (Mt)	0.046	0.017	0.01	0.03	0.05
Recycled and secondary aggregates	Total annual capacity (Mt)	>0.135	>0.135	>0.135	>0.135	>0.150
Recycled and secondary aggregates	Percentage of sales against capacity (%)	<35	<12	<8	<22	<34
Wharves	Sales through wharves (Mt)	2.727	3.062	3.172	3.308	3.377
Wharves	Total annual capacity (Mt)	4.3	4.3	4.3	4.3	4.3
Wharves	Percentage of sales against capacity (%)	66	74	74	77	78
Rail Depot	Average 3-year sales through rail depot (Mt)	0.003	0.002	0.001	0	0
Rail Depot	Total annual capacity (Mt)	n/k	n/k	n/k	n/k	n/k
Rail Depot	Percentage of sales against capacity (%)	n/k	n/k	n/k	n/k	n/k

6.19. With regard to recycled and secondary aggregate, it is estimated that current permitted capacity for recycled aggregates production in Medway is around 150,000tpa. Active operational capacity is anticipated to increase in the near future when a plant for producing 'Hydraulically Bound Material'<sup>15</sup> (HBM) from

<sup>15</sup> 'Hydraulically Bound Material' is a generic term referring to soil or aggregates that have been bound together with additives such as cement, lime-based binders, gypsum or fly ash, then hardened by a hydraulic reaction with water. HBM is used in several construction applications including pavement sub-bases.

recycled aggregates begins production at Malmaynes Hall Farm, Stoke. The plant is expected to have an operational capacity of 0.075 Mtpa.

- 6.20. Exports of aggregate from the rail depot at the North Sea Terminal site at Cliffe suggest that the depot has capacity of at least 550,000tpa. However, this depot is used exclusively for the export of aggregate landed at the associated wharf.

### 7.

#### Conclusion

- 7.1. This LAA indicates that Medway continues to play an important strategic role in regional aggregates supply through the wharves located on the Medway and Thames. The ability to handle large vessels and their proximity to markets in the wider South East and London elevates the wharves' importance to a regional level. The importance of the wharves is exemplified by the fact that crushed rock imported from Scotland to the Grain terminal wharf is being used in the construction of HS2. The current surplus handling capacity allows for flexibility and provides assurance in there is headroom allowing for a response to increased market demand.
- 7.2. A new 'Medway Local Plan 2041' is currently being prepared and is scheduled to be adopted in Autumn 2026<sup>16</sup>. A draft ('Regulation 18') Local Plan was consulted on during 2024. This, and previous LAAs are being used to inform the approach taken to the provision of aggregates in the Local Plan.
- 7.3. Although land won reserves of sand and gravel continue to deplete, it is considered that Medway is making sufficient provision to ensure a steady supply of aggregates. The Council will rigorously apply its mineral safeguarding policies to ensure that it can continue to make an effective contribution to meeting local and wider needs. The council will continue to actively participate in the work of SEEAWP and maintain cooperative working with neighbouring MPAs and industry operators.

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<sup>16</sup> [Medway Local Development Scheme 2024 to 2026](#)