South East England Aggregates Working Party (SEEAWP)

Annual Report 2021

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Acronyms – also see Glossary

AR	Annual Report
APR	Aggregates Provision Rate
AWP	Aggregate Working Party
BAA	British Aggregates Association
BGS	British Geological Survey
BMAPA	British Marine Aggregate Producers Association
CDEW	Construction, Demolition and Excavation Waste
CE	Crown Estate
DPD	Development Plan Document
DLUHC	Department for Levelling Up, Housing and Communities
EA	Environment Agency
LAA	Local Aggregates Assessment
MDA	Marine Dredged Aggregate
MMO	Marine Management Organisation
MP	Minerals Plan
MHCLG	Ministry of Housing, Communities and Local Government
MPA	Mineral Products Association
MPAs	Mineral planning authorities (in plural to distinguish from the MPA)
NPPF	National Planning Policy Framework
PPG	Planning Practice Guidance
SE or SEE	South East or South East England region
SEEAWP	South East England Aggregates Working Party
SoCG	Statement of Common Ground
SS	Soft sand (also known as building sand)
SSG	Sharp sand and gravel
WDI	Waste Data Interrogator
UDP	Unitary Development Plan

Glossary

Aggregates Guidelines (the Guidelines)	'The national and regional guidelines for aggregates provision in England and Wales 2005 to 2020' provide an indication of the total amount of aggregate provision that the mineral planning authorities, collectively within each Aggregate Working Party, should aim to provide. The guidelines are no longer current and revised guidelines are due.
Aggregates Landbank	'…. the sum in tonnes of all permitted reserves for which valid planning permissions are extant, divided by the annual rate of future demand based'
Aggregates Provision Rate (APR)	An indicator or proxy for aggregates demand - see LAA below – expressed in thousand tonnes per annum.
Aggregate Resources	Minerals that may be available for use as an aggregate, including resources that may not be practicable to extract
Construction Demolition and Excavation (CDE) Wastes	Wastes arising from construction activity, comprising soils, substrate material, concrete, bricks, rubble, timber, glass etc. Only some of this waste stream is suitable for recycling as an aggregate.
Development Plan Document (DPD)	Development Plan Documents are planning policy documents which make up the statutory development plan. Core strategies and site-specific allocations are DPDs.
Duty to Cooperate (DtC)	Strategic policy-making authorities are required to cooperate with each other, and other bodies, when preparing, or supporting the preparation of policies which address strategic matters. This includes those policies contained in local plans (including minerals and waste plans), spatial development strategies, and marine plans. (NPPF – para. 24)
Landbank	The tonnage of all permitted reserves for which valid planning permissions are extant, divided by the annual rate of future demand or APR found in the latest annual Local Aggregate Assessment. (ref. PPG – Minerals para. 83) The landbank is usually expressed as years of life and SEEAWP's practice is to round the calculation to a whole year.
Local Aggregates Assessment (LAA)	An annual assessment of the demand for and supply of aggregates in a mineral planning authority's area. The LAA should '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) (NPPF 213a).

Managed Aggregate Supply System (MASS)	MASS seeks to ensure a steady and adequate supply of aggregate mineral, to handle the significant geographical imbalances in the occurrence of suitable natural aggregate resources, and the areas where they are most needed. It requires mineral planning authorities to make an appropriate contribution to national as well as local supply. It also ensures that areas with smaller amounts of aggregate make some contribution towards meeting local and national need, where that can be done sustainably.
Marine dredged aggregates (MDA)	Off shore sand and gravel dredged and landed at a wharf for use as an aggregate (excludes dredged material used for beach replenishment)
Mineral Consultation Area (MCA)	An area that includes part or all of an MSA that has been notified to a local planning authority by MPAs for consultation on specified non-mineral development proposals. (NPPF-210c)
Mineral Safeguarding Area (MSA)	An area of known 'of specific minerals resources of local and national importance' that should not be sterilised by non-mineral development where this should be avoided'. (NPPF-210c)
Primary aggregate	Aggregate produced from naturally occurring mineral deposits, extracted specifically for use as aggregate and used for the first time. Often produced from hard rock formations or from naturally occurring particulate deposits such as sand and gravel.
Recycled aggregate	Aggregate derived from processing e.g. sorting, screening, crushing, washing inorganic material used in construction e.g. construction and demolition waste. Excavation waste at construction sites after screening/washing out organic material e.g. soil is suitable as a recycled aggregate. Likewise spent railway ballast is included.
Secondary aggregate	Aggregate obtained as a by-product of other mineral operations, such as china clay waste, or as a by-product of other industrial processes, such as incinerator ash, spent railway ballast.
Statement of Common Ground (SoCG)	A statement of common ground is a written record of the progress made by strategic policy-making authorities during the process of planning for strategic cross-boundary matters. For minerals plans, aggregate working parties are also expected to be treated as additional signatories in statements of common ground.

Waste Data Interrogator (WDI)	A public Environment Agency data base comprising details on waste handled at sites licensed with an Environment Permit. Recycling plant on temporary construction and demolition is licensed by local authorities and are not included in the WDI.

Executive Summary

- The 2021 South East England sales of primary aggregate (excluding sales of imported aggregate) were 15.3 Mt. Over the 10-year period 2012-2021 sales display an increasing trend. Land won sales of sand and gravel (6.6 Mt) and crushed rock (2.1 Mt) displayed a modest upward trend. Similarly, marine dredged aggregate sales (6.6 Mt) show a slight increasing trend. Marine dredged aggregates are one of the critical components of MASS for the South East.

- Virtually all MPAs had sand and gravel sales during 2021. The MPAs with the largest sales were Oxfordshire (1.4 Mt), Buckinghamshire (1.3Mt), Kent (0.9 Mt), Surrey and Hampshire (0.8 Mt each). However, the soft sand element of sand and gravel sales were particularly important for Kent (0.6 Mt) and Surrey (0.5 Mt). Crushed rock sales were concentrated in Oxfordshire (1.2 Mt) and Kent (0.8 Mt). Almost half the marine dredged aggregate sales were from Kent and Medway wharves. Evidence from past AM surveys suggest a significant proportion of these sales are exported to London.

- The AM 2021 survey provides information on sales of imported aggregate and the dominant aggregate is crushed rock sales at wharves (3.4 Mt) and rail depots (3.8 Mt). Together these sales were more than marine dredged aggregate sales. However, the imported crushed rock sales trends at wharves and rail depots were dissimilar. Wharf sales display a significant upward trend, doubling over the previous 10-year period. In contrast, rail depot sales are on a virtually level trend with a declining 3-year trend (2019-2021). Although imports delivered by road are not covered by AM 2021 the nationally collated AM 2019 survey indicate 69% of imported crushed rock sales are via rail or water (sea). As with marine dredged aggregates, imported crushed rock sales are a vital component of MASS for the South East

- The MPAs with the largest crushed rock wharf sales, by a very significant margin, are Kent and Medway (3.1 Mt). While for rail depot sales the largest are Hampshire and Berkshire MPAs (1.9 Mt).

- Land won aggregate reserves in the South East at the end of 2021 were over 77 Mt of which 54.3 Mt was sand and gravel and 23.4 Mt crushed rock. Over the ten years since 2012 land won aggregates reserves have had a decidedly downward trend. Sand and gravel reserves in 2021 are about 30% lower than in 2012.

- The MPAs with the highest reserves for sand and gravel were Oxfordshire (14.4 Mt), Kent (7.6 Mt), Hampshire (7.6 Mt) and Surrey (7.4 Mt). However, 6.2 Mt (82%) and 5.5 Mt (70%) of the respective Kent and Surrey sand and gravel reserves were soft sand. The respective South East proportion is about 30%.

- The reserves translate into a landbank for sand and gravel of 8 years. However, this varies over the South East. Buckinghamshire, East Sussex, Isle of Wight, Medway, Milton Keynes and West Sussex have landbanks that do

not meet the NPPF requirement of 7 years. Only Kent and Oxfordshire have significant crushed rock landbanks although the latter does not meet the NPPF requirement of 10 years.

- The most important offshore marine dredged aggregate reserves for the South East are in the South Coast and Thames's Estuary 'dredging regions' and had reserves of 75 Mt and 38.2 Mt respectively. The reserve life was 22 and 28 years for the South Coast and Thames Estuary regions respectively.

- The ability of the South East to import crushed rock and handle marine dredged aggregates is dependent on capacity of wharves and rail depots. Capacity estimates are unreliable but best judgement is that in 2021 wharf capacity was 14.4 Mt. This seemed to provide overall for the South East a substantial 'headroom', above 10-year average sales rate. However, there are variations across the South East.

- Regarding capacity at rail depots – again estimates are partly conjectural – capacity in 2021 was 13.3 Mt which is significantly above the 10-year average sales rate. Recently more capacity has had to be implemented in West Berkshire and Oxfordshire.

- Further constraints on marine dredged aggregate and crushed rock capacity are the size and quality of dredgers and rail paths and land banks in the MPAs supplying aggregate. However there has been some new dredgers deployed, and the current land banks in Leicestershire and Somerset are above 10 years. However, SEEAWP has noted concerns about longer term prospects about the continuation of the supply of crushed rock by rail from some sources. Moreover, there is some concern that the rail network capacity is also an issue. .

- Estimated secondary and recycled aggregate sales are 4.6 Mt during 2021. There is an apparent slight upward trend since 2014 although survey difficulties and reporting changes has affected data quality. Secondary aggregate sales are about 20% of total secondary and recycled aggregates sales. Only a few MPAs have records of secondary aggregate sales, with Hampshire reporting just under 0.5 Mt. The MPAs with most recycled aggregate sales are Hampshire (0.8 Mt), Kent (0.8 Mt), Surrey and West Berkshire (< 0.8 Mt) There are no reported constraints on capacity.

SEEAWP identifies some trends and issues concerning the future supply of aggregates in the South East.

- Primary aggregate sales are on a virtually level trend (Table 2). The aggregate sales stream that contradicts this are crushed rock imports sales through the wharves (Appendix 5). However, set against that, there is the strong downward trend in sand and gravel reserves with the landbank being close to NPPF requirements (Tables 3 and 5). Moreover, some of the MPAs landbanks are well below the requirements (Table 5) which is further addressed by the LAAs (Table 10). This suggest a potential supply issue, which could be compounded by possible increase in demand from major project and the aspiration for higher economic growth.

- The Annual Report lists several major construction projects and developments (Table 7), which could have significant demands on aggregates. However, in most instances, there is insufficient data to provide how much is required, where and when. However, a 'guesstimate' suggests that projects like the Oxford – Cambridge ARC and Growth Area, Thames Gateway and Lower Thames Crossing, Gatwick Expansion, Heathrow Expansion as well as major infrastructure schemes will create aggregate demands, directly or indirectly across the South East and in turn aggregate provision.

- Generally, construction forecasts for the South East suggest an activity increase by around 10% over the next decade. However, it is unclear how this translates into aggregates provision. Nevertheless, MPAs may have to factor in some growth as a contingency in their mineral plans and LAAs.

- Historically, the South East relies on marine dredged aggregates and crushed rock imports to augment supply (Table 2, Appendices 5, 6 and 7). Generally, there are not supply constraints. Marine dredged aggregate reserves and crushed rock reserves at relevant exporting MPAs and there is overall adequate capacity at wharves and rail depots (Table 4). However, the data is insufficiently reliable to make a fully informed judgement, there is sufficient capacity throughout the South East in the longer term. It is noted that this capacity can be reduced if wharves or email depots are redeveloped with alternative uses.

- Secondary and recycled aggregates are now a feature of aggregate supply and subject to data reliability they provide about 24% of all primary aggregate (land won sand and gravel, crushed rock and marine dredged aggregate sales excluding imports) sales (Table 6). Furthermore, there are no immediate constraints on capacity, although there are limitations to this aggregate stream.

- It is noted that there are built in to existing mineral plans unused allocations (Table 8) and there are some planning applications (Table 9) which have the potential to augment reserves. Together, these could in due course add 6 years to the sand and gravel land bank. However, there is limited certainty the applications/allocations can be realised before the landbank is eroded further. Consequently, this only provides a limited mitigation to general trend of declining reserves/landbanks.

- A further issue with land won aggregates is that sand and gravel is not an entirely homogeneous aggregate. As reported above, soft sand is generally unsuitable for concrete manufacture while sharp sand and gravel is unsuitable for mortars and fine aggregate applications. This is not an issue overall for the South East as soft sand is a minority product, but in the eastern part of the region this is not the case and the low landbanks of sharp sand and gravel give an added dimension to the supply system. A question is whether other MPAs can cover additional demands for sharp sand and gravel as in due course this may affect the South East's regional contribution to national aggregate needs.

- The LAAs indicate very mixed prospects for local aggregate supply – six of the MPAs have landbanks that do not meet NPPF requirements. Although there are mitigations including: availability of potential reserves through mineral plan allocations; applications pending determination and/or; significant local environmental constraints such as the South Downs National Park and AoNBs. On the other hand, supply is increasingly being focussed on the few MPAs with the larger sales and landbanks. These are Oxfordshire, Hampshire, Kent and Buckinghamshire. However, Kent has declining sharp sand and gravel sales so there are tensions that should be resolved soon.

SEEAWP is required by the PPG to:

> '.. provide an assessment on the position of overall demand and supply for the Aggregate Working Party area, including whether, in its view, the area is making a full contribution towards meeting both national and local aggregate needs. This assessment should be based on local aggregate assessments and should be informed by other economic data. It should also include an indication of emerging trends of demand in the Aggregate Working Party area'

However, the challenge for SEEAWP in making its assessment is the absence of an up-to-date version of the 'National and regional guidelines for aggregates provision in England 2005 to 2020'. Without this Government advice there are no benchmarks for against which SEEAWP can make any meaningful comparisons.

The issue is further compounded with no guidance on aggregate demand so SEEAWP must resort to making judgements based on disparate pieces of information.

The Annual Report identifies land-won sales that have displayed a modest upward trend (Table 2), while over the last 10 years reserves have had a decidedly downward trend, with sand and gravel reserves in 2021 about 30% lower than in 2012 (Table 3).

It is noted (p 35) that the MPA suggest a GB growth rate of about 1% per annum or 10% growth over the next decade in aggregate demand. The LAAs, and the major projects (Table 7, pp 36 - 38) suggest that this growth could be a reasonable assumption for the South East. However, how this demand translates to the different aggregate sectors is unclear, although the last 10 years growth in crushed rock imports (p 27 Appendix 5/6) implies this sector may increase more. Moreover, given the locations of the largest projects, demand may cluster in parts of the South East although it is impossible estimate these local impacts other than provide an indication where pressures may arise (p 35).

Regarding supply or provision of aggregates, the LAAs (pp 45-46, Table 10) as informed by the AM 2021 (p 25 Table 25) survey indicate a sand and gravel land bank of 8 years and that for crushed rock of 14 years. Both are within the NPPF requirements. Moreover, there is evidence of potential additional reserves through unused allocations in mineral plans and outstanding planning applications that could increase the sand and gravel landbank by a further 6 years (pp 39-45 Tables 8/9).

This suggests that there is potential to accommodate growth in sand and gravel demand. Regarding, marine dredged aggregates there are significant offshore reserves (p 20)

However, it is noted that provision varies across the South East and some MPAs do not meet the NPPF land bank requirements (pp 39-44 Table 10), which places pressure on the MPAs with larger reserves. This is particularly noticeable in the eastern sector of the South East where the sand and gravel landbank is biased to soft sand (p 25 Appendix 4) and sand and gravel reserves are becoming depleted

Moreover, if aggregates growth is skewed towards imported crushed rock and marine dredged aggregate this may place pressure sector on wharf and rail depot capacity. Overall, the AM data and LAAs suggest there is additional capacity, but if imports by sea of crushed rock and landings on marine dredged aggregates continue to grow it places more pressure on the Medway and Kent wharves and the associated distribution network (p 23 Table 4) which will become increasingly important and critical to regional aggregates supply. The pressure can be compounded by any loss of wharf or rail depot capacity, to non-minerals development associated with regeneration schemes frequently supported in local plans. Even apparent minor losses can have untoward impacts on an increasingly fragile supply system.

Accepting that the conclusions of the report are made in the absence of current Aggregate Guidelines that limits SEEAWP's assessment on the South East meeting national needs; there is evidence it makes a full contribution at the local level. It is however, acknowledged there are pressures in parts of the South East that must be addressed given the context of rising sales and declining reserves of land-won aggregates.

Table 1 Dashboard key data summary

Thousand tonnes unless otherwise specified

Aggregate	Sales 2021	Change from 2020	10-yr sales av.	3-yr sales av.	Average sales trend		Reserves @ 31 Dec. 2021	Reserves trend		APR	Landbank (years)	Landbank trend	
					10-yr.	3-yr.		10-yr.	3-yr			10-yr.	3-yr.
Land won Sand and Gravel	6,644	↑	5,969	6,185	↑	↑	54,349	↓	↓	7,040	8	↔	↓
Crushed Rock	2,077	↑	1,684	2,165	↑	↑	23,434	↓	↓	1,689	14	↓	↓
Marine dredged aggregates	6,588	↓	6,442	6,388	↑	↑							
Total Primary Aggregates	15,309	↑	13,934	14,737	↑	↑							
Secondary Aggregates	923	↑	384*	469	↑	↑							
Recycled Aggregates	4,232	↑	4,027*	4,208	↑	↓							

** 8-year sales average*

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SEEAWP Membership

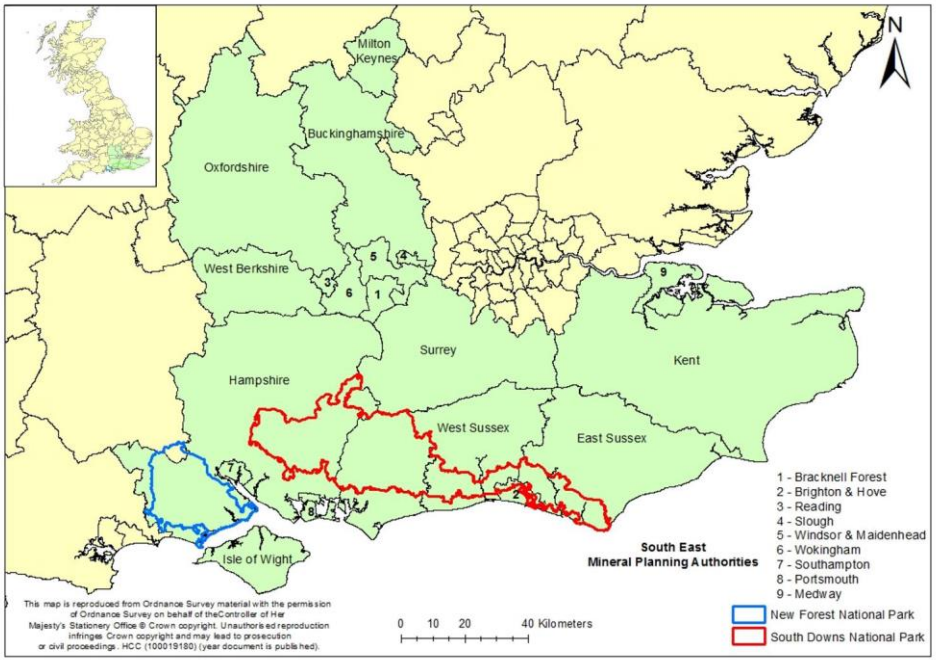
SEEAWP is one of several Aggregates Working Parties that cover England and Wales. The geographic coverage of SEEAWP is illustrated in Figure 1 below.

SEEAWP is a technical advisory group of mineral planning authorities (MPAs), aggregates companies and other relevant organisations within South East England. There are 21 MPAs in South East England, but there are only 13 MPA members, as some represent more than a single authority. The only MPA that is not represented is Slough. Membership of SEEAWP is illustrated below.

The role of SEEAWP is to:

- consider, scrutinise and provide advice on the Local Aggregates Assessment (LAA) prepared by each mineral planning authority in the South East and if required respond to findings of LAAs elsewhere.
- provide an assessment, based on the LAAs, on the position of overall demand and supply for the South East, including whether, in its view, the area is making a full contribution towards meeting both national and local aggregate needs. The AWP assessment should also be informed by other economic data and should also include an indication of emerging trends of demand in its area.
- obtain, collect, and report on data on minerals activity in the South East including aggregates demand and supply and information on sales, permissions and mineral reserves and data on recycled and secondary sources.
- provide advice to individual mineral planning authorities.

Figure 1 SEEAWP Mineral Planning Authorities



SEEAWP Membership:

Buckinghamshire Council
Central and Eastern Berkshire Mineral Planning authorities (excluding Slough Borough Council)
East Sussex County Council (also representing Brighton and Hove County Council)
Hampshire County Council (also representing Portsmouth and Southampton City Councils and New Forest National Park Authority)
Isle of Wight Council
Kent County Council
Medway Council
Milton Keynes Council
Oxfordshire County Council
South Downs National Park Authority
Surrey County Council
West Berkshire Council
West Sussex County Council

MPAs' data is consolidated in some of tables in the Annual Report to preserve commercial confidentiality: Central and Eastern Berkshire (CEB) includes all the Berkshire unitary authorities except West Berkshire and Slough; East Sussex includes Brighton and Hove and part of the South Downs NPA; Hampshire includes Portsmouth, Southampton, New Forest NPA and part of the South Downs NPA; West Sussex includes part of the South Downs NPA. Slough has no land won or marine dredged aggregate (MDA) sales.

Mineral Products Association (MPA)
British Aggregates Association (BAA)
Hanson UK
Brett Aggregates Limited
Dudman Group
Summerleaze Ltd
Tarmac
Aggregate Industries
Cemex
Grundon
Day Group Ltd
Smiths Blechington
Crown Estate (Royal Haskoning DHV)
Marine Management Organisation (MMO)

Note: A summary of the key matters discussed at SEEAWP meetings are included in Appendix 1

Primary Aggregates

Primary aggregates are naturally occurring minerals not hitherto extracted. They are a broad category of coarse to medium-grained particulate material used in construction and are a critical element in the supply chain for buildings and infrastructure.

The principal source of primary aggregates from within the SEEAWP area are land-won from local quarries, which are widely distributed throughout South East England. A further source of primary aggregates are marine dredged aggregates, landed and sold at various wharves. A third source of primary aggregates for the SEEAWP area are imports from other regions or nations outside England and Wales. The most important are crushed rock, sold at some wharves and rail depots, principally brought into the South East by rail or sea. Sand and gravel is also imported, although mostly by road. Figures 2A and 2B illustrate distribution of aggregate sites, while Appendix 2 provides a comprehensive list with more information.

Figure 2A Location of quarries, wharves and rail depots (West) in 2021

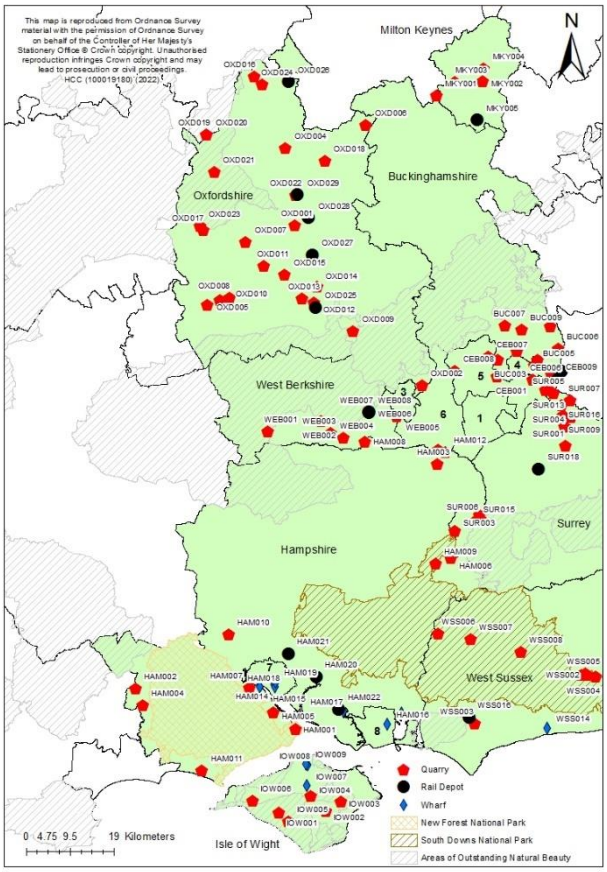
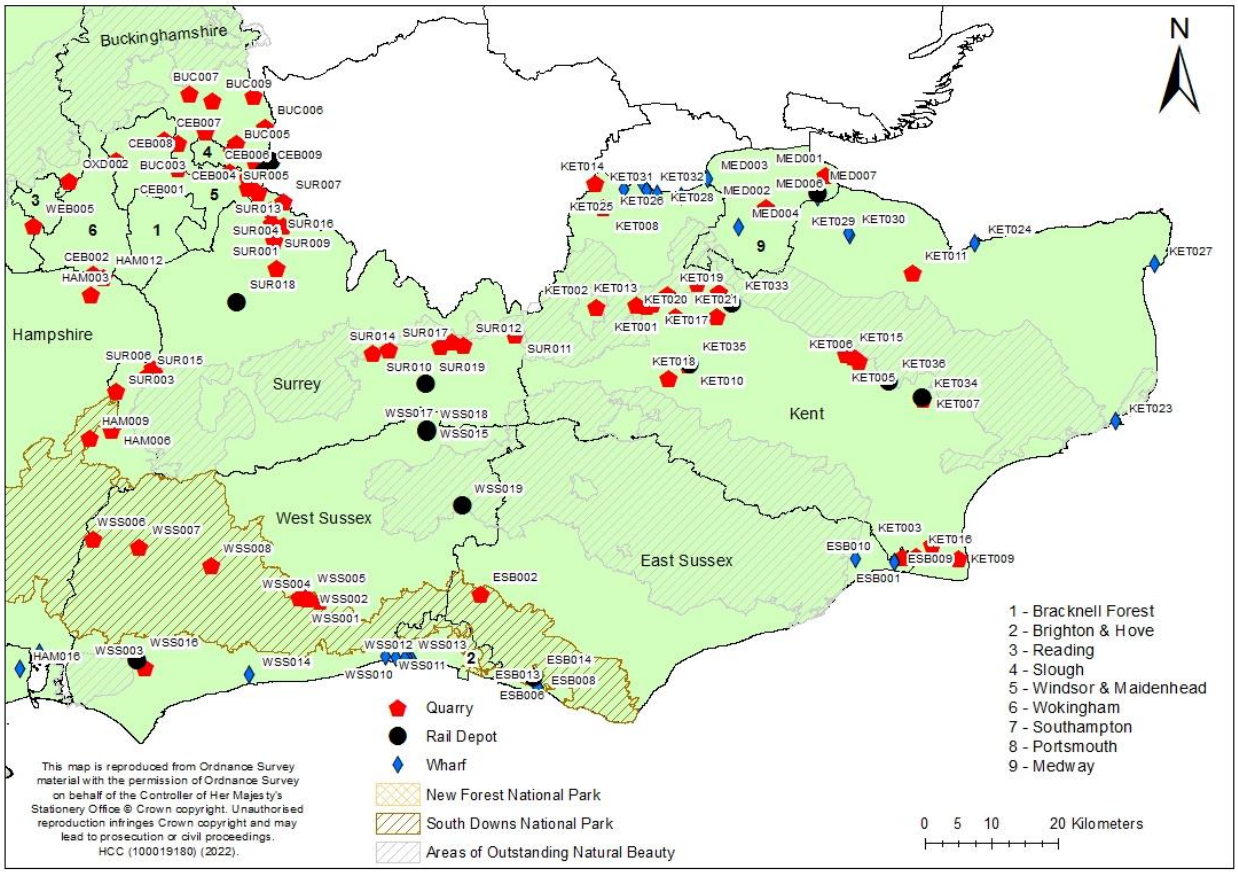


Figure 2B Location of quarries, wharves and rail depots (East) in 2021



Land Won Aggregates

Sands and gravels are the principal land won aggregates quarried in the SEEAWP area and comprise:

- The 'superficial' deposits laid down during the glacial periods and often called 'valley' and 'plateau' gravels. They are widely distributed and are usually referred to as 'sharp sand and gravel' and are particularly used in the manufacture of concrete.
- Some sands quarried from the 'solid' deposits mainly laid down in the Cretaceous period with the Folkestone Formation being the most widely spread (Kent, Surrey, West Sussex, Hampshire and parts of Oxfordshire). These aggregates are usually referred to as 'soft sand' or building sand and used for mortars, asphalt, and plaster.
- the poorer quality aggregates from both sources are used for 'fill' and low grade uses.

An important consideration for aggregates supply is that not all relevant mineral deposits are suitable for use as an aggregate. The technical and economic factors may mean extraction is impracticable. Also, there are environmental considerations which make use of a deposit 'unsustainable' From a strategic perspective various environmental designations militate against the release of land for aggregate. The

South Downs National Park and various AoNBs particularly affect soft sand extraction opportunities. Elsewhere, other designations and planning policy may weigh against aggregate proposals. Ultimately, it is for the relevant MPA, when preparing plans and determining planning applications, to determine the balance to be given between the merits of an aggregate site and environmental and other considerations.

The Annual Report treats soft sand and sharp sand and gravel collectively as ‘sand and gravel’. However, in recognition of their differing markets, as well as sales and reserves characteristics, separate information on soft sand, and sharp sand and gravel is provided in Appendix 4. This information is referenced in various parts of the Report.

Crushed rock is extracted in the SEEAWP area from less widely distributed outcrops of ‘solid geology’. The principal areas are:

- Kent that produces a Cretaceous ‘ragstone’, a form of limestone mainly used for fill.
- Oxfordshire that produces a limestone and ironstone of Jurassic origin, which has a wide range of uses.
- Some other parts of the South East have crushed rock resources, particularly Surrey, East Sussex and the Isle of Wight, although only the latter has active, albeit limited, reserves.
- Throughout the South East, chalk has been used as an aggregate, mainly as a fill and a building stone, however, its uses are now limited to agriculture.

Imported land won aggregate, particularly crushed rock, is discussed below under ‘Imports and Exports’ and Appendix 5 – Imported Aggregate Sales @ Wharves – and Appendix 6 – Imported Aggregate Sales @ Rail Depots – provide the data for the related commentary.

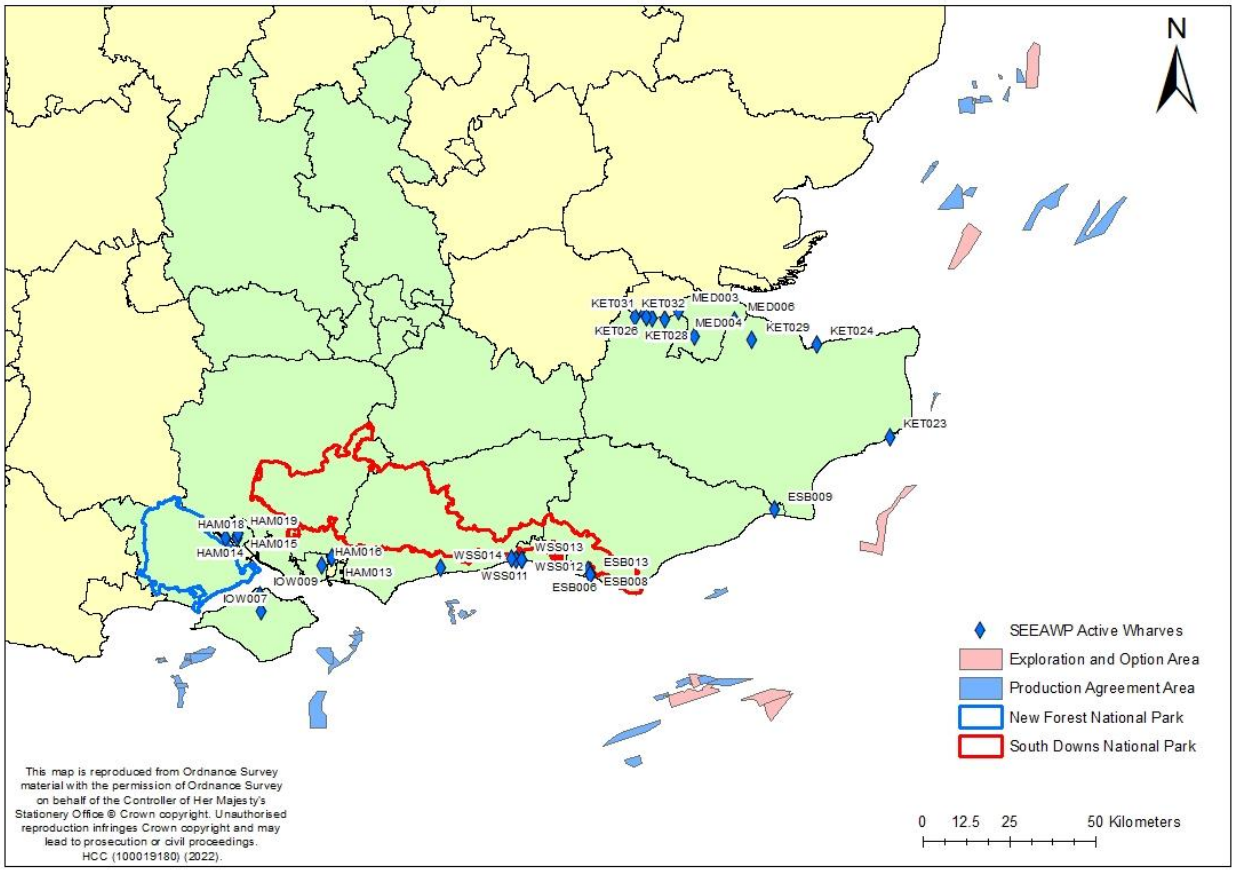
Marine Dredged Aggregates

The offshore deposits of sand and gravel are an important aggregates resource for the South East. Although the Crown Estate ‘dredging regions’ not only supply the South East, the most important regions, in order tonnage landed, are:

- South Coast – largest provider to the South East in terms of tonnage landed.
- East English Channel.
- East Coast and,
- Thames Estuary

Figure 3 below illustrates the licensed areas relevant for the South East and the location of the wharves

Figure 3 Location of offshore aggregate dredging areas in 2021



Sales of Primary Aggregates

Sales of primary aggregate in the South East are illustrated in Table 2 while Appendix 4 illustrates sales for sharp sand and gravel and soft sand).

- Primary aggregate (land won and marine) sales were 15.3 Mt in 2021 lower than 2020 but higher than the 3-year average.

- Land won sand and gravel sales were at 6.6 Mt and 19% higher than the previous year and similarly higher than average sales.

- Within the overall sand and gravel sales pattern there are differences for soft sand and sharp sand and gravel. Appendix 4 shows that in 2021 soft sand and sharp sand and gravel sales were 2 Mt and 4.5 Mt respectively. The corresponding growth compared to 2020 were 36% and 9%.

- All the South East MPAs had sand and gravel sales in 2021 although there were very low sales for some. The MPAs with the largest were Oxfordshire (1.4 Mt), and Buckinghamshire (1.3Mt). However, this pattern is different for soft sand, with Kent (0.6 Mt), Surrey (0.5 Mt), Oxfordshire and West Sussex (0.3 Mt) and Hampshire (0.1 Mt) being the only MPAs with significant sales. East Sussex, Medway, Milton Keynes and West Berkshire had no soft sand sales. On the other hand, compared with the South East overall where soft sand sales are about 30% of all sand and gravel sales; for Kent and Surrey

they were over 60%. As the neighbouring MPAs of West and East Sussex, and Medway have only modest sharp sand and gravel sales this is a very distinctive sub-regional aggregate supply pattern.

- Crushed rock sales were 2.1 Mt in 2021 and though like 2020 they were higher than 10-year average sales. The sales were concentrated in Kent and Oxfordshire.

- Marine dredged aggregates sales at 6.6 Mt were lower than 2020 but higher than the average sales pattern. It is noted more than half the MDA sales are in Kent/Medway. In contrast to sales, Appendix 7 shows that MDA landings were less than sales in 2021. However, over time sales and landing balance.

Table 2 Primary Aggregate Sales in SEEAWP Area

Thousand tonnes

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	10-year average	3-year average
Land Won Sand and Gravel (S&G)												
Buckinghamshire	665	773	684	739	1,033	1,172	976	1,268	840	1,267	942	1,125
C&E Berkshire	865	792	1,080	902	581	573	c	528	546	336	689	470
East Sussex	c	c	442	344	325	338	297	291	173	173	298	212
Hampshire	745	847	882	833	918	963	1,182	1,020	850	804	904	891
Isle of Wight	67	62	69	91	87	70	76	c	103	117	82	110
Kent	1,040	756	565	757	798	716	744	612	611	858	746	694
Medway	c	c	c	c	n/a	n/a	n/a	150	134	86	123	123
Milton Keynes	c	c	c	c	c	c	c	c	c	c	143	127
Oxfordshire	714	566	869	1,001	879	954	1,049	1,248	1,040	1,421	974	1,236
Surrey	621	796	978	741	733	799	907	690	760	818	784	756
West Berkshire	234	192	160	154	112	82	55	60	57	38	114	52
West Sussex	284	277	239	245	420	352	c	402	410	450	342	421
Total	**5,514**	**5,399**	**5,889**	**5,857**	**5,900**	**6,181**	**6,400**	**6,317**	**5,594**	**6,644**	**5,969**	**6,185**
Marine Dredged Aggregate (MDA)												
Kent & Medway	3,250	3,152	3,533	3,494	3,767	3,577	3,046	1,733	3,226	3,442	3,222	2,800
East & West Sussex	1,735	1,694	1,626	1,601	1,775	1,457	1,350	1,454	1,595	1,715	1,600	1,588
Hants & IoW	1,190	1,511	1,459	1,638	1,654	1,242	1,507	1,360	3,208	1,431	1,620	2,000
Total	**6,175**	**6,357**	**6,618**	**6,733**	**7,196**	**6,276**	**5,903**	**4,547**	**8,029**	**6,588**	**6,442**	**6,388**
Crushed Rock (CR)												
Isle of Wight	n/a	n/a	c	c	c	c	c	c	c	c	-	-
Kent	526	723	767	727	812	817	880	990	1,508	815	857	1,104
Oxfordshire.	c	c	1,061	914	715	866	751	843	1,087	1,254	824	1,061
Total CR sales	**800**	**1,200**	**1,844**	**1,659**	**1,527**	**1,686**	**1,631**	**1,824**	**2,595**	**2,077**	**1,684**	**2,165**
Total Aggregate Sales	**12,060**	**12,256**	**14,494**	**14,374**	**14,735**	**14,219**	**12,988**	**12,684**	**16,218**	**15,309**	**13,934**	**14,737**

Notes: c = confidential figure, n/a – not available

Sales for West Sussex are included based upon the sales figures from Appendix 7, however West Sussex utilise landings figures from the Crown Estate for use as a representative sales figure in their LAA.

Aggregate Reserves

The position of land won aggregate reserves are illustrated in Table 3. However, more detailed information concerning soft sand and sharp sand and gravel reserves are in Appendix 4.

Land won sand and gravel reserves in 2021 were 54.3 Mt, a decline from 81.5 Mt in 2012.

The MPAs with the largest reserves are Oxfordshire at 14.4 Mt which have, in contrast to the South East overall, increased from 8.3 Mt in 2012. Kent has the second largest reserves.

However, there are contrasts between the reserves of soft sand, and sharp sand and gravel across the South East. Kent had the largest soft sand reserve at 6.2 Mt which represented 82% of the MPA's total sand and gravel reserve. Surrey with 5.5 Mt of soft sand had the second largest reserve in the South East and represented 73% of the MPAs total sand and gravel reserve. The sub-regional pattern of reserves reflected that for sales and may have implications in the medium term for aggregate supply to various construction sectors.

Crushed rock reserves in 2021 were 23.4 MT which is about half they were in 2012.

Marine dredged aggregate (MDA) reserves are reported in The Crown Estate Licences – Summary of Statistics 2021. The most recent publication reported a reserve of 254 Mt suitable for mineral purposes in the 'dredging regions' that supply the South East. It cannot be assumed that the reserve is dedicated to South East, indeed some of the material dredged is sent to the Continent. Nevertheless, the South Coast and Thames's Estuary regions that supply most of the MDA landed in the South East have 75 Mt and 38.2 Mt reserves respectively.

Table 3 Land Won Aggregate Reserves in the SEEAWP Area (as of 31st December 2021)

Thousand tonnes

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Sand & Gravel										
Buckinghamshire	10,049	9,143	10,036	9,045	8,221	10,676	10,652	7,959	8,616	5,856
C & E Berkshire	8,117	10,272	8,619	9,876	6,919	5,851	5,857	7,407	6,800	5,548
East Sussex	c	c	2,884	2,560	2,465	1,350	858	466	417	340
Hampshire	14,510	13,085	10,549	11,508	8,900	7,920	9,067	8,030	8,183	7,598
Isle of Wight	1,668	1,710	1,355	1,161	1,442	738	671	430	475	498
Kent	18,527	18,583	11,441	12,044	13,276	12,768	12,121	10,990	12,120	7,608
Medway	c	n/a	n/a	n/a	1,310	1,195	1,047	897	574	427
Milton Keynes	c	n/a	n/a	n/a	c	c	c	c	c	c
Oxfordshire	8,251	8,783	9,065	14,081	12,724	13,909	16,015	16,016	15,353	14,411
Surrey	9,374	6,125	10,016	11,602	11,082	10,914	9,909	7,850	7,900	7,471
West Berkshire	1,045	3,155	3,096	3,025	2,695	2,790	2,642	2,567	2,530	2,520
West Sussex	4,801	4,459	3,909	3,652	**3,459**	3,735	2,715	3,184	2,389	2,026
Total	**81,486**	**77,604**	**70,014**	**76,362**	**73,746**	**72,032**	**72,356**	**68,976**	**65,426**	**54,349**

Table 3 Land Won Aggregate Reserves in the SEEAWP Area continued (as of 31st December 2021)

Thousand tonnes

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Crushed Rock										
Isle of Wight	n/a	n/a	c	c	600	600	600	0	0	c
Kent	c	c	c	c	25,829	25,012	24,133	17,297	23,281	16,097
Oxfordshire.	n/a	c	c	8,629	8,545	9,318	7,718	6,030	7,151	6,455
Total	**45,000**	**60,000**	**52,244**	**57,932**	**35,425**	**35,381**	**32,902**	**31,063**	**22,551**	**23,434**

Notes: c = confidential figure

Aggregate Infrastructure Capacity

Capacity on aggregate sites maybe a potential restraint on aggregate supply and the SEEAWP Annual Reports have hitherto reported on this. However, there is an issue with the reliability of the data. Although the AM surveys cover the topic the response from operators of aggregate sites is variable, indeed the early time series data is best ignored and conclusions not drawn from it.

Capacity data on land won aggregate sites is covered in the AM survey, but latterly not reported in SEEAWP Annual Reports as it is not generally a supply constraint. Landbank data is a preferable indicator.

Table 4 illustrates the capacity of wharves and rail depots. Capacity at secondary and recycled aggregate sites in covered in Secondary and Recycled Aggregates section - below,

Aggregate wharf capacity covers marine dredged and imported aggregates and in 2021 is estimated at 14.4 Mt. This compares with relevant 2021 10-year average sales for these aggregates of 9.5 Mt – see Appendices 5 and 7. This suggest a 'headroom' above 50%. A rule of thumb suggested by the aggregates industry is a headroom below 25% could be concerning, .

There were significant sub-regional variation, Kent/Medway wharves along with those in East Sussex/West Sussex have about 40% headroom while Hampshire/Isle of Wight have a theoretical negative capacity. The latter figure illustrates the data problem. Although the relevant MPAs views accord with this general picture with Hampshire estimating there may be wharf capacity issues. This suggests this matter may need further examination. In 2021, 45% of South East aggregate sales (excluding imports) were from marine dredged aggregate and capacity of the wharves could be a constraint on this supply. A matter that could be compounded by pressure to decommission wharf (and rail depot) capacity for alternative developments. These sites are becoming favoured options in local plans' regeneration proposals.

Rail depot capacity is 13.3 Mt, which is an increase of about 60% on 2020. This appears to have increased significantly in the last 10 years although the data really cannot be relied on. Some MPAs have reported an increase in the number sidings at the depots over the last two years – see the section on LAAs. Average sales of all aggregates at the depots in 2021 were 4 Mt, which provides a generous headroom. There were variations sub-regionally but only Hampshire/Berkshire has the most restricted head room of 35%. An additional capacity issue concerns availability of rail paths from the exporting MPAs to the South East. At least one operator reports this is much more of a problem than capacity at the depots, which can adversely affect the integrity of the aggregate supply system.

Table 4 Aggregates Infrastructure Capacity in the SEEAWP Area

Thousand tonnes per annum

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Rail depot capacity										
Kent & Medway	n/a	n/a	n/a	n/a	2,200	2,200	2,200	2,380	2,380	2,225
East Sussex, Surrey, West Sussex	n/a	1,280	1,380	1,380	1,930	1,880	2,130	2,456	2,516	2,566
Berkshire & Hampshire	1,600	1,600	1,600	1,600	1,027	1,027	2,027	2,027	2,121	4,146
Buckinghamshire, Oxfordshire and Milton Keynes	275	275	275	275	1,165	1,165	1,165	1,165	1,165	4,352
Total rail depot capacity	**1,875**	**3,155**	**3,255**	**3,255**	**6,322**	**6,272**	**7,522**	**8,028**	**8,182**	**13,289**
Wharf capacity										
Kent & Medway	4,150	4,150	4,150	4,150	7,250	9,600	10,100	10,100	9,900	10,640
East Sussex & West Sussex	n/a	2,230	1,880	2,274	2,274	2,274	2,070	2,070	2,070	2,360
Hampshire & Isle of Wight.	n/a	n/a	n/a	n/a	n/a	c	n/a	n/a	n/a	1,403
Total wharf capacity	**4,150**	**6,380**	**6,030**	**6,424**	**9,524**	**11,987**	**12,170**	**12,170**	**11,970**	**14,403**

Notes: c = confidential figure

Aggregate landbanks in the SEEAWP Area

Land banks are regarded as the critical measure for assessing whether there is some security to supply of aggregates in the medium term for land won aggregates. The NPPF requirement for landbanks is 7 years for land won sand and gravel and 10 years for crushed rock. Table 5 illustrates the landbank situation in 2021 for sand and gravel and crushed rock, while Appendix 4 provides details on soft sand and sharp sand and gravel.

The landbank for the South East for sand and gravel is 8 years and for crushed rock 14. Both are above the NPPF requirement, although the margin of one year for sand and gravel is small and without new reserves (permitted tonnage) this will be quickly eroded. Moreover, a slight increase in APRs will also have an adverse impact on the landbank. On the other hand, the current overall APR is some 15% above the 2021 average 10-year sales and this allows for some margin to accommodate growth in aggregate demand. However, it is noted 50% of the MPAs have landbanks below the NPPF requirement for sand and gravel. There are also others which are close to the requirement. These matters are discussed below under LAAs.

There are differing landbanks for soft sand and sharp sand and gravel. Appendix 4 illustrates that the overall soft sand landbank for the South East was 10 years while for sharp sand and gravel it is 8. However, it is the subregional pattern that shows a much more varied picture contrasting picture, which again is addressed under the section on LAAs.

Table 5 Aggregates Landbank in the SEEAWP Area (as of 31-12-2021)

Thousand tonnes

Sand and Gravel				
MPA	**10-year average sales**	**APR**	**Reserves**	**Landbank (years)**
Buckinghamshire	942	1,125	5,856	5
C&E Berkshire	689	628	5,548	9
East Sussex	298	106	340	<1
Hampshire	904	1,150	7,598	7
Isle of Wight	82	100	498	5
Kent	746	691	7,609	11
Medway	123	119	427	4
Milton Keynes	143	170	c	3
Oxfordshire	974	1,258	14,411	11
Surrey	784	1,000	7,471	7
West Berkshire	114	233	2,520	11
West Sussex	342	460	2,026	4
TOTAL	**6,142**	**7,040**	**54,350**	**8**

Crushed Rock				
MPA	**10-year average sales**	**APR (per annum)**	**Reserves**	**Landbank (years)**
Isle of Wight	c	8	c	110
Kent	857	857	16,097	19
Oxfordshire	824	824	6,455	8
TOTAL	**c**	**1,689**	**c**	**14**

Notes: c = confidential figure. *The 'APR' (Aggregate Provision Rate) is the figure used in the calculation of the landbank. This may also be referred to as the 'LAA Rate'. The APR can be the same as the 10-year average sales figures or may be an adjusted figure as advised by an MPAs LAA.*

Imports and exports of aggregates to/from the SEEAWP Area

Aggregate imports and exports refer to aggregate movements into and out of the South East to/from other English regions and Wales. Aggregates from Scotland, Ireland and elsewhere are also regarded as imports. The overall picture for imports and exports was not covered by the AM 2021 survey. The last survey to address these by means of a national collation of AM 2019 survey results. This was reported in the SEEAWP Annual Report 2020. This indicated that although the South East was a net importer of aggregate overall, it was only crushed rock the South East had an adverse sale to consumption balance. Land won sand and gravel was virtually in balance and MDA the South East had more sales than consumption.

The AM 2021 sales data relates to those at wharves and rail depots and only provides a partial picture of the import/export picture and this information is included in the Appendices.

The sales of imported aggregates at the aggregate wharves are illustrated in Appendix 5. Imported land won sand and gravel sales at wharves should be distinguished from marine dredged aggregate sales, which might be sold on the same wharves. These sales increased from under 0.2 Mt in 2016, the first year this material was surveyed by SEEAWP to nearly 1.7 Mt in 2021. A nine-fold increase. On the other hand, imported crushed rock sales at the wharves were 3.4 Mt, an increase on the 1.5 Mt in 2012. This material was largely imported from outside England Wales, with Scotland the likely principal supplier.

Sales of imported aggregate at the rail depots were different to that at the wharves. Virtually all this aggregate was imported from within England and Wales to the South East. There may be some internal movements within the South East by rail and road also and there is a possibility of double counting of sales. Unfortunately, the data is unavailable. Sales of imported land won sand and gravel at the depots was 0.8 Mt in 2021. This was higher than the 10-year average. It is reported that some of these imports are by rail.

Imported MDA sales occur at rail depots but on a modest scale. In 2021, East Sussex/West Sussex report sales of 0.15 Mt and a slightly smaller amount, 0.14 Mt, in Hampshire/Berkshire. It is reported the latter originates from the London wharves and moved by rail.

Imported crushed rock sales at rail depots accounts for the largest aggregate flow at these sites. In 2021, 3.7 Mt of crushed rock was sold and most originated in Somerset and Leicestershire. However, sales were below average sales. The depots in Hampshire/Berkshire account for the largest sales at 1.9 Mt with East Sussex/West Sussex second with sales of a million tonnes.

Secondary and Recycled Aggregates

Secondary and recycled aggregates are aggregates derived as a by-product of non-other mineral operations e.g. mineral wastes or industrial processes e.g. Incinerator bottom ash see glossary.

NPPF minerals policy places significant emphasis on secondary and recycled aggregates as a major contributor to aggregates supply. The MPA[1] estimate that about 28% of all aggregates in 2020 are from these sources and this might be the limit they can contribute to the total aggregate supply. The proportion in recent years has been quite steady.

There are numerous recycled aggregate sites in the South East but many fewer secondary aggregate sites. The distribution of both types of sites is illustrated below in Figure 4. More information is included in the site list in Appendix 3.

[1] Mineral Products Association (2022): 'The Contribution of Recycled and Secondary Materials to Total Aggregates Supply in Great Britain - 2020 Estimates'

Figure 4A Location of secondary and recycled aggregate sites (West) in 2021

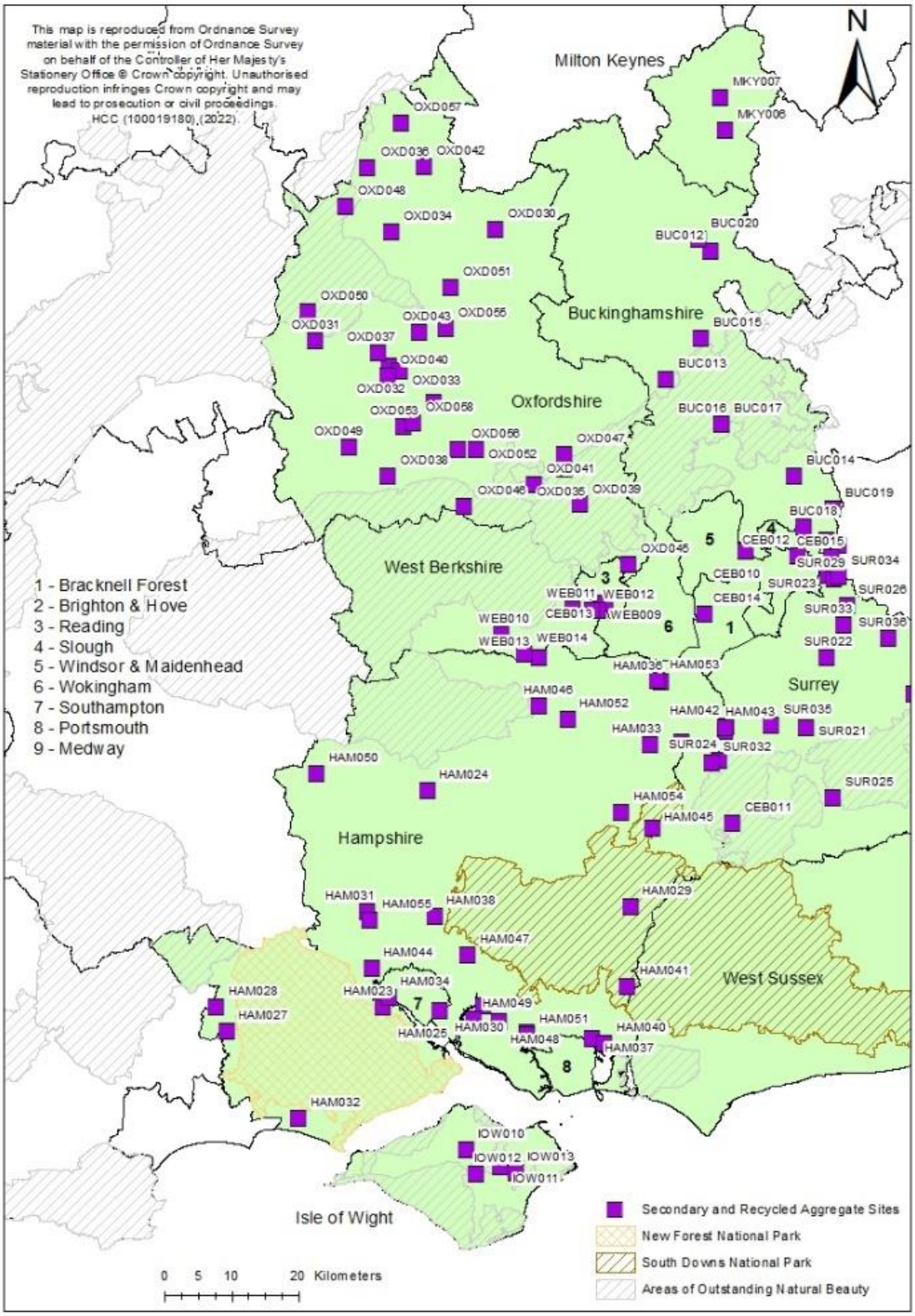
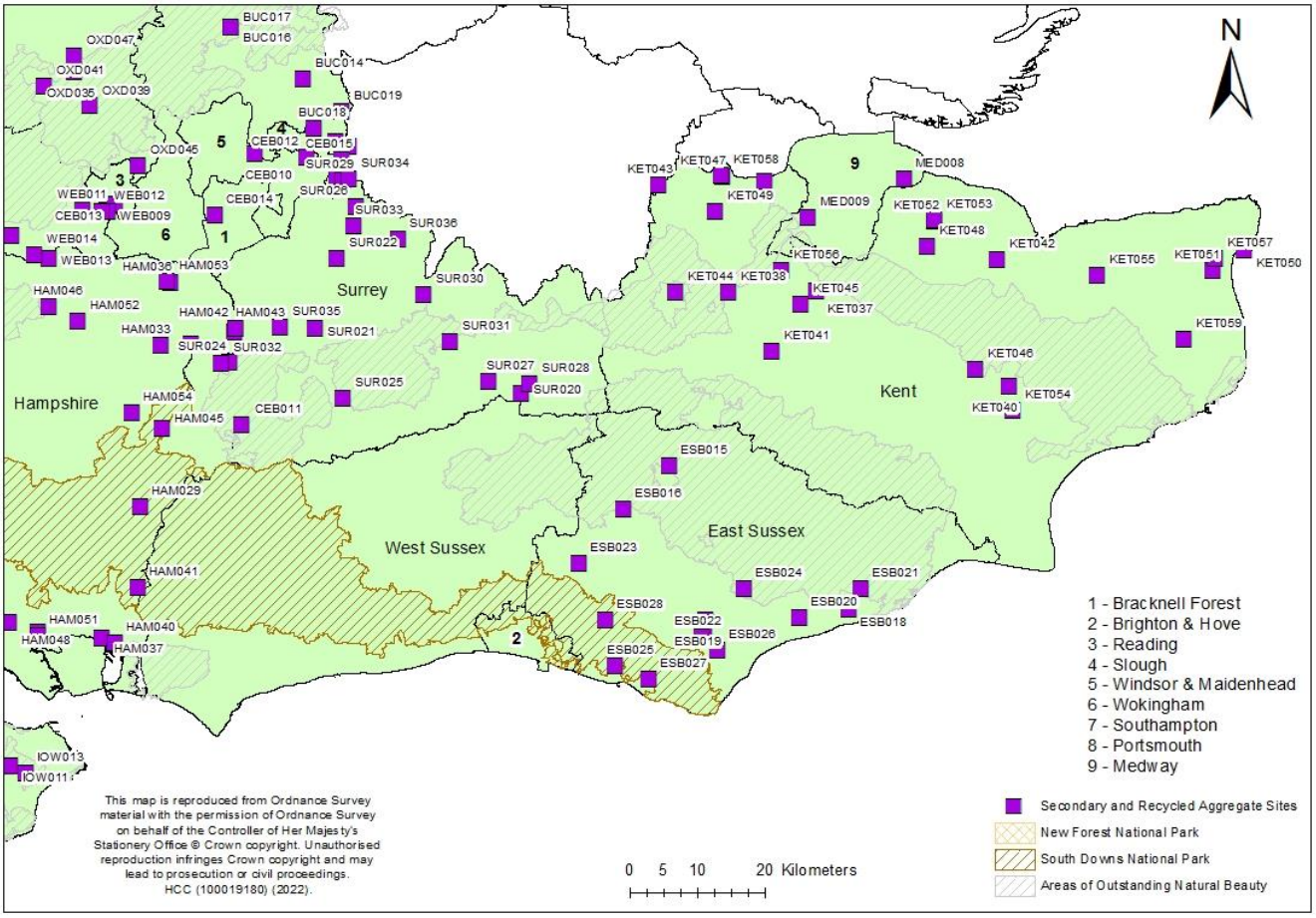


Figure 4B Location of secondary and recycled aggregate sites (East) in 2021



Secondary Aggregates and Recycled Aggregates

In 2021, 0.9 Mt of secondary aggregates were sold in the South East. As Table 6 below illustrates, this was the highest sales by a large margin since 2014 - the earliest date for which records are available – although the reliability of this data is uncertain as the AM survey responses were variable. The AM surveys are the only sources of information so data quality is a direct function of the effectiveness of this survey.

Only a limited number of MPAs appear to have secondary aggregate sales. This is not surprising as the South East has few sites that produce mineral waste or have industrial processes from which secondary aggregates are produced. Most secondary aggregate seems to arise from waste incinerators.

On the other hand, as Table 6 illustrates recycled aggregate sales are more important component of aggregate supply. In 2021, 3.7 Mt of recycled aggregate were estimated as sold in the South East, about 55% of land-won sand and gravel sales. The sales are higher than 2020 but lower than the 8-year average.

It appears that in 2021 the MPAs with the largest sales were; Hampshire, Kent Surrey and West Berkshire.

There are concerns with the data reliability for recycled aggregate. Despite the importance the NPPF gives to this waste stream there has not been any systematic nationally coordinated survey for almost 20 years. Although the AM surveys endeavour to survey all the recycled aggregate operators the response to surveys is variable. Moreover, the AM surveys only cover the ‘fixed’ sites, although it is known a significant of construction and demolition waste is produced by mobile plant on short life sites.

In 2022 an attempt has been made to improve the data and the information in the AM 2021 returns have been augmented by estimates of recycled aggregates sales from material processed at the ‘missing’ sites i.e. those sites which did not make AM returns. This is based on information in the Environment Agency’s WDI – see glossary – which covers the amount of construction wastes handled by ‘licensed’ sites. It is thought that this might provide more information on recycled aggregate but it has limitations. It does not cover the transitory mobile plant production at short life sites and currently and it is impossible to verify assumptions about the proportion of recycled aggregates sales arising at a site from any quantity of construction and demolition waste reported by the WDI.

Table 6: Secondary and Recycled Aggregate Sales in the SEEAWP area

Thousand tonnes

MPAs	2014	2015	2016	2017	2018	2019	2020	2021	8-year average	3-year average
Secondary Aggregates										
East Sussex	0	0	30	36	62	n/a	42	43	30	43
Hampshire	94	113	78	83	127	n/a	124	471	156	298
Kent	55	43	107	49	57	n/a	0	47	51	24
Medway	0	0	n/a	n/a	n/a	n/a	c	0	0	0
Oxfordshire	14	60	96	111	114	n/a	113	c	97	141
Surrey	0	0	3	287	8	n/a	2	193	70	98
West Sussex	0	0	0	0	1	n/a	2	1	1	2
SEEAWP: Secondary Aggregates	**199**	**216**	**314**	**566**	**369**	**200**	**283**	**923**	**384**	**469**
Recycled Aggregates										
Buckinghamshire	178	146	28	122	95	n/a	95	181	121	138
C&E Berkshire	408	400	498	451	460	n/a	89	117	346	n/a
East Sussex (incl. SDNPA part)	53	57	156	317	627	n/a	163	116	213	140
Hampshire (incl. SDNPA part)	975	940	753	674	594	n/a	550	812	757	681
Isle of Wight	85	85	55	69	94	n/a	53	c	70	53
Kent	673	805	909	953	738	n/a	964	806	835	n/a
Medway	36	30	n/a	n/a	n/a	n/a	c	10	n/a	10
Milton Keynes	0	0	n/a	n/a	n/a	n/a	n/a	81	n/a	81
Oxfordshire	257	393	437	307	292	n/a	286	346	331	316
Slough	n/a	n/a	n/a	n/a	n/a	n/a	n/a	28	n/a	28

Table 6: Secondary and Recycled Aggregate Sales in AWP area continued

Thousand tonnes

	2014	2015	2016	2017	2018	2019	2020	2021	8-year average	3-year average
MPAs	**Recycled Aggregates**									
Surrey	635	837	755	1,124	1,065	n/a	586	544	792	565
West Berkshire	323	313	370	320	322	345	254	362	326	308
West Sussex (incl.SDNPA part)	139	166	128	337	254	n/a	388	236	235	312
SEEAWP: Recycled Aggregates	**3,762**	**4,172**	**4,089**	**4,674**	**4,541**	**4,952**	**3,439**	**3,691**	**3,959**	**4,027**
SEEAWP: Secondary and Recycled Aggregates	**3,961**	**4,388**	**4,403**	**5,240**	**4,910**	**5,152**	**3,722**	**4,614**	**4,343**	**4,496**

Note: Highlighted Recycled Aggregate figures - Some MPAs' records for 2021 have not been updated with WDI 2021 information.

Trends and Analysis

Trends – Sales, Reserves and Capacities

The data in the table above indicate the following trends[2] for aggregates in the South-East:

- Over all primary aggregate sales were virtually level over the period 2012 - 2021
- The sales trend is one of a gentle increase for and won sand and gravel over the 10-year period, although virtually stable for the last 3-year period (2019-2021). The sales trend was similar for soft sand, and sharp sand and gravel.
- Crushed rock sales exhibit a similar sales trend as sand and gravel.
- Marine dredged aggregate sales have slightly increased over the 10-year period, and significantly increased over the 3-year period.
- Regarding reserves there has been a steady decline for all land won aggregates for both the 10-year and 3-year periods
- In relation to capacity at the wharves and rail depots there has been an increase over the last 3-year period (data not available for the longer period).
- Imported aggregates (crushed rock) sales have increased steadily at the wharves but over the last 3 years there has been a decline in sales at the rail depots.
- Both recycled and secondary aggregate sales have increased over the last 10 years although there has been a decline for recycled aggregate sales during the latter 3-year period.
- Some of the sub-regional variations for these trends are considered in the LAA section below.

The dominant features of the trends are the modest increase in sand and gravel sales over the 10-year period compared with a relative steeper decline in the reserves. This compares with slight decrease in marine dredged aggregate sales and about very significant increase in imported crushed rock at the wharves.

Major Construction Projects or Developments

There are several major construction projects and development in or near the South-East and are listed in Table 7. Many of the projects have not factored in aggregate supply into their planning and limited data is available to make a definitive impact on aggregate reserves and infrastructure capacity. Moreover, a distinction should be

[2] Estimated from the 'trendlines' calculated in Excel for the time series data in Tables 2, 3,4,6, Appendices 4,5,6,7

made with some developments which are within the realms of 'business as usual' and major disruptors. Of the latter type, the following projects could affect the aggregate supply pattern for some South-East MPAs:

- HS2 (Oxfordshire) - although this is underway and the effects already noted – see LAA section below.

- Heathrow Expansion (Central and Eastern Berkshire, Slough, Buckinghamshire) – some studies have been undertaken on the aggregate impact which indicate there is a net gain in sand and gravel and provision for a rail depot, the existing one at Colnbrook could be lost to the development.

- Lower Thames Crossing/Thames Gateway – Kent/Medway – cumulative impact of several major developments.

- Oxfordshire Growth Area (Oxford – Cambridge Arc) – Oxfordshire, Buckinghamshire – not only infrastructure but business and housing development associated with high tech investments.

- Gatwick Expansion/ Arundel Bypass etc – West Sussex/Surrey

A conjectural summary and undoubtedly others could have some significant local impacts but the MPAs noted above appear vulnerable to additional demand pressures.

Alongside this is the general issue of aggregate demand forecasting and its relationship with aggregate provision. An approach would be to extrapolate current sales trends which would indicate maintaining current sales pattern and overall steady state for APRs for estimating landbanks and infrastructure capacity. However, this would not reflect evident demands in some areas as noted above or medium-term Government aspirations for the economy.

The only aggregate demand forecasts currently available are those produced by the Minerals Products Association and the latest[3] indicates a 3% growth in construction output 2022 - 2025. This equates to approximately a growth of 1% per annum. This suggests construction over the next decade would increase by 10%. It is a matter of judgement for MPAs to translate this into corresponding adjustments for their APRs their LAAs.

[3] Regional overview and forecasts of construction and mineral products markets in Great Britain - Spring 2022

Table 7 Major Construction Projects or Developments

Mineral Planning Authority	Project/Development Name and Location	Time Scale (estimated start and end date)	Comments
Buckinghamshire	HS2	Started construction	Additional rail depot capacity implemented in Oxfordshire
	Western Rail Link to Heathrow	TBC	Project status and timeline unknown. PINS expected submission in winter 2021/2022 A study undertaken on aggregate supply – onsite material available with possibility for some export and arrangements for a rail depot for aggregate and materials.
C&E Berkshire	Heathrow Expansion	Until 2050 for full scheme	DCO pre-app
	Crossrail (next stage)	2023	
	M25 and M4 Improvements	2025+	Smart motorway projects paused for 5 years, other junction improvements to progress to 2025 and beyond.
	Datchet to Teddington Flood Defences	Potentially 2023-2028	Strategic Outline Case expected to be signed off 2023
East Sussex	Toads Hole Valley, Hove - major greenfield development area, Brighton & Hove	TBC	Adopted City Plan Part One Allocation
	Brighton Marina outer harbour	TBC	Adopted City Plan Part One Allocation. Scheme commenced some time ago but intention now to build out the remaining phases of the permitted scheme which includes a 40-storey tower.
Hampshire	Southampton Airport Expansion (164 metre runway, blast screen and 600 space car park)	Construction estimated to be 32 weeks	May 2022 - Received High court decision to proceed
	Smart Motorway M3	2022 to TBC	Upgrade to just include central reservation, rest of scheme paused for 5 years
	M27 Junction 9 improvements	Started 2020 estimated duration of 24 months	
	Fawley Power station redevelopment	TBC	1500 new homes
Kent	Lower Thames Crossing	2024-2030	Twin bore crossing to link existing M25 and A2 north and south of the Thames 4km in total
Medway	Lower Thames Crossing	within next 5 years	"A 13-mile new road and bored tunnel crossing
	Crossrail 2	within next 15 years	A proposed major new rail route through London between Surrey and Hertfordshire.
	Thames Tideway Tunnel	Construction underway	A 16-mile drainage and sewerage tunnel currently in construction under much of the tidal section of the Thames through central London.
	Northern Extension Line	TBC	"An extension to the London Underground
	High Speed Rail 2	Construction underway	
	Ebbsfleet Garden City	TBC	A planned development of up to 15,000 homes and 45,000m2 of commercial floor space.
	Housing and infrastructure delivery across Kent	TBC	Includes in the region of 178,600 additional homes (2011-31) and the provision of 163 extra form entries for schools (2017-23)

Mineral Planning Authority	Project/Development Name and Location	Time Scale (estimated start and end date)	Comments
Oxfordshire	HS2		
	Oxford to Cambridge Arc		
	East-West Rail		
	Oxfordshire Knowledge Spine		
	Science Vale Oxford		20000 new jobs and 20,000 new homes
	Bicester Growth		
	HIF 1 and HIF 2	By Mid 2026	
	Oxfordshire Housing and Growth Deal	by 2031	100,000 new homes, road and rail infrastructure improvements
	Local Plans x5	2031-2036	Delivering the 100,000 new homes and developments
Surrey	Smart Motorways: M4 J3-12	Ongoing - 2022	Upgrade has been paused pending data over five-year period from other smart motorway upgrades
	M25 J10-16 upgrade	Summer 2022 - Summer 2025	The project will upgrade the current stretch of motorway, increasing the number of lanes at J10 from three to four at an estimated cost of £317m.
	Crossrail remaining work	Ongoing - Autumn 2022	Services from Reading, Heathrow and Shenfield are anticipated to connect with the central tunnels in autumn
	Major housing project in Elephant & Castle	October 2020-2026	The second of three phases of development, this project will involve the construction of 485 houses, a shopping centre and significant road improvements. The estimated cost is £1bn.
	West Cromwell Road Development	Autumn 2022 - 2025	Construction of 462 new homes and accompanying commercial space in the borough of Kensington & Chelsea, with an estimated cost of £500m
	Pinewood Studios Expansion	Spring 2022 - 2023	Expansion to existing film studios, with an estimated cost of £400m
	Audley Square	Autumn 2022- Summer 2025	This seven-storey housing development in central has an estimated cost of £350m
	Victoria Arch widening scheme	Ongoing - 2027	This project has permission for temporary access for up to five years and is comprised of three phases costing an estimated £115m
	Allies and Morrison's Hampton Court hotel	Not determined	Hotel and housing development, including 97 homes and an 84-bed hotel
	Deepcut and Frimley Green	Not determined	Housing development - 65 homes to be built on brownfield site,
	Chilsey Green Farm	Not determined	Housing development - 170 homes to be built alongside five permanent traveller pitches
	Industrial Development, Leatherhead	2023 - undetermined	£32m warehousing and industrial project - 4.6 acres - could this be considered a major development?
	Chertsey mental health hospital	May 2022 - December 2023	£8.5m project to completely rebuild the hospital and associated parking for sustainable transport
West Sussex	A259 Corridor Enhancement Capacity, East Arun	Under construction	Estimated completion November 2022
	A284 Lyminster Bypass	Summer 2022 - Jan 2024	Planning permission received
	Crawley Transport Package Phase 1	2022-2027	
	National Cycle Network 2	2022-2027	Chichester to Emsworth route

Mineral Planning Authority	Project/Development Name and Location	Time Scale (estimated start and end date)	Comments
	A29 Re-alignment	Spring 2023 - Autumn 2024 for phase 1	
	A27 Arundel Bypass	Application 2022	Consultation spring 2022
	Rampion 2	Mid 2020s earliest	Consultation spring 2022
	Gatwick Airport Northern Runway	DCO to be submitted Spring 2023	Consultation summer 2022
	A259 Corridor Enhancement Capacity, East Arun	Under construction	Estimated completion November 2022

Mineral Plans in SEEAWP Area

All the MPAs have adopted mineral development plans (of development plans with mineral policies). However, about 50% of the MPAs have plans that are out of date in that they are more than 5 years old. However, all the remaining MPAs are progressing with revised Development Plan Documents. Indeed several, Central and Eastern Berkshire, East Sussex and West Berkshire are at or at post 'examination' stage.

Regarding the 'adopted' plans there is some 24.6 Mt of sand and gravel in the outstanding allocations i.e. those that have not received planning permission, in mineral plans. If permitted they would add a further 4 years to the 2021 South East landbank of 8 years.

Table 8 Minerals Plans Information

Thousand tonnes

Mineral Planning Authority	**Plan Name / Mineral DPD**	**Status**	**Change since 2020 (Yes/No)**	**Comments**	**Allocations – Outstanding Tonnage (**not yet permitted)	
					Sand and Gravel	Crushed Rock
Buckinghamshire	Buckinghamshire Minerals and Waste Local Plan	Adopted July 2019	N		5,850	n/a
C&E Berkshire	Replacement Minerals Local Plan for Berkshire (incorporating the Alterations adopted in December 1997 and May 2001 (joint Strategic Planning Unit)	Saved policies	n/a		n/a	n/a
	Central & Eastern Berkshire - Joint Minerals and Waste Plan	Submitted Feb 2021	Y	Currently waiting for adoption	n/a	n/a
East Sussex and Brighton & Hove (incl SDNPA part)	Waste and Minerals Plan	Adopted 2013	N		0	0
	Waste and Minerals Sites Plan	Adopted 2017	N		0	0
	Waste and Minerals Local Plan Review - Revised policies	Submitted May 2022	Y		0	0
Hampshire (incl SDNPA part)	Hampshire Minerals and Waste Plan	Adopted Oct 2013	N		2,693	n/a
	Hampshire Minerals and Waste Plan Partial Update	Draft Plan Nov 2022	Y		n/a	n/a
Isle of Wight	Isle of Wight Core Strategy	Adopted Mar 2012	N		n/a	n/a

Mineral Planning Authority	Plan Name / Mineral DPD	Status	Change since 2020 (Yes/No)	Comments	Allocations – Outstanding Tonnage (not yet permitted)	
					Sand and Gravel	Crushed Rock
	Island Planning Strategy Minerals and Waste DPD	Not yet drafted	N		n/a	n/a
Kent	Kent Minerals and waste Local Plan 2013-30 Full Review	Draft Plan Sept 2022	Y		n/a	n/a
	Kent Mineral Sites Plan	Adopted 2020	N		5,700	0
Medway	Kent Minerals Local Plan Construction Aggregates	Adopted 1993	N	Plan is out of date, but policies have been saved. Minerals policies to be included in new Medway Local Plan.	n/a	n/a
	Medway Local Plan	Draft Plan 2018	N	Revised Reg 18 Plan may be published late 2022 or 2023	n/a	n/a
Milton Keynes	Minerals Local Plan	Adopted Jul 2017	N		118	n/a
Oxfordshire	Oxfordshire Minerals and Waste Local Plan: Part 1 Core Strategy	Adopted Sept 2017	N		n/a	n/a
	Oxfordshire Minerals and Waste Local Plan: Partial Update to Core Strategy	Draft Plan 2022	Y		n/a	n/a
	Oxfordshire Minerals and Waste Local Plan: Part 2 Site Allocations Plan	Draft Plan 2020 & 2022	Y		n/a	n/a
Slough	Berkshire Waste Local Plan (saved policies)	Saved policies 2007	N		n/a	n/a
	Berkshire Joint Minerals Local Plan (saved policies)	Saved policies 2007	N		n/a	n/a
	Slough Local Plan 2016-2036		N	Work paused 2022		
Surrey	Surrey Minerals Plan Core Strategy DPD 2011	Adopted Jul 2011	N		n/a	n/a

Mineral Planning Authority	Plan Name / Mineral DPD	Status	Change since 2020 (Yes/No)	Comments	Allocations – Outstanding Tonnage (not yet permitted)	
					Sand and Gravel	Crushed Rock
	Surrey Minerals Plan Primary Aggregates DPD	Adopted Jul 2011	N		7,620	n/a
	Aggregates Recycling Joint DPD (PDF)	Adopted Feb 2013	N		n/a	n/a
	Surrey Minerals and Waste Local Plan	Not yet drafted	N	Aiming for Draft Plan Summer 2023	n/a	n/a
West Berkshire	Minerals and Waste Local Plan	Submitted Jul 2021	Y		1,400	n/a
West Sussex	West Sussex Waste Local Plan	Adopted Apr 2014	N		n/a	n/a
	West Sussex Joint Minerals Local Plan (Partial Review March 2021)	Adopted Mar 2021	**Y**		2,680	n/a
Total					**18,693**	**10,512**

Planning applications in SEEAWP area

A schedule of outstanding and yet to be determined (pending) is set out in Table 9. The tonnage of aggregate for permissions granted 2021 wil have been factored in to the reserve and landbanks recorded in respective tables above.

An estimated 14.5 Mt of sand and gravel (4.8 Mt soft sand and 9.7 Mt sharp sand and gravel) is included in the outstanding applications. If permitted this represents the equivalent of 2 years of land bank of which 4.8 Mt is soft sand and 9.7 Mt sharp, 2.5 and 2 years landbank respectively. All of the tonnage for the soft sand applications is in Hampshire, while 70% of the sharp sand and gravel tonnage is in Surrey.

Table 9 Planning Applications in SEEAWP Area

Mineral Planning Authority	Site Name	Grid Ref.	Operator / Applicant	Type: Development: Mineral	Decision / Date	Tonnage (thousand tonnes)	Expiry Date
Buckinghamshire	Land adjacent to the M25 between junctions 15 and 16	503857, 183604	Colne Valley Motorway Service Area Limited	Prior extraction – Quarry - SSG	Pending	156	
	Sutton Court Farm, Langley	502500, 179300	Ingrebourne Valley Ltd	New – Quarry - SSG	Pending	1,000	
Hampshire (incl SDNPA part)	Roeshot	418500, 094700	Cemex	New – Quarry - SSG	Granted 15/04/2021	3,000	20 years
	Bleak Hill III (also known as Hamer Warren)	413005, 111303	Cemex	Extension – Quarry - SSG	Granted 02/12/2021	600	31 Dec 2025
	Hamble	447705, 107955	Grundon	New – Quarry - SSG	Pending	1,700	n/a
	Frith End	480980, 139137	Grundon	Extension – Quarry - SS	Pending (Granted 20th April 2022)	100	30 Jun 2024
	Purple Haze	411841, 106649	TJ Transport	New – Quarry - SS	Pending	4,500	n/a
	Five Oaks	456276, 114150	TMR South Coast Ltd	New – Quarry - SS	Pending	230	n/a
	Land at Three Maids Hill	446165, 133774	Cemex	New – Agg Recycling – R&SA	Refused 21 Jan 2021 (Appealed and granted	75,000 tpa	
Isle of Wight	Palmers Farm		Wight Building Materials Ltd	New – Quarry - SSG	Pending	900	
Oxfordshire	Hatford Quarry	432363, 195747	Hatford Quarry Limited	Extension – Quarry – SS/SSG/CR	Mar-21	130 / 225 / 520	2030
	Swannybrook Farm	440738, 196786	Nap Grabhire	Extension - Agg Recycling - R&SA	May-21	66.6	Perm
	New Barn Farm	460034, 188235	Grundon	New - Agg Recycling - R&SA	28.9.2021	10	2038
	Hennef Way	445727, 241838	Tarmac	Extension – Rail Depot	22.10.21	2,000	5 years then drop to 183.75
Surrey	Land at Milton Park Farm	501075, 170148	Hanson Quarry Products Europe Ltd	New – Quarry - SSG	Pending	2,400	May 2021

Mineral Planning Authority	Site Name	Grid Ref.	Operator / Applicant	Type: Development: Mineral	Decision / Date	Tonnage (thousand tonnes)	Expiry Date
	King George VI Reservoir	504080, 173448	Brett Aggregates Ltd	New – Quarry - SSG	Pending	3,400	Aug 2022
	Land at Whitehall Farm	500528, 169541	CEMEX UK Operations Ltd	New – Quarry - SSG	Pending	1,000	Mar 2022

Notes:
Grid Refence (10 figure)
Type: N – New; E – Extension (laterally/vertically); Other - only recorded if affects reserves/capacity e.g. extension of hours – disregard
Mineral: SSG (Sharp Sand and gravel)/SS - (Soft Sand (building/mortar/asphalt sands)/CR - (Crushed Rock); MDA (Marine dredged aggregate)/ ISG (Imported Sand & Gravel)/ICR (Imported Crushed Rock)/ SA (Secondary Aggregates Facility/ S/RA (Secondary/ Recycled Aggregates Facility);
Development: Q (Quarry); Wharf; Rail Depot; Recycling Facility
Mineral: SSG (Sharp Sand and gravel)/SS - (Soft Sand (building/mortar/asphalt sands)/CR - (Crushed Rock); MDA (Marine dredged aggregate)/ ISG (Imported Sand & Gravel)/ICR (Imported Crushed Rock)/ SA (Secondary Aggregates Facility/ RA (Recycled Aggregates Facility) - all applicable recorded
Decision Pending; Granted; Refused: Appeal: **Date** MM/YY: **Tonnage** Reserve (Thousand tonnes) or Capacity (Thousand tonnes per annum)
Expiry Date YYYY if applicable

c - confidential N/A - not applicable

Local Aggregate Assessments in the SEEAWP area

All the South East MPAs, apart from Slough, have submitted draft LAAs for 2021. Table 10 includes information on Aggregate Provision Rates and landbanks for sand and gravel and crushed rock where applicable along with some comments. A function of LAAs is to inform whether the South East 'is making a full contribution towards meeting …. local aggregate needs'. This is taken as whether an MPA has:

- A landbank that meets PPG landbank requirements (7 years for sand and gravel; 10 years for crushed rock).
- Adequate capacity for alternative aggregate supply from marine dredged aggregates, imported aggregate, and secondary/recycled aggregate.
- Any mitigatory circumstances by way of: current undetermined planning applications and/or outstanding allocations i.e. yet to receive planning permission, in an up to date adopted plan; or environmental constraints that would make the landbank requirements for a MPA unsustainable.

The South East LAAs 2021 Dashboard at the end of the report summarises critical information in the LAAs and it is proposed it be included in the Annual Report with the following commentary (in Italics).

All the South East MPAs, apart from Slough, have submitted draft LAAs for 2021. Table 10 includes information on Aggregate Provision Rates and landbanks for sand and gravel and crushed rock where applicable along with some comments. A function of LAAs is to inform whether the South East 'is making a full contribution towards meeting …. local aggregate needs'. This is taken as whether an MPA has:

- A landbank that meets PPG landbank requirements (7 years for sand and gravel; 10 years for crushed rock).
- Adequate capacity for alternative aggregate supply from marine dredged aggregates, imported aggregate, and secondary/recycled aggregate.
- Any mitigatory circumstances by way of: current undetermined planning applications and/or outstanding allocations i.e. yet to receive planning permission, in an up to date adopted plan; or environmental constraints that would make the landbank requirements for a MPA unsustainable.

Table 10 demonstrates that the following MPAs have adequate landbanks:

- Central and Eastern Berkshire MPAs.
- Hampshire – although the soft sand landbank is low, but there are undetermined planning applications.
- Kent – although the MPA notes declining sharp sand and gravel sales.
- Oxfordshire – although the crushed rock land bank is 8 years and below requirement, but there is an outstanding application.
- Surrey – however the landbank is skewed to soft sand with a landbank of 11 years and a sharp sand and gravel land bank of 4 years. On the other hand there are undetermined applications that would rebalance the situation.

- West Berkshire – 11 years – although dependent on one site.

The remaining MPAs have landbanks below NPPF requirement.

- Buckinghamshire – 6 years - although there is a current application for 1.5 Mt of sharp sand and gravel that has the potential to reinforce the landbank to a level above NPPF requirements.
- East Sussex – 1 year - the emerging mineral plan will determine whether any additional tonnage can be allocated and whether there is sufficient capacity from alternative supplies, including from other MPAs
- Isle of Wight – 6 years – the island status and dependency on marine dredged aggregates for which there is adequate wharf capacity.
- Medway – 4 years – although there are resources which the emerging plan can assess opportunities
- Milton Keynes – 3 years – although the mineral plan allocates some sites that have the potential to meet NPPF requirements.
- West Sussex – 4 years – the mineral plan identifies three sites for soft sand and sharp sand and gravel sales are very limited. There is a query whether there is sufficient headroom for wharf and rail depot capacity.

Further to this there are a few LAAs where the APR are below current sales or sales trends which if revised may indicate lower land banks.

Overall, the LAAs indicate very mixed prospects for local aggregate supply – six of the MPAs have landbanks that do not meet NPPF requirements. On the other hand, most can offer reasonable mitigations that demonstrate they are continuing to offer a ’full contribution’ to aggregate needs.

However, aggregates supply is increasingly being focussed on the few MPAs with the larger sales and land banks. These are Oxfordshire, Hampshire, Kent and Buckinghamshire. However, Kent has declining sharp sand and gravel sales.

Table 10 Local Aggregate Assessments in the South East

Mineral Planning Authority	APR (Thousand tonnes/pa)		Landbank (Years)		APR Methodology	Comments (Summary points & SEEAWP draft summary **Comments**)
	S & G	**C R**	**S & G**	**C R**		
Buckinghamshire	940	n/a	6	n/a	10-yr. av. sales	**APR:** below current/3-yr. av. sales which are on a rising trend. **Reserves:** declining trend and landbank below NPPF requirement. Limited SS sales and reserves. Pending applications 1.5 Mt + **Capacity** An active rail depot (no capacity data). S/RA sales well below capacity **Comment: Consider review of APR and recalibration of landbank but note pending applications.**
C & E Berkshire	628	n/a	10	n/a	Combination of 10 years sales data & a variety of growth factors for forecasting	**APR**: above current/ av. sales that display mixed trend. **Reserves:** Proposed allocations/criteria policy in emerging plan. No SS reserves. **Capacity:** No rail depot – dependent on neighbouring MPAs (see West Berkshire below) - no capacity issues reported. S/RA capacity headroom est. about 25%. **No further comment**.
East Sussex	106	n/a	1	n/a	3-yr. av. sales divided in half	**APR:** specific geographic circumstances for calculating APR – note there is effectively none **Reserves:** virtually exhausted. Mineral plan to determine if further potential reserves can be allocated. The identified environmental constraints noted. SS reserves, but no recent sales. **Capacity**: MDA sales above 3-yr. av. but sufficient capacity at the wharves and rail depots. S/RA capacity data limited but historic information indicates adequate headroom. **Comment: Note the emerging mineral plan will resolve future aggregate supply issues.**
Hampshire	1,150	n/a	10	n/a	Combination of 10-year sales data and growth factors including MPA forecast	**APR**: above current and av. sales. **Reserves:** SSG landbank above NPPF requirement but SS landbank of 5 years, but applications and review of mineral plan pending. **Capacity:** data for MDA/imported aggregates limited with possible issue for wharves. Large capacity headroom for S/RA **No further comments**

Mineral Planning Authority	**APR** (Thousand tonnes/pa)		**Landbank** (Years)		**APR Methodology**	**Comments** (Summary points & SEEAWP draft summary **Comments**)
	S & G	**C R**	**S & G**	**C R**		
Isle of Wight	87	n/a	6	n/a	10-yr. av. sales	**APR:** lower than current/3-yr av. sales **Reserves:** below NPPF requirement. Some limited SS and CR sales/reserves (confidential) **Capacity:** MDA important aggregate source but **n**o constraints on wharf and S/RA capacity **Comment: Consider review of APR and recalibration of landbank and note IoW special circumstances**
Kent	691	857	11	19	10-yr. av. sales	**APR:** S&G below 2021 sales CR above 2021 sales **Reserves**: Both SS/SSG landbanks above minimum requirement 14/11 yrs. LAA reports SSG in steep decline with no realistic potential for this trend to be reversed. **Capacity**: Adequate capacity at wharves and rail depots. LAA note the CR imports have been at a record high. Alternative development pressures at some of the wharves. Capacity at S/RA sites adequate subject to data limitations. **Comment: Clarification of terminology would be helpful.**
Medway	119	n/a	4	n/a	3-yr av. sales	**APR:** above current/10-yr. av. sales - only two quarries (one currently operating) with limited life **Reserves:** Limited life landbank but potential for further sites and emerging local plan proposing areas of search No SS resources. **Capacity**: Rising trend in MDA sales but wharf capacity for MDA and imported aggregates. S/RA sales declining but significant capacity. **Comment: Note emerging local plan addressing the limited landbank.**
Milton Keynes	170	n/a	3	n/a	Derived from MLP – higher than 10/3-year average sales	**APR**: above 10/3 yr. av. sales **Reserves:** Landbank below NPPF requirement but mineral plan allocations (4 sites). No SS resources. **Capacity:** Rail depot capacity margin. Recycled aggregate sales modest (little CDE generated) generous capacity margin. **No further comments**

Mineral Planning Authority	**APR** (Thousand tonnes/pa)		**Landbank** (Years)		**APR Methodology**	**Comments** (Summary points & SEEAWP draft summary **Comments**)
	S & G	**C R**	**S & G**	**C R**		
Oxfordshire	1,258	824	11	8	APR (SSG) based on Core Strategy and retained accounting for sales/projected growth, APR (SS) based on 3-year sales in 2018 and still relevant APR (CR) increased to 10-year average	**APRs**: below current/3-yr. av. sales. Rising sales trend (two major rail projects) and declining **Reserves:** CR below NPPF landbank requirement, but undetermined application for 2.7Mt. **Capacity:** Although rail depots data confidential sales appear buoyant and capacity has increased with new investment. Recycled aggregate sales declined but capacity increased. Oxfordshire has been heavily affected by HS2 and note the APRs to be reviewed after 'normal' sales patterns re-emerge. **Comment: Current special circumstances noted and support review of APRs in due course.**
Slough						Slough BC does not engage with SEEAWP and has not prepared LAAs. However, the Borough has a major aggregates rail depot and some S/RA sites and sales data on these included in the Annual Report. No data on capacity.
Surrey	1,000	see notes	8	see notes	Above av. sales to factor in demand pressures	**APR:** above current/av. sales which the latter are exhibiting downward trends. **Reserves:** Landbank meet NPPF requirements but 'mask a significant imbalance' between; SS (11yrs,) and SSG (4 yrs.) Allocations if permitted would address landbank deficit and current undetermined applications for 5.54 Mt would if permitted increase landbank to 13 years and longer-term prospects uncertain. A plan review is underway. CR reserve but site not operational. **Capacity:** Rail depot sales limited as only one site – imports from depots in adjacent MPAs – see West Sussex below. S/RA sales increased in 2021 although declining trend – ample capacity **Note low level of sharp sand and gravel reserves which would remedy low landbank, nevertheless support a mineral plan review.**
West Berkshire	233	n/a	11	n/a	Same as 2018 rate	**APR:** well above average and declining sales. **Reserves:** Adequate landbank but concentrated on one site. No SS reserves, although a site might emerge in the plan under preparation.

Mineral Planning Authority	**APR** (Thousand tonnes/pa)		**Landbank** (Years)		**APR Methodology**	**Comments** (Summary points & SEEAWP draft summary **Comments**)
	S & G	**C R**	**S & G**	**C R**		
						Capacity: CR sales appear to be increasing and though no reported capacity issues data suggests limited headroom with implications for C&E Berkshire. Capacity well above sales for recycled aggregate facilities (no secondary aggregate facilities). **Comment: Some clarity on rail depot capacity would be welcome as part of the emerging mineral plan.**
West Sussex	460	n/a	4	n/a	SSG est. max annual demand SS 10-yr av. sales/local data	**APR:** close to current sales level **Reserves:** Landbank below NPPF requirement - similar for both SS and SSG (one site with incidental sales from SS sites) Mineral plan allocations for three SS sites. **Capacity**: sufficient capacity headroom estimated for both wharves, depots and S/RA facilities **Comment: Low landbanks noted and options to address these needs to be considered by the MPA.**

Notes: S & G: sand and gravel (including soft sand; sharp sand and gravel); CR: crushed rock; MDA – marine dredged aggregate; S/RA – secondary/recycled aggregate. Landbank calculation: Permitted reserves divided by APR (Aggregate Provision Rate or LAA Rate)

NPPF requirement for landbanks is 7 years for sand and gravel; and 10 years for crushed rock

Surrey has crushed rock reserves but data confidential

Summary

- The 2021 South East England sales of primary aggregate (excluding sales of imported aggregate) were 15.3 Mt. Over the 10-year period, 2012-2021, sales display a gently declining – virtually level – trend. On the other hand, the land won sales of sand and gravel (6.6 Mt) and crushed rock (2.1 Mt) displayed a modest upward trend. Marine dredged aggregate sales (6.6 Mt) show a similar trend. Nevertheless, marine dredged aggregates are still one of the critical components of MASS for the South East.

- Virtually all MPAs had sand and gravel sales during 2021. The MPAs with the largest sales were Oxfordshire (1.4 Mt), Buckinghamshire (1.3 Mt), Kent (0.9 Mt), Surrey and Hampshire (0.8 Mt each). However, the soft sand element of sand and gravel sales were particularly important for Kent (0.6 Mt) and Surrey (0.5 Mt). Crushed rock sales were concentrated in Oxfordshire (1.2 Mt) and Kent (0.9 Mt). Almost half the marine dredged aggregate sales were from Kent and Medway wharves. Evidence from past AM surveys suggest a significant proportion of these sales are exported to London.

- The AM 2021 survey provides information on sales of imported aggregate and the dominant aggregate is crushed rock sales at wharves (3.4 Mt) and rail depots (3.8 Mt). Together these sales were more than marine dredged aggregate sales. However, the imported crushed rock sales trends at wharves and rail depots were dissimilar. Wharf sales display a significant upward trend, doubling over the previous 10-year period. In contrast, rail depot sales are on a virtually level trend with a declining 3-year trend (2019-2021). Although imports delivered by road are not covered by AM 2021 the nationally collated AM 2019 survey indicate 69% of imported crushed rock sales are via rail or water (sea). As with marine dredged aggregates, imported crushed rock sales are a vital component of MASS for the South East.

- The MPAs with the largest crushed rock wharf sales, by a very significant margin, are Kent and Medway (3.1 Mt). While for rail depot sales the largest are Hampshire and Berkshire MPAs (1.9 Mt).

- Land won aggregate reserves in the South East at the end of 2021 were over 77 Mt of which 54.3 Mt was sand and gravel and 23.4 Mt crushed rock. Over the ten years since 2012 land won aggregates reserves have had a decidedly downward trend. Sand and gravel reserves in 2021 are about 30% lower than in 2012.

- The MPAs with the highest reserves for sand and gravel were Oxfordshire (14.4 Mt), Kent (7.6 Mt), Hampshire (7.6 Mt) and Surrey (7.4 Mt). However, 6.2 Mt (82%) and 5.5 Mt (70%) of the respective Kent and Surrey sand and gravel reserves were soft sand. The South East proportion is about 30%.

- The reserves translate into a landbank for sand and gravel of 8 years. However, this varies over the South East. Buckinghamshire, East Sussex, Isle

of Wight, Medway Milton Keynes and West Sussex have land banks that do not meet the NPPF requirement of 7 years. Only Kent and Oxfordshire have significant crushed rock landbanks although the latter does not meet the NPPF requirement of 10 years.

- The most important offshore marine dredged aggregate reserves for the South East are in the South Coast and Thames's Estuary 'dredging regions' and had reserves of 75 Mt and 38.2 Mt respectively. The reserve life was 22 and 28 years for the South Coast and Thames Estuary regions respectively.

- The ability of the South East to import crushed rock and handle marine dredged aggregates is dependent on capacity of wharves and rail depots. Capacity estimates are unreliable but best judgement is that in 2021 wharf capacity was 14.4 Mt. This seemed to provide a 20 % 'headroom', above 10-year average sales rate. However, there is variation across the South East with Kent and Medway MPAs having the most generous.

- Regarding capacity at rail depots – again estimates are partly conjectural – capacity in 2021 was 13.3 Mt which is above the 10-year average sales rate. Recently more capacity has had to be implemented in West Berkshire and Oxfordshire.

- Further constraints on marine dredged aggregate and crushed rock capacity are the size and quality of dredgers and rail paths and land banks in the MPAs supplying aggregate. However there has been some new dredgers deployed, and the current land banks in Leicestershire and Somerset are above 10 years. However, SEEAWP has noted concerns about longer term prospects about the continuation of the supply of crushed rock by rail from some sources.

- Estimated secondary and recycled aggregate sales are almost 4.6 Mt during 2021. There is an apparent slight upward trend since 2012 although survey difficulties and reporting changes has affected data quality. Secondary aggregate sales are about 18% of total secondary and recycled aggregates sales. Only a few MPAs have records of secondary aggregate sales, with Hampshire reporting just under 0.5 Mt. The MPAs with most recycled aggregate sales are Hampshire (0.8 Mt), Kent (0.8 Mt), Surrey and West Berkshire (< 0.8 Mt) There are no reported constraints on capacity.

In summarising the commentary and tables in the Annual above SEEAWP identifies some trends and issues concerning the future of aggregates in the South East.

- Primary aggregate sales are on a virtually level trend (Table 2). The aggregate sales stream that contradicts this are crushed rock imports sales through the wharves (Appendix 5). However, set against that is the strong downward trend in reserves and the landbank for sand and gravel being close to NPPF requirements (Tables 3 and 5). Moreover, some of the MPAs land banks are well below the requirements (Table 5) and further addressed by the LAAs (Table 10). This suggest a potential supply issue, which could be compounded by possible increase in demand from major project and the aspiration for higher economic growth.

- The Annual Report lists several major construction projects and developments (Table 7), which could have significant demands on aggregates. However, in most instances there is insufficient data to provide how much is required, where and when. However, a 'guesstimate' suggests that project like the Oxford – Cambridge ARC and Growth Area), Thames Gateway and Lower Thames Crossing, Gatwick Expansion, Heathrow Expansion as well as major infrastructure schemes that will create aggregate demands, directly or indirectly across the South East and in turn aggregate provision.

- Generally, construction forecasts for the South East could be around 10% over the next decade. However, it is unclear how this translates in to aggregates provision. Nevertheless, MPAs may wish to factor in some growth as a contingency in plans and LAAs. So a systematic review of LAA Aggregate Provision Rates (Table 10) should be considered by MPAs for next year's round of LAAs.

- Historically, the South East relies on marine dredged aggregates and crushed rock imports to augment supply (Table 2, Appendices 5, 6 and7). Generally, there are not supply constraints. Marine dredged aggregate reserves, crushed rock reserves at relevant exporting MPAs and there is overall adequate capacity at wharves and rail depots (Table 4). However, the data is insufficiently reliable to make a fully informed judgement whether there is sufficient capacity throughout South East. Furthermore, with the trend for increasing crushed rock imports alongside the downward trend in sand and gravel reserves, the South East is becoming even more reliant on wharves and rail depot capacity to accommodate alternative to local land won material. A loss of wharf or rail depot capacity would be damaging on the integrity of the South East's future aggregate supply.

- Moreover, it is noted that by virtue of the sales data it seems capacity is skewed to Kent and Medway. This could have distribution issues if this pattern is continued to be relied on. It should also be stressed that these aggregate streams cannot fully substitute for local land won sales. There are differences in end uses for the various aggregates and customer preferences that militate against totally relying on transfer between different aggregate streams. This has been stressed by some members of SEEAWP – also see below regarding secondary and recycled aggregates. This suggests a loss of land won aggregate reserves from an MPA should be made up by another to some degree. In the first instance this should be addressed by the relevant mineral plans but ultimately if the South East cannot meet its provision as currently set out in the PPG, SEEAWP will have to report accordingly to the NACG

- Secondary and recycled aggregates are now a feature of aggregate supply and subject to data reliability they provide about 24% of all primary aggregate (land won sand and gravel, crushed rock and marine dredged aggregate sales excluding imports) sales (Table 6). Furthermore, there are no immediate constraints on capacity, although there are limitations to this aggregates stream. The source material whether it is construction etc waste and/or industrial by products is limited. Additionally, there are limits to how far they can be an alternative to land won aggregate. The Mineral Products

Association's view is that the maximum contribution secondary and recycled aggregate to total aggregate supply is around 30 %. This further endorses the view above that there is not necessarily direct transfer between aggregates streams.

- It is noted that there is built in to existing mineral plans unused allocations (Table 8) and there are some planning applications (Table 9) which have the potential to augment reserves. Together, these could in due course add 6 years to the sand and gravel land bank. However, there is limited certainty the applications/allocations can be realised before the landbank is eroded further. Consequently, this only provides a limited mitigation to general trend of declining reserves/landbanks.

- A further issue with land won aggregates is that sand and gravel is not an entirely homogeneous aggregate. As reported above soft sand is generally unsuitable for concrete manufacture while sharp sand and gravel is unsuitable for mortars and fine aggregate applications. This is not an issue overall for the South East as soft sand is a minority product but in the eastern part of the region this is not the case and the low landbanks of sharp sand and gravel give an added dimension to the supply system. A question is whether other MPAs can cover additional demands for sharp sand and gravel as in due course this may affect the South East's regional contribution to national aggregate needs.

- The LAAs indicate very mixed prospects for local aggregate supply – six of the MPAs have landbanks that do not meet NPPF requirements. Although there are mitigations including: availability of potential reserves through mineral plan allocations; applications pending determination and/or; significant local environmental constraints such as the South Downs National Park and AoNBs. On the other hand, supply is increasingly being focussed on the few MPAs with the larger sales and land banks. These are Oxfordshire, Hampshire, Kent and Buckinghamshire. However, Kent has declining sharp sand and gravel sales so there are tensions that should be resolved soon

Conclusions

SEEAWP is required by the PPG to:

> '.. provide an assessment on the position of overall demand and supply for the Aggregate Working Party area, including whether, in its view, the area is making a full contribution towards meeting both national and local aggregate needs. This assessment should be based on local aggregate assessments and should be informed by other economic data. It should also include an indication of emerging trends of demand in the Aggregate Working Party area'

However, the challenge for SEEAWP in making its assessment is the absence of an up-to-date version of the 'National and regional guidelines for aggregates provision in England 2005 to 2020'. Without this Government advice there are no benchmarks for against which SEEAWP can make a meaningful comparison.

The issue is further compounded with no guidance on aggregate demand so SEEAWP must resort to making judgements based on disparate pieces of information.

The Annual Report identifies land-won sales that have displayed a modest upward trend (Table 2), while over the last 10 years reserves have had a decidedly downward trend, with sand and gravel reserves in 2021 about 30% lower than in 2012 (Table 3).

It is noted (p 35) that the MPA suggest a GB growth rate of about 1% per annum or 10% growth over the next decade in aggregate demand. The LAAs, and the major projects (Table 7, pp 36 - 38) suggest that this growth could be a reasonable assumption for the South East. However, how this demand translates to the different aggregate sectors is unclear, although the last 10 years growth in crushed rock imports (p27 Appendix 5/6) implies this sector may increase more. Moreover, given the locations of the largest projects, demand may cluster in parts of the South East although it is impossible estimate these local impacts other than provide an indication where pressures may arise (p35).

Regarding supply or provision of aggregates, the LAAs (pp 45 - 46, Table 10) as informed by the AM 2021 (p 25 Table 25) survey indicate a sand and gravel land bank of 8 years and that for crushed rock of 14 years. Both are within the NPPF requirements. Moreover, there is evidence of potential additional reserves through unused allocations in mineral plans and outstanding planning applications that could increase the sand and gravel landbank by a further 6 years (pp 39 - 45 Tables 8/9). This suggests that there is potential to accommodate growth in sand and gravel demand. Regarding, marine dredged aggregates there are significant offshore reserves (p 20)

However, it is noted that provision varies across the South East and some MPAs do not meet the NPPF land bank requirements (pp 39-44 Table 10), which places

pressure on the MPAs with larger reserves. This is particularly noticeable in the eastern sector of the South East where the sand and gravel landbank is biased to soft sand (p 25 Appendix 4) and sand and gravel reserves are becoming depleted

Moreover, if aggregates growth is skewed towards imported crushed rock and marine dredged aggregate this may place pressure sector on wharf and rail depot capacity. Overall, the AM data and LAAs suggest there is additional capacity, but if imports by sea of crushed rock and landings on marine dredged aggregates continue to grow it places more pressure on the Medway and Kent wharves and the associated distribution network (p 23 Table 4) which will become increasingly important and critical to regional aggregates supply. The pressure can be compounded by any loss of wharf or rail depot capacity, to non-minerals development associated with regeneration schemes frequently supported in local plans. Even apparent minor losses can have untoward impacts on an increasingly fragile supply system.

Accepting that the conclusions of the report are made in the absence of current Aggregate Guidelines that limits SEEAWP's assessment on the South East meeting national needs; there is evidence it makes a full contribution at the local level. It is however, acknowledged there are pressures in parts of the South East that must be addressed given the context of rising sales and declining reserves of land-won aggregates.

Appendix 1: SEEAWP Meetings

Date	Link to meeting minutes	Summary of Key Points
27th April	https://documents.hants.gov.uk/see-awp/SEEAWPMinutes-27April2021.pdf	Discussion on ToRs - a SEEAWP version to be agreed (adoption deferred until national ToRs published Considered key dates in SEEAWP work programme especially regarding submission of LAAs Publication of AM2019 collation later in year - impact on work programme AM 2021 – data problem about site capacity LAAs – emphasis on timely submission
28th October	https://documents.hants.gov.uk/see-awp/SEEAWPMinutes-28October2021.pdf	AM 2019 collation headlines - need for more subregional and transport data LAAs – appropriate level of APRs - addressing local shortages in provision Preparation for AM 2021 DLUHC stressed need for standardised data
7th December	https://documents.hants.gov.uk/see-awp/SEEAWPMinutes-071221.pdf	Calculation of APRs in LAAs - issues about Leicestershire LAA Finalising AR - meeting aggregate needs East Sussex/soft sand SoCGs - deferred

Appendix 2: Primary aggregates sites in the SEEAWP area

Mineral Planning Authority	Site Name	Reference (Figure 2)	Type of site	Operator	Easting/ Northing	Mineral	Status	Expiry
Buckinghamshire	All Souls Farm, Wexham	BUC001	Quarry	Tarmac Ltd	500000, 182000	SSG	Restored	
	Beechwood Nurseries, East Burnham	BUC002	Quarry	Summerleaze Ltd	495500, 183800	SSG	O	31-Dec-24
	Berryhill Farm, Taplow	BUC003	Quarry	Summerleaze Ltd	491300, 18200	SSG	Restored	
	Denham Park Farm	BUC004	Quarry	Ingrebourne Valley Ltd	502700, 189100	SSG / SS	O	31/08/2031
	George Green	BUC005	Quarry	Brett Aggregates	499300, 180800	SSG	O	31/12/2024
	New Denham	BUC006	Quarry	Summerleaze Ltd	504400, 184400	SSG	O	31/12/2026
	Springfield Farm, Beaconsfield	BUC007	Quarry	Springfield Farms Ltd	493000, 189400	SSG / SS	O	30/09/2044
	North Park	BUC008	Quarry	Cemex	502745, 179484	SSG	O	31/12/2026
	Slade Farm	BUC009	Quarry	RJD Ltd	496500, 188500	SSG	O	28/02/2031
	Thorney Mill Road, West Drayton	BUC010	Rail Depot / S/RA	Aggregate Industries	505171, 179280		O	
C&E Berkshire	Bray Quarry / Water Oakley	CEB001	Quarry	Summerleaze Ltd	491211, 178321	SSG	NYC	
	Eversley Quarry, (Fleethill Farm)	CEB002	Quarry	Harleyford Aggregates Ltd	478500, 162400	SSG	Closed	
	Horton Brook Quarry	CEB003	Quarry	Aggregate Industries UK Ltd	501862, 176848	SSG	Active	

Mineral Planning Authority	Site Name	Reference (Figure 2)	Type of site	Operator	Easting/ Northing	Mineral	Status	Expiry
	Kingsmead Quarry,	CEB004	Quarry	CEMEX	501774, 175417	SSG	Closed	
	Poyle Quarry (extension to BMF)	CEB005	Quarry	Summerleaze Ltd	502383, 176895	SSG	Closed	
	Riding Court Farm (Datchets)	CEB006	Quarry	CEMEX	499000, 177700	SSG	Active	
	Sheephouse Farm, Maidenhead	CEB007	Quarry	Summerleaze Ltd	489257, 182621	SSG	Active	
	Star Works, Knowle Hill	CEB008	Quarry	S Grundon Ltd	482020, 179530	SS	Closed	
	Colnbrook Rail Depot	CEB009	Rail Depot	Aggregate Industries UK Ltd	504200, 177700	ICR/ISG	Active	
East Sussex, Brighton & Hove and SDNPA (part)	Scotney Court, Lydd	ESB001	Quarry	Brett Aggregates	600100, 119900	SSG	Operational	
	Novington Sand pit	ESB002	Quarry	Dudman Group	536700, 114500	SS	NO	
	North Quay (Berth 1), Newhaven	ESB003	Wharf	Newhaven Roadstone / Tarmac	544700, 101600	CR	Operational	
	North Quay (Plot 6), Newhaven	ESB004	Wharf	FM Conway Ltd	544700, 101700		NO	
	North Quay (Plot 7), Newhaven	ESB005	Wharf	F M Conway Ltd	544700, 101800		NO	
	North Quay (Berth 4), Newhaven	ESB006	Wharf	European Metal Recycling	544700, 101900	CR	Operational	
	North Quay (Berth 5), Newhaven	ESB007	Wharf	Newhaven ERF	544700, 102100		NO	
	Fishers Wharf, East Quay	ESB008	Wharf	Brett Aggregates Ltd	545322, 100457	MDA	Operational	
	Rastrums Wharf, Rye	ESB009	Wharf	Rastrum for various customers	598830, 119316		Operational	

Mineral Planning Authority	Site Name	Reference (Figure 2)	Type of site	Operator	Easting/ Northing	Mineral	Status	Expiry
	Rye Wharf (AKA “old ARC wharf”)	ESB010	Wharf		593000, 119700		Closed	
	Britannia wharf, Shoreham Port	ESB011	Wharf	Day Group	526400, 104700		NO	
	Halls Aggregate Wharf, Shoreham	ESB012	Wharf	CEMEX UK Ltd	525682, 104934		Operational	
	East Quay Rail depot	ESB013	Wharf	Brett	545322, 100457	MDA	Operational	
	Newhaven Railhead	ESB014	Rail Depot	Day Aggregates	544700, 101900		Operational	
Hampshire (incl SDNPA part)	Badminston Farm	HAM001	Quarry	Mid Hants Ltd	447600, 102100	SSG	Active	
	Bleak Hill (Hamer Warren), Somerley	HAM002	Quarry	CEMEX Materials Ltd - South East	413100, 110800	SSG / SS	Active	
	Bramshill (Warren Heath) Quarry, Eversley	HAM003	Quarry	CEMEX Materials Ltd - South East	478300, 159400	SSG	Active	
	Blashford Quarry (Pumley Wood)	HAM004	Quarry	Tarmac Ltd	414600, 107300	SSG / SS	Active	
	Forest Lodge Home Farm	HAM005	Quarry	TJ Transport	442817, 105775	SS	Active	
	Frithend Sand Quarry	HAM006	Quarry	Grundon Waste Management Ltd	481300, 139000	SS	Active	
	Marchwood (Bury Farm) Quarry	HAM007	Quarry / R/SA	Marchwood Aggregates	437700, 111000		Active	
	Mortimer Quarry	HAM008	Quarry	Hills Group	462720, 164170	SSG	Aftercare	
	Kingsley Quarry (Rookery Farm)	HAM009	Quarry	Tarmac Ltd	478000, 137800	SS	Active	
	Roke Manor Quarry	HAM010	Quarry	Raymond Brown	433200, 122600	SSG	Active	

Mineral Planning Authority	Site Name	Reference (Figure 2)	Type of site	Operator	Easting/ Northing	Mineral	Status	Expiry
	Downton Manor Farm	HAM011	Quarry	New Milton Sand & Ballast	427400, 093100	SSG	Active	
	Eversley (Chandlers Farm) quarry, Eversley	HAM012	Quarry	CEMEX Materials Ltd - South East	480100, 161900	SSG	Active	
	Bedhampton Wharf, Havant	HAM013	Wharf	Tarmac Ltd	470500, 105600		Active	
	Burnley Wharf, Southampton	HAM014	Wharf	Tarmac Ltd	443000, 111700		Active	
	Dibles Wharf, Southampton	HAM015	Wharf	Dudman Group	443200, 111200		Active	
	Kendall's Wharf, Portsmouth	HAM016	Wharf	Kendall Bros	467500, 103200		Active	
	Fareham Wharf, Fareham	HAM017	Wharf	Tarmac Ltd	458000, 105900		Closed	
	Marchwood Wharf, Marchwood	HAM018	Wharf	Tarmac Ltd	439900, 111200		Active	
	Leamouth Wharf, Southampton	HAM019	Wharf	CEMEX Materials Ltd - South East	443300, 112300		Active	
	Botley Rail Depot, Botley	HAM020	Rail Depot	Aggregate Industries	452100, 113300		Active	
	Eastleigh Rail Depot, Eastleigh	HAM021	Rail Depot	Aggregate Industries	446100, 118300		Active	
	Fareham Rail Depot, Fareham	HAM022	Rail Depot	Kendall Bros	457000, 106300		Active	
Isle of Wight	Cheverton Down, Shorwell	IOW001	Quarry	Cheverton Aggregates Ltd	444000, 084000	SSG	D	
	Hale Manor Farm	IOW002	Quarry	Wight Building Materials Ltd	454155, 084433	SSG	Operational	
	Knighton Sand Pit	IOW003	Quarry	Knighton Sandpit Ltd	457400, 086500	SSG / SS	Operational	

Mineral Planning Authority	Site Name	Reference (Figure 2)	Type of site	Operator	Easting/ Northing	Mineral	Status	Expiry
	St Georges Lane, Newport	IOW004	Quarry	Wight Building Materials Ltd	451000, 087600	SSG	Operational	
	Shorewell sandpit (Haslett Farm) Shorewell	IOW005	Quarry	BR & GA Draper	446100, 082200	SSG / SS	Operational	
	Prospect quarry	IOW006	Quarry	Wight Building Materials Ltd	438338, 086681	CR	D	
	Blackhouse Quay, Newport	IOW007	Wharf	Blackhouse Quay Aggregates	450051, 089866		Operational	
	Kingston Wharf, East Cowes	IOW008	Wharf	Isle of Wight Aggregates Ltd	450296, 094331		Closed	
	Medina Wharf, West Cowes	IOW009	Wharf	Isle of Wight Aggregates Ltd	449900, 094600		Operational	
Kent	Borough Green Sand Pit, Borough Green	KET001	Quarry	Borough Green Sandpits Ltd	561700, 157600	SSG / SS	Active	
	Greatness Farm (Sevenoaks Quarry), S'oak	KET002	Quarry	Tarmac Ltd	554046, 157457	SS	Active	
	Allens Bank, Lydd	KET003	Quarry	Brett Aggregates Ltd	604458, 121779	SSG	Inactive	
	Aylesford Quarry, Aylesford	KET004	Quarry	Aylesford Heritage Ltd	572554, 159635	SSG / SS	Inactive	
	Burleigh Farm, nr Ashford	KET005	Quarry	Brett Aggregates Ltd	592672, 150043	SS	Active	
	Charing Quarry, nr Ashford	KET006	Quarry	Brett Aggregates Ltd	593562, 149294	SS	Closed	
	Conningbrook Quarry, Ashford	KET007	Quarry	Brett Aggregates Ltd	603215, 143732	SSG / SS	Inactive	
	Darenth Court Quarry, Dartford	KET008	Quarry	J Clubb Ltd	555077, 172398	SSG / SS	Inactive	
	Denge Quarry, Dungeness	KET009	Quarry	CEMEX UK	608439, 119764	SSG / SS	Active	

Mineral Planning Authority	Site Name	Reference (Figure 2)	Type of site	Operator	Easting/ Northing	Mineral	Status	Expiry
	East Peckham Quarry, E Peckham	KET010	Quarry	J Clubb Ltd	567868, 148815	SSG / SS	Closed	
	Faversham Quarries	KET011	Quarry	Brett Aggregates Ltd	601573, 162621	SSG / SS	Inactive	
	Ham Hill Sand Pit (Snodland Quarry)	KET012	Quarry	Tarmac Ltd	569300, 161000	SS	Inactive	
	Ightham Sand Pit	KET013	Quarry	H & H Celcon Ltd	560194, 157870	SS	Inactive	
	Joyce Green Quarry	KET014	Quarry	Ingrebourne Valley Ltd	553990, 175999	SSG / SS	Inactive	
	Lenham Quarry (Shepherds Farm), Lenham	KET015	Quarry	Brett Aggregates Ltd	591665, 150372	SS	Inactive	
	Lydd Quarry (Scotney Court Farm), Lydd	KET016	Quarry	Brett Aggregates Ltd	602063, 120108	SSG / SS	Active	
	Nepicar Sand Quarry, nr Sevenoaks	KET017	Quarry	J Clubb Ltd	562497, 157907	SS	Active	
	Stone Castle Farm, nr Tonbridge	KET018	Quarry	Lafarge Aggregates Ltd	564873, 146839	SSG / SS	Inactive	
	Wrotham quarry (Addington Sand Pit), Wrotham	KET019	Quarry	Ferns Aggregates	564700, 159400	SSG / SS	Active	
	Blaise Farm, West Malling	KET020	Quarry	Hanson Aggregates	566000, 156000	CR	Active	
	Hermitage Quarry, Maidstone	KET021	Quarry	Gallagher Aggregates	572200, 156000	CR	Active	
	Denton Wharf (Clubb Marine) Gravesend	KET022	Wharf	J Clubb Ltd	566908, 174170	SSG	Active	
	Dunkirk Jetty, Dover Wharf	KET023	Wharf	CEMEX UK	632000, 140400	SSG/CR	Active	
	East Quay, Whitstable Wharf	KET024	Wharf	Brett Aggregates Ltd	610858, 167089	SSG	Active	

Mineral Planning Authority	Site Name	Reference (Figure 2)	Type of site	Operator	Easting/ Northing	Mineral	Status	Expiry
	Johnson's Wharf, Greenhithe	KET025	Wharf	Tarmac Ltd	558187, 175135	SSG	Active	
	Northfleet Wharf (Botany Marshes), N'fleet	KET026	Wharf	CEMEX UK	561069, 175985	SSG	Active	
	Ramsgate New Port, Ramsgate	KET027	Wharf	Brett Aggregates Ltd	637971, 163929		Inactive	
	Red Lion Wharf, Gravesend	KET028	Wharf	Stema Shipping (UK) Ltd	563149, 174514	SSG/CR	Active	
	Ridham Dock, Ridham	KET029	Wharf	Brett Aggregates Ltd	592102, 168318	SS/SSG/CR	Active	
	Ridham Dock, Sittingbourne	KET030	Wharf	Tarmac Ltd	591910, 168695		Closed	
	Robins Wharf (Grove Road), Northfleet	KET031	Wharf	Brett Aggregates Ltd	561668, 175045	SSG	Active	
	Robins Wharf, Northfleet	KET032	Wharf	Aggregate Industries	561668, 175040	CR	Active	
	Allington Rail Sidings, Allington	KET033	Rail Depot	Allington Rail Sidings, Allington	574441, 157979	SS/SSG/CR	Active	
	Conningbrook Depot	KET034	Rail Depot	Conningbrook Depot	602900, 143900		Inactive	
	East Peckham Rail Depot	KET035	Rail Depot	East Peckham Rail Depot	568026, 148928		Inactive	
	Hothfield Works, Westwell	KET036	Rail Depot	Hothfield Works, Westwell	598057, 146316	CR	Active	
Medway	Isle of Grain Quarry, Perrys Farm, Grain	MED001	Quarry	J Clubb Ltd	588533, 177209	SSG	Inactive	
	Stoke Road, Hoo St. Werburgh	MED002	Quarry	Tarmac	579500, 172500	SSG	Operational	
	Cliffe Terminal	MED003	Wharf	Brett Aggregates Ltd	570756, 176785	SSG	Operational	

Mineral Planning Authority	Site Name	Reference (Figure 2)	Type of site	Operator	Easting/ Northing	Mineral	Status	Expiry
	Eurowharf, Frindsbury, Rochester	MED004	Wharf	Hanson Aggregates	575400, 169500	SSG	Operational	
	London Thamesport	MED005	Wharf	Medway Aggregates	TQ 86867 73832	SSG/CR	Operational	
	Isle of Grain, Grain	MED006	Wharf	Aggregate Industries	587238, 173994	SSG/CR	Operational	
	Isle of Grain, Grain	MED007	Rail Depot	Aggregate Industries	587287, 174513	CR	Inactive' (Export from wharves only)	
Milton Keynes	Land at Passenham Quarry (eastern extension) Calverton	MKY001	Quarry	GRS Roadstone Ltd	478061, 239003	SSG	Operational	
	Land South of Caldecote Farm, Newport Pagnell	MKY002	Quarry	Smith Construction	488046, 242152	SSG	Closed	
	Land East of Haversham Road, New Bradwell	MKY003	Quarry	Hanson Quarry Products Ltd	482114, 242002	SSG	Closed	
	Land to north & east of Lathbury.	MKY004	Quarry	Smith Aggregates Ltd	488271, 244947	SSG	Operational	
	Bletchley Rail Depot	MKY005	Rail Depot	CEMEX	486880, 233670		Operational	
Oxfordshire	Cassington Quarry	OXD001	Quarry	Hanson UK	447500, 211000	SSG	Inactive	12.2022
	Caversham Quarry	OXD002	Quarry	Tarmac	475000, 176400	SSG	A	12.2027
	Chinham Farm / Bowling Green Farm Quarry	OXD003	Quarry	Hills Quarry Products Ltd	431300, 194800	SS / CR	A	12.2037
	Duns Tew Quarry	OXD004	Quarry	Smith & Sons (Bletchington) Ltd	445500, 227600	SS / CR	A	12.2034

Mineral Planning Authority	Site Name	Reference (Figure 2)	Type of site	Operator	Easting/ Northing	Mineral	Status	Expiry
	Faringdon Quarry	OXD005	Quarry	Grundon Sand & Gravel Ltd	428600, 193800	SSG / SS / CR	A	2028
	Finmere Quarry	OXD006	Quarry	Opes Industries	462800, 232600	SSG	I-W	2030
	Gill Mill Quarry, Ducklington	OXD007	Quarry	Smith & Sons (Bletchington) Ltd	436900, 207400	SSG	A	12.204
	Hatford Quarry, Hatford	OXD008	Quarry	Hatford Quarry Ltd	433400, 195400	SS / CR	A	2028
	New Barn Farm, Cholsey	OXD009	Quarry	Grundon	460051, 118121	SSG	A	12.2037
	Shellingford Quarry	OXD010	Quarry	Multi Agg Ltd	432700, 193700	SS / CR	A	12.2044
	Stanton Harcourt Quarry (Stonehenge Farm)	OXD011	Quarry	Hanson UK	440800, 202200	SSG	I-NYC	12.2023
	Sutton Courtenay Quarry (Bridge Farm)	OXD012	Quarry	Hanson UK	451700, 194300	SSG	A	6.2024
	Sutton Wick Quarry, Abingdon	OXD013	Quarry	H Tuckwell & Sons Ltd	449100, 195100	SSG	A	3.2024
	Thrupp Farm Quarry, Radley	OXD014	Quarry	J Curtis & Sons	452300, 197800	SSG	In suspension	2042
	Upwood Quarry, Besseleigh	OXD015	Quarry	Hills Quarry Products Ltd	445300, 200300	SS / CR	A	12.2029
	Alkerton Quarry	OXD016	Quarry	Peter Bennie Ltd	438700, 243100	CR	Closed	2042
	Burford Quarry	OXD017	Quarry	Smith & Sons (Bletchington) Ltd	427700, 209900	CR	A	12.2035
	Dewars Farm Quarry, Ardley	OXD018	Quarry	Smith & Sons (Bletchington) Ltd	454000, 225000	CR	A	12.2028
	Rollright Quarry Phase 1	OXD019	Quarry	Hanson UK	428400, 230600	CR	A	2042

Mineral Planning Authority	Site Name	Reference (Figure 2)	Type of site	Operator	Easting/ Northing	Mineral	Status	Expiry
	Rollright Quarry Phase 2	OXD020	Quarry	Smith & Sons (Bletchington) Ltd	428400, 230600	CR	A	2022
	Sarsden (Castle Barn) Quarry	OXD021	Quarry	Great Tew Farm Partnership	430100, 222600	CR	Closed	
	Shipton on Cherwell Quarry	OXD022	Quarry	Earthline Ltd	447600, 217500	CR	Closed	
	Whitehill Quarry	OXD023	Quarry	Smith & Sons (Bletchington) Ltd	427000, 210800	CR	A	2.2042
	Wroxton Quarry	OXD024	Quarry	Peter Bennie Ltd	440500, 241500	CR	A	12.2042
	Appleford Sidings, Sutton Courtenay	OXD025	Rail Depot	Hanson UK	452000, 193100		A	
	Hennef Way, Banbury	OXD026	Rail Depot	Tarmac	446100, 241900		A	
	Hinksey Sidings, Oxford	OXD027	Rail Depot	Network Rail	451300, 204500		A	
	Oxford Road, Kidlington	OXD028	Rail Depot	Hanson UK	450500, 212500		A	
	Shipton on Cherwell Quarry	OXD029	Rail Depot	Earthline Ltd	448100, 217500		I	
Surrey	Addlestone Quarry (Wey Manor Farm)	SUR001	Quarry	Cappagh Public Works Ltd	506060, 163294	SSG	O	
	Farnham Quarry (Runfold Farm)	SUR002	Quarry	Hanson Aggregates	487500, 148400	SSG	C	
	Alton Road Sandpit	SUR003	Quarry	Earthline Ltd	482000, 144900	SS	O	
	Hengrove Farm, Staines	SUR004	Quarry	Henry Streeter Ltd	505200, 172100	SSG	C	
	Hithermoor quarry (Stanwell Quarry)	SUR005	Quarry	Brett Group	503400, 174700	SSG	O	

Mineral Planning Authority	Site Name	Reference (Figure 2)	Type of site	Operator	Easting/ Northing	Mineral	Status	Expiry
	Homefield Sandpit, Farnham	SUR006	Quarry	Chambers Runfold plc	487600, 147600	SS	C	
	Homers Farm	SUR007	Quarry	Henry Streeter (Sand and Ballast Ltd)	507082, 173209	SSG	O	
	Land north east of Pendell Farm	SUR008	Quarry	Sibelco UK	532398, 152333	SS	O	
	Manor Farm	SUR009	Quarry	Brett Group	505420, 169924	SSG	O	
	Mercers South Quarry	SUR010	Quarry	J&J Franks Ltd	530737, 151586	SS	O	
	Moorhouse Sand Pit, Limpsfield	SUR011	Quarry	Titsey Estates	541900, 153400	SS	O	
	North Park Quarry, Godstone	SUR012	Quarry	Sibelco UK	534100, 151700	SS	O	
	Queen Mary Reservoir, Laleham	SUR013	Quarry	Brett Group	507200, 169600	SSG	O	
	Reigate Road Quarry	SUR014	Quarry	J & J Franks Ltd	520600, 150500	SS	C	
	Runfold South Quarry (Area C), Farnham	SUR015	Quarry	SITA	486300, 147000	SS	C	
	Shepperton Quarry, Shepperton	SUR016	Quarry	Brett Group	505800, 167400	SSG	C	
	Tapwood Quarry, Buckland	SUR017	Quarry	Hanson Quarry Products Europe Ltd	523000, 151000	SSG	C	
	British Rail Down Yard, Woking	SUR018	Rail Depot	Day Aggregates	500100, 158200		O	
	Salfords Rail Aggregate Depot	SUR019	Rail Depot	Day Aggregates	528500, 145900		NO	
West Berkshire	Craven Keep, Hamstead Marshall	WEB001	Quarry	Earthline	441700, 166500	SSG	D	2042

Mineral Planning Authority	Site Name	Reference (Figure 2)	Type of site	Operator	Easting/ Northing	Mineral	Status	Expiry
	Harts Hill Copse (Bucklebury Quarry), Upper Bucklebury	WEB002	Quarry	Harleyford Aggregates Ltd./ Grundon Sand and Gravel	453100, 168700	SSG	O	Jun-22
	Kennetholme Farm, Midgham	WEB003	Quarry	Grundon Sand and Gravel	455200, 166100	SSG	NO	2023
	Lower Farm, Wasing	WEB004	Quarry	Tarmac Ltd	457976, 165045	SSG	NYC	
	Moores Farm, Pingewood	WEB005	Quarry	Caversham Restoration	469600, 169700	SSG	NO	2024
	Theale (South)	WEB006	Rail Depot	Aggregate Industries & FM Conway	463500, 170600		O	n/a
	Theale (North)	WEB007	Rail Depot	Hanson Aggregates	463500, 170400		O	n/a
	Theale (Central)	WEB008	Rail Depot	Breedon	463500, 170500		O	n/a
West Sussex (incl SDNPA part)	Chantry Lane Sandpit, Sullington	WSS001	Quarry	Dudman Aggregates Ltd	509457, 113880	SS		
	Washington sand quarry/Hampers Lane Sandpit, Sullington	WSS002	Quarry	Britannia Crest Recycling Ltd.	510675, 113821	SS		
	Kingsham Gravel Pit	WSS003	Quarry	Dudman Aggregates Ltd	486315, 103375	SSG		
	Rock Common Sandpit, Washington	WSS004	Quarry	Dudman Aggregates Ltd	512561, 113456	SS		
	Sandgate Park Quarry, Sullington	WSS005	Quarry	Cemex Uk Materials Ltd	510300, 114200	SS		
	West Heath Quarry, West Harting	WSS006	Quarry	Cemex Uk Materials Ltd	478500, 122700	SS		
	Minsted Sandpit, Minstead	WSS007	Quarry	Dudman Aggregates Ltd	485500, 121500	SS		
	Heath End Quarry, Duncton	WSS008	Quarry	Dudman Aggregates Ltd	496300, 118800	SS		

Mineral Planning Authority	Site Name	Reference (Figure 2)	Type of site	Operator	Easting/ Northing	Mineral	Status	Expiry
	Halls Wharf/Shoreham Wharf	WSS009	Wharf	Cemex UK Materials Ltd	525682, 104934			
	Turberville and Penneys Wharf, Southwick	WSS010	Wharf	Dudman Aggregates Ltd	523986, 104969			
	New Wharf, Shoreham	WSS011	Wharf	Aggregate Industries	522419, 105052			
	Solent Wharf	WSS012	Wharf	Tarmac Trading Limited	525393, 104809			
	ARC Wharf	WSS013	Wharf	Tarmac Trading Limited	525393, 104809			
	Railway Wharf, Littlehampton	WSS014	Wharf	Tarmac Trading Limited	502002, 102345			
	Tinsley Goods Yard, Crawley	WSS015	Rail Depot	CEMEX UK ltd.	528680, 139077			
	Chichester Rail Depot	WSS016	Rail depot	Dudman Aggregates Ltd	485094, 104523			
	Crawley Depot	WSS017	Rail depot	Day Group Ltd as Day Aggregates	528668, 138930			
	Crawley Rail Depot	WSS018	Rail depot	Aggregates Industries	528668, 138760			
	Ardingly Rail Depot, Ardingly	WSS019	Rail depot	Hanson UK	533901, 127609			

Notes:
Ref: Relates references in Figure 2 Type of Site : Quarry, Wharf, Rail Depot, S/RA – Secondary/recycling aggregate facility
Mineral: SS – soft sand, SSG – sharp sand and gravel, CR – crushed (hard) rock, MDA – marine dredged aggregate, ISG – imported sand and gravel, ICR – imported crushed rock, SA – secondary aggregate, RA- recycled aggregate
Status: O=operational; NO=Non Operational, D=Dormant, C=Closed, R=Restored/Redeveloped
End date – year (YYYY) permission expires if applicable

Appendix 3: Secondary & Recycled Aggregates sites in SEEAWP area

Mineral Planning Authority	Site Name	Reference (Figure 4)	Operator	Easting/ Northing	Mineral	Status	Expiry
Buckinghamshire	Thorney Mill Road, West Drayton	BUC010	Aggregate Industries	505171, 179280	Rail Depot / S/RA		
	Unit 13 Bisons Industrial Estate, Iver	BUC011	Cappagh Public Works Ltd	503300, 180100	S/RA		
	Lockshart Farm	BUC012	G Ives	486200, 222800	S/RA		
	Summerleys Farm, Princes Risborough	BUC013	C Putnam & Sons	479600, 203700	S/RA		
	Wapseys Wood	BUC014	Quattro	498500, 189400	S/RA		
	Chiltern View Nursery	BUC015	Westside Land Ltd	484700, 209900	S/RA		
	Unit 54 Binders Industrial Estate	BUC016	Wycombe Recycling Ltd	487800, 197100	S/RA		
	Unit 44 Binders Industrial Estate	BUC017	Wycombe Traders & Skip Hire	487800, 197100	S/RA		
	Slough Recycling	BUC018	Tarmac Ltd	500000, 182000	S/RA	Closed	
	New Denham Quarry	BUC019	Summerleaze Ltd	504200, 184600	S/RA		
	Red Brick Farm	BUC020	W J Doherty & Son	484413, 224561	S/RA		
C&E Berkshire	Bray Quarry	CEB010	Summerleaze Ltd	491312, 178343	S/RA	Closed	

Mineral Planning Authority	Site Name	Reference (Figure 4)	Operator	Easting/ Northing	Mineral	Status	Expiry
	Hindhay Quarry	CEB011	Summerleaze Ltd	489413, 138128	S/RA	Closed	
	Riding Court Farm	CEB012	Cemex	499054, 177728	S/RA	Active	
	Smallmead HWRC	CEB013	Re3 Waste Partnership	470567, 170723	S/RA	Active	
	Longshot Lane	CEB014	Re3 Waste Partnership	485377, 169125	S/RA	Active	
	Colnbrook Rail Depot	CEB015	Aggregate Industries	504095, 177436	S/RA	Active	
East Sussex and Brighton & Hove (incl SDNPA part)	Go green waste recycling	ESB015	Mr Honeysett	552700, 132000	S/RA	O	
	Hazelbank, Maresfield	ESB016	AM Skips	545900, 125500	S/RA	O	
	Woodside depot, Hailsham	ESB017	Hailsham Roadway	557987, 107198	S/RA	O	
	Woodland House	ESB018	R French & Sons	579300, 110800	S/RA	NO	
	Apex Way, Hailsham	ESB019	Haulaway Ltd	558100, 109100	S/RA	O	
	Ashdown Brickworks	ESB020	Ibstock Ltd	572000, 109500	S/RA	O	
	Land at Hole Farm, Westfield Lane, Westfield	ESB021	The Blackford Group	581095, 113809	S/RA	O	
	Cophall Wood, nr Polegate	ESB022	PJ Skip Hire	557600, 106700	S/RA	O	
	Chailey Brickworks	ESB023	Ibstock Ltd	539271, 117624	S/RA	O	
	Sandbanks, Herstmonceux	ESB024	Robins of Herstmonceux	563800, 113800	S/RA	NO	

Mineral Planning Authority	Site Name	Reference (Figure 4)	Operator	Easting/ Northing	Mineral	Status	Expiry
	New Road Industrial Estate, Newhaven	ESB025	Greenacre Waste Recycling	544656, 102407	S/RA	NO	
	Unit 13, Chaucer Industrial Estate, Polegate	ESB026	Pauls Mini Skips	559827, 104692	S/RA	NO	
	Unit 3, Cradle Hill Industrial Estate, Seaford	ESB027	James Waste Management /Expert Skip Hire	549670, 100317	S/RA	NO	
	Greystone Quarry, Southerham Lane, Lewis	ESB028	MDJ Light Bros Ltd	543200, 109100	S/RA	O	
Hampshire (incl SDNPA part)	Marchwood (Bury Farm) Quarry	HAM023	Marchwood Aggregates	437700, 111000	Quarry / R/SA	Operational	
	A303 Enviropark, Barton Stacey	HAM024	Raymond Brown	444300, 143000	S/RA	Operational	
	Ashley Crescent, Southampton	HAM025	L & S Waste Management	446100, 110400	S/RA	Operational	
	Beacon Hill, Ewshot	HAM026	Cranston Bros	481900, 150100	S/RA	Dormant	
	Blashford Quarry, Ellingham	HAM027	Lafarge Tarmac Ltd	414600, 107500	S/RA	Operational	
	Bleak Hill, Harbridge	HAM028	Cemex Materials Ltd - South East	413100, 111000	S/RA	Operational	
	Butser Hill Lime Works, (SDNP)	HAM029	George Ewan	474300, 125900	S/RA	Operational	
	Bury Farm, Curbridge	HAM030	Wessex Demolition & Savage	452500, 111200	S/RA	Operational	
	Bunny Lane, Timsbury	HAM031	Waltet Materials & RFSF	435500, 125100	S/RA	Operational	
	Caird Avenue, New Milton	HAM032	New Milton Sand & Ballast	425300, 094600	S/RA	Operational	
	Calf Lane, Odiham	HAM033	Comley & Sons Ltd	477300, 149800	S/RA	Operational	

Mineral Planning Authority	Site Name	Reference (Figure 4)	Operator	Easting/ Northing	Mineral	Status	Expiry
	Dock Gate 20, Southampton Docks	HAM034	K&B Crushers	438600, 112500	S/RA	Operational	
	Down Barn Farm, Fareham	HAM035	Graham Moyse	459100, 107300	S/RA	Operational	
	Eversley Haulage Park, Eversley	HAM036	R Collard Ltd	478800, 159100	S/RA	Operational	
	Farlington Redoubt, Portsmouth/Havant	HAM037	L & S Waste Management	468700, 106400	S/RA	Operational	
	Four Dell Farm, Otterbourne	HAM038	HWM Group	445400, 124400	S/RA	Operational	
	Gold Farm, Aldershot	HAM039	R Collard Ltd	488300, 151800	S/RA	Operational	
	Harts Farm Way, Havant	HAM040	Conroy's Group	470500, 105700	S/RA	Operational	
	Herberdens Farm, Finchdean (SDNP)	HAM041	A Fisk	473900, 114000	S/RA		
	Hollybush Lane, Aldershot	HAM042	Chambers Ltd	488500, 152400	S/RA	Operational	
	Hollybush Lane, Aldershot	HAM043	Taurus	488400, 152300	S/RA	Operational	
	Lee Lane, Nursling	HAM044	Raymond Brown	436100, 116800	S/RA	Operational	
	Lode Farm, Kingsley	HAM045	Lafarge Tarmac Ltd	477600, 137500	S/RA	Operational	
	Manor Farm, Tadley	HAM046	GB Foot/Basingstoke Skip Hire	460800, 155600	S/RA	Operational	
	Mortimer Lane, Fairoak	HAM047	R&R Contractors and CWM	450300, 118700	S/RA	Operational	
	Pegham Ind Est, Fareham	HAM048	L & S Waste Management	454900, 108800	S/RA	Operational	

Mineral Planning Authority	Site Name	Reference (Figure 4)	Operator	Easting/ Northing	Mineral	Status	Expiry
	Rookery Farm, Swanwick	HAM049	Raymond Brown	451200, 109200	S/RA	Operational	
	Thruxton Airfield, Thruxton	HAM050	Earthline Ltd	428000, 145500	S/RA	Operational	
	Wallington Depot, Fareham	HAM051	SITA	459100, 106900	S/RA	Operational	
	Wade Road Depot Basingstoke	HAM052	Basingstoke Skip Hire	465100, 153500	S/RA	Operational	
	Warren Heath, Bramshill	HAM053	R Collard Ltd	478347, 159365	S/RA	Operational	
	Waterbrook Road, Alton	HAM054	Grey Fox Recycling Ltd	473000, 139800	S/RA	Operational	
	Yokesford Hill, Romsey	HAM055	Ace Liftaway	435800, 123900	S/RA	Operational	
Isle of Wight	Blackhouse Quay, Newport	IOW010	Blackhouse Quay Aggregates	450051, 089866	S/RA	NO	
	Duxmore Quarry	IOW011	Reynolds & Read Ltd	455106, 087477	S/RA	O	
	St George's Down	IOW012	Wight Building Materials Ltd	451490, 086363	S/RA	O	
	Knighton Sand Pit	IOW013	Knighton Sand Ltd	457400, 086500	S/RA	O	
Kent	Allington Depot	KET037	Hanson Aggregates	574459, 157922	S/RA	Active	
	Borough Green Sand Pit, Sevenoaks	KET038	Borough Green Sandpits Ltd	561513, 157704	S/RA	Active	
	Clubbs Marine Wharf, Gravesend (Denton)	KET039	J Clubb & Sons Ltd	566892, 174179	S/RA	Inactive	
	Conningbrook Quarry	KET040	Brett Aggregates Ltd	603061, 143865	S/RA	Inactive	

Mineral Planning Authority	Site Name	Reference (Figure 4)	Operator	Easting/ Northing	Mineral	Status	Expiry
	East Peckham Rail Depot	KET041	J Clubb & Sons Ltd	568001, 148937	S/RA	Inactive	
	Faversham Quarries	KET042	Brett Aggregates Ltd	601263, 162503	S/RA	Inactive	
	FM Conway Works, Dartford	KET043	FM Conway	551230, 173712	S/RA	Active	
	Greatness Integrated Waste Management Facility	KET044	Cory Environmental	553600, 157700	S/RA	Inactive	
	Hermitage Quarry, Maidstone	KET045	Gallagher Aggregates Ltd	572200, 156000	S/RA	Active	
	Hothfield Works, Ashford	KET046	Tarmac Ltd	598056, 146329	S/RA	Active	
	Manor Way, Swanscombe	KET047	Lancebox	560590, 174913	S/RA	Active	
	Milton Pipes Site Recycling Plant	KET048	Sheerness Recycling Ltd	591000, 164600	S/RA	Active	
	Pinden Quarry	KET049	Pinden Plant & Processing	559583, 169611	S/RA	Active	
	Ramsgate New Port, Ramsgate	KET050	Brett Aggregates Ltd	637949, 163975	S/RA	Inactive	
	Richborough Hall, Sandwich	KET051	Thanet Waste Services	633328, 160965	S/RA	Active	
	Ridham Dock, Sittingbourne	KET052	Ballast Pheonix	592043, 168216	S/RA	Active	
	Ridham Wharf	KET053	Brett Aggregates Ltd	591972, 168508	S/RA	Active	
	Sevington Rail Depot	KET054	Brett Aggregates Ltd	603615, 140232	S/RA	Inactive	
	Shelford Landfill, Canterbury	KET055	Vindor Waste Management	616190, 160160	S/RA	Inactive	

Mineral Planning Authority	Site Name	Reference (Figure 4)	Operator	Easting/ Northing	Mineral	Status	Expiry
	Snodland (Ham Hill Quarry)	KET056	Tarmac Ltd	569300, 161000	S/RA	Active	
	Stonelees Golf Course	KET057	Ovenden Earthmoving Co Ltd	633705, 162783	S/RA	Inactive	
	Swanscombe Site Recycling Plant	KET058	Sheerness Recycling Ltd	560400, 175000	S/RA	Active	
	Tilmanstone Works	KET059	RH Ovenden Ltd	629025, 150732	S/RA	Active	
Medway	Isle of Grain Ballast Site	MED008	Aggregate Industries	587563, 174513	S/RA		
	Temple Boat Yard, Rochester	MED009	Saward Tipping Services Ltd	TQ 73377 68717	S/RA		
Milton Keynes	Cotton Valley Waste Transfer Station, Pineham	MKY006	Mick George Ltd	488374, 240673	R/SA	NYC	
	Recycling centre, Woad Farm, Lathbury,	MKY007	Smith Aggregates Ltd	487554 , 245475	R/SA	O	n/a
Oxfordshire	Ardley ERF	OXD030	Fortis IBA	454300, 225900	S/RA	O	
	Burford Quarry	OXD031	Pavestone UK	427760, 209519	S/RA	NO	
	Cemex Site, Hardwick	OXD032	Fergal Contracting	438700, 205700	S/RA	O	Perm
	Dix Pit, Stanton, Harcourt	OXD033	Sheehan Haulage & Plant Hire Ltd	440300, 205000	S/RA	O	2028
	Enstone Airfield	OXD034	David Einig Contracting Ltd	439030, 225667	S/RA	O	2021
	Ewelme Landfill No 2	OXD035	Grundon Waste Management	464600, 190500	S/RA	O	2032
	Ferris Hill Farm, Hook Norton	OXD036	Banbury Skips	435500, 235100	S/RA	O	Perm

Mineral Planning Authority	Site Name	Reference (Figure 4)	Operator	Easting/ Northing	Mineral	Status	Expiry
	Gill Mill Quarry, Ducklington	OXD037	Smith & Sons (Bletchington) Ltd	437000, 207800	S/RA	O	2040
	Grove Industrial Park, Wantage	OXD038	Aasvogel Recycling & Skip Hire	438500, 189500	S/RA	O	Perm
	Hundridge Farm, Ipsden	OXD039	G D Parker	466900, 185400	S/RA	O	Perm
	Lakeside Industrial Park Standlake	OXD040	Micks Skips & Recycling Ltd	438400, 204400	S/RA	O	Perm
	New Barn Farm	OXD041	Grundon	460034 188235	S/RA	O	2038
	Newlands Farm, Milton Road, Bloxham	OXD042	Smiths of Bloxham	443879, 235203	S/RA	O	PErm
	New Wintles Farm, Eynsham	OXD043	David Einig Contracting Ltd	443100, 210800	S/RA	O	Perm
	NW Corner of TW Depot	OXD044	Clancy Docwra		S/RA	O	Perm
	Playhatch Quarry, Sonning Eye	OXD045	Grabloader Ltd	474000, 176500	S/RA	O	Perm
	Prospect Farm, Chilton	OXD046	Raymond Brown Minerals & Recycling Ltd	449800, 185100	S/RA	O	2022
	Rumbold's Pit, Ewelme	OXD047	Hazell & Jeffries	464500, 192700	S/RA	O	Perm
	Sandfields Farm, Chipping Norton	OXD048	KJ Millard Plant Hire & Sales Ltd	432200, 229300	S/RA	O	Perm
	Shellingford Quarry	OXD049	Multi Agg Ltd	432800, 193700	S/RA	O	2044
	Shipton Hill, Fulbrook	OXD050	Hickman Bros.	426700, 213800	S/RA	O	2042
	Shipton on Cherwell Quarry	OXD051	Earthline Ltd	447800, 217400	S/RA	O	2025

Mineral Planning Authority	Site Name	Reference (Figure 4)	Operator	Easting/ Northing	Mineral	Status	Expiry
	Sutton Courtenay Asphalt Plant	OXD052	Hanson UK	451459, 193503	S/RA	O	2030
	Swannybrook Farm	OXD053	NAP Grab Hire	440744, 196776	S/RA	O	Perm
	Upwood Quarry, Besseleigh	OXD054	Hills Quarry Products Ltd	445200, 200300	S/RA	NO	2029
	Cresswell Field, Cassington	OXD055	David Einig Contracting Ltd	447100, 211300	S/RA	O	Perm
	Drayton Depot	OXD056	Oxfordshire Highways	448900, 193500	S/RA	O	Perm
	Wroxton Fields	OXD057	Earthline Ltd	440408, 241691	S/RA	O	2042 or when quarry ends
	Stonepitt Barn	OXD058	S.Belcher	442269, 197370	S/RA	O	Perm
Surrey	2 Perrylands Lane, Smallfield	SUR020	Fuller Grab Hire	530800, 142700	S/RA	O	
	20-24 Westfield Road, Guildford	SUR021	Chambers Waste Management Ltd	500300, 152300	S/RA	O	
	Capital House, Woodham	SUR022	Capital Demolition Ltd	503400, 162700	S/RA	O	
	Hithermoor Quarry, Stanwell Moor	SUR023	Brett Group	503500, 174900	S/RA	O	
	Homefield Sandpit, Runfold	SUR024	Chambers Runfold plc	487500, 147400	S/RA	O	
	Kill Copse Farm, Shamley Green	SUR025	Guildford Tipper Hire Ltd	504300, 142000	S/RA	O	
	Land West of Queen Mary Reservoir, Ashford	SUR026	Brett Group	506300, 170400	S/RA	O	
	Little Orchard Farm, Hookwood	SUR027	Britania Crest Recycling Ltd	525900, 144500	S/RA	O	

Mineral Planning Authority	Site Name	Reference (Figure 4)	Operator	Easting/ Northing	Mineral	Status	Expiry
	Normans Corner, Smallfield	SUR028	R&S Etherington	532000, 144100	S/RA	O	
	Oakleaf Farm, Stanwell Moor	SUR029	Charles Morris (Fertilizer) Ltd	504400, 174300	S/RA	C	
	Plough Industrial Estate, Leatherhead	SUR030	D&E Roberts	516300, 157300	S/RA	O	
	Reigate Road Materials Recovery Facility, Betchworth	SUR031	J&J Franks Ltd	520300, 150400	S/RA	O	
	Runfold South Quarry, Runfold	SUR032	R Collard Ltd	486300, 147200	S/RA	C	
	Shepperton Quarry, Shepperton	SUR033	Killoughery Ltd	505900, 167500	S/RA	C	
	Stanwell Quarry	SUR034	Cappagh Public Works Ltd	505200, 174600	S/RA	O	
	Sunnyside Worplesdon	SUR035	John Gunner & Co Ltd	495100, 152600	S/RA	C	
	Weylands Treatment Works, Hersham	SUR036	General Demolition Ltd	512500, 165600	S/RA	O	
West Berkshire	Moores Farm, Pingewood	WEB009	Caversham Restoration	469600, 169700	R/SA	O	2024
	Kennetholme Farm, Migham	WEB010	Grundon Sand and Gravel Limited	455200, 166100	R/SA	O	2023
	Theale Waste Recycling and Transfer Facility	WEB011	Hadleys	465800, 169800	R/SA	O	Permanent
	Reading Quarry, Berrys Lane, Pingewood	WEB012	J Mould	468600, 169700	R/SA	O	Permanent
	Whitehouse Farm, Silchester Road, Tadley	WEB013	J Stacey	460800, 162700	R/SA	O	Permanent
	Old Stocks Farm	WEB014	Aldermaston Recycling Ltd.	458681, 163218	R/SA	NO	Permanent

Mineral Planning Authority	Site Name	Reference (Figure 4)	Operator	Easting/ Northing	Mineral	Status	Expiry
West Sussex (incl SDNPA part)	South Coast Skips, Ford	WSS020	South Coast Skips Ltd		S/RA		
	Wealden Works, Brookhurstwood Landfill Site, Horsham	WSS021	Britanniacrest Recycling Ltd		S/RA		
	Rabbit Waste Management, Lancing	WSS022	Rabbit Waste Management Ltd		S/RA		
	Crawley Depot, Crawley Goods Yard	WSS023	Day Group Ltd		S/RA		
	Crawley Rail Depot, EWS New Goods Yard	WSS024	Aggregate Industries		S/RA		
	The Haulage Yard, Dial Post	WSS025	Penfold Verrall Ltd		S/RA		
	Burleigh Oaks Farm, Turners Hill	WSS026	Cox Skips		S/RA		
	Elbridge Farm	WSS027	Recycle Southern Ltd		S/RA		
	Brookhurstwood Landfill Site, Horsham	WSS028	Biffa Waste Services Ltd		S/RA		
	North Barn Farm, Worthing	WSS029	Eurogreen		S/RA		
	Cutmills, Bosham	WSS030	Envee Ltd		S/RA		
	Maxi Skips, Fishbourne	WSS031	Maxi Skips		S/RA		
	Shoreham Cement Works	WSS032	Dudman Group Ltd		S/RA		
	Eastlands Farm, Scaynes Hill	WSS033	DJ Nichols Transport Ltd		S/RA		
	New Timber Line Works, Hassocks	WSS034	Robins of Herstmonceux		S/RA		
	Hurstpierpoint Sewage Works	WSS035	Edburton Contractors		S/RA		

Notes:
Ref: Relates to references in Figure 4
Mineral: SA – secondary aggregate, RA- recycled aggregate
Status: O=operational; NO=Non Operational, C=Closed, R=Restored/Redeveloped
End date – year (YYYY) permission expires if applicable

Appendix 4: Soft Sand and Sharp Sand and Gravel Sales, Reserves and Landbanks in SEEAWP area

Thousand tonnes

Aggregate	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	10 year average	3 year average
Soft Sand Sales												
Buckinghamshire	104	62	88	c	c	c	c	92	c	c	85	85
C&E Berkshire	c	c	c	c	24	c	c	0	0	c	37	41
East Sussex	c	c	c	0	0	0	c	0	0	0	0	0
Hampshire	164	119	107	123	200	232	227	320	20	126	164	155
Isle of Wight	c	c	16	12	35	12	11	c	c	c	16	12
Kent	388	483	289	480	507	519	493	417	392	594	456	468
Medway	c	c	c	0	n/a	n/a	n/a	0	0	0	0	0
Milton Keynes	c	c	c	0	n/a	n/a	n/a	0	0	0	0	0
Oxfordshire	155	165	230	233	227	251	252	254	210	264	224	243
Surrey	367	430	571	496	413	394	439	490	470	466	454	475
West Berkshire	c	c	c	c	7.2	2	21.8	17	0	0	16	6
West Sussex	284	277	174	188	359	c	305	303	289	314	277	302
Total	**1,539**	**1,560**	**1,506**	**1,632**	**1,829**	**1,759**	**1,819**	**1,904**	**1,454**	**1,979**	**1,698**	**1,779**
Sharp Sand and Gravel Sales												
Buckinghamshire	561	711	596	674	1,068	c	1,075	1,175	c	c	881	1,182
C&E Berkshire	c	c	c	c	557	571	c	528	546	c	483	429
East Sussex	c	c	442	344	325	339	297	291	173	173	n/a	212
Hampshire	581	728	775	710	718	730	955	700	830	678	741	736
Isle of Wight	c	c	53	79	53	c	65	c	c	c	79	113
Kent	652	273	173	239	259	151	119	84	132	202	228	139

Medway	c	c	c	0	0	16	132	150	121	86	72	119
Milton Keynes	c	c	c	c	c	c	c	c	c	c	143	127
Oxfordshire	559	401	639	768	651	703	797	994	830	1,157	750	994
Surrey	254	366	407	246	321	406	468	200	200	345	321	248
West Berkshire	c	c	c	c	104.9	79.9	33.1	43	57	38	98	46
West Sussex	0	0	65	57	61	c	c	99	109	24	52	77
Total	**3,975**	**3,839**	**4,383**	**4,225**	**4,045**	**4,422**	**4,579**	**4,394**	**4,110**	**4,481**	**4,245**	**4,328**
Sand and Gravel Sales												
Buckinghamshire	865	773	684	739	1,159	1,412	1,075	1,268	840	1,267	1,008	1,125
C&E Berkshire	865	792	1,080	902	581	573	c	528	546	c	689	470
East Sussex	c	c	442	344	325	338	297	291	173	173	n/a	212
Hampshire	745	847	882	833	918	963	1,182	1,020	850	804	904	891
Isle of Wight	67	62	69	91	87	70	76	c	103	117	82	110
Kent	1,040	756	462	720	766	670	612	501	525	858	691	628
Medway	c	c	c	0	0	16	132	150	121	86	72	119
Milton Keynes	c	c	c	c	c	c	c	c	c	c	143	127
Oxfordshire	714	566	869	1,001	879	954	1,049	1,248	1,040	1,421	974	1,236
Surrey	621	796	978	741	733	799	907	690	760	818	784	756
West Berkshire	c	c	c	c	112	82	55	60	57	38	114	52
West Sussex	284	277	239	245	420	352	c	402	410	450	342	421
Total	**5,514**	**5,399**	**5,889**	**5,857**	**5,900**	**6,181**	**6,400**	**6,317**	**5,624**	**6,644**	**5,972**	**6,195**

Thousand tonnes

Soft Sand Reserves and Landbanks													APR	Landbank (years) 2021
Buckinghamshire	1,415	1,303	c	c	c	c	c	c	c	c			73	11.15
C&E Berkshire	c	c	c	c	c	c	c	0	0	0			0	-
East Sussex	c	c	0	120	350	350	250	250	250	250			0	-
Hampshire	2,427	1,914	1,307	1,516	c	570	634	490	167	167			230	0.73
Isle of Wight	310	180	255	202	196	182	170	c	c	c			0	-
Kent	14,717	14,465	7,994	8,177	9,182	8,848	8,296	7,810	9,341	6,225			456	13.65
Medway	n/a	n/a	c	0	0	n/a	n/a	c	0	0			0	-
Milton Keynes	n/a	n/a	c	0	n/a	n/a	n/a	c	c	0			0	-
Oxfordshire	2,415	2,164	6,619	1,594	1,341	3,104	3,091	3,914	3,914	3,824			243	15.74
Surrey	7,281	4,366	1,759	8,170	7,788	7,679	7,178	5,966	5,966	5,528			500	11.06
West Berkshire	c	c	c	c	0	40	15	0	0	0			44	0
West Sussex	3,876	3,34	3,009	2,752	3,355	2,745	2,210	1,736	1,736	1,451			365	3.98
Total	**32,666**	**28,401**	**23,126**	**23,110**	**23,456**	**25,756**	**24,115**	**24,737**	**22,378**	**18,457**			**1,911**	**10**
Sharp Sand and Gravel Reserves and Landbanks														
Buckinghamshire	8,634	7,840	9,416	7,876	6,197	6,438	5,857	c	c	c			850	5.93
C&E Berkshire	c	c	*	*	5,423	5,851	8,480	7,407	6,800	5,547			628	8.83
East Sussex	c	c	2,884	2,440	2,115	1,000	508	216	167	90			106	0.85
Hampshire	12,083	11,171	9,242	9,992	1,680	1,520	8,433	7,540	8,016	7,081			920	7.70
Isle of Wight	1,358	1,530	1,710	959	448	556	500	c	c	c			100	3.00
Kent	3,810	3,613	2,642	3,792	2,716	3,695	3,286	2,949	2,779	1,384			228	6.07
Medway	c	c	*	*	1,310	1,195	1,047	897	574	427			119	3.59
Milton Keynes	c	c	n/a	n/a	c	c	c	c	c	c			170	3

Oxfordshire	5,836	6,619	8,783	12,487	11,383	10,805	12,925	c	11,439	10,586			1,015	10.43
Surrey	2,093	1,759	6,125	3,432	3,294	3,235	2,731	1,990	1,934	1,895			500	3.79
West Berkshire	9,050	3,030	3,060	3,015	2,803	2,655	2,628	2,568	2,530	2,520			189	13.33
West Sussex	925	925	4,459	900	900	990	505	727	c	c			111	5.18
Total	**48,822**	**49,203**	**47,038**	**53,252**	**38,852**	**37,327**	**48,240**	**44,239**	**43,047**	**35,493**			**4,936**	**7**
Sand and Gravel Reserves and Landbanks														
Buckinghamshire	10,049	9,143	10,036	7,876	8,221	10,676	10,652	7,959	8,616	5,856			942	6.22
C&E Berkshire	8,117	10,272	8,619	9,876	6,919	5,851	5,857	7,407	6,800	5,547			628	8.83
East Sussex	c	c	2,884	2,560	2,465	1,350	858	466	417	340			106	3.21
Hampshire	14,510	13,085	10,549	11,508	8,900	7,920	9,067	8,030	8,183	7,248			1,150	6.30
Isle of Wight	1,668	1,710	1,355	1,161	1,442	738	671	430	475	498			82	6.07
Kent	18,527	18,583	11,441	12,044	13,276	12,768	12,121	10,990	12,120	7,609			691	11.01
Medway	c	n/a	n/a	n/a	1,310	1,195	1,047	897	574	427			119	3.59
Milton Keynes	c	c	n/a	n/a	c	c	c	c	c	c			170	3
Oxfordshire	8,251	8,783	9,065	14,081	12,724	13,909	16,015	16,016	15,353	14,410			1,258	11.45
Surrey	9,374	6,125	10,016	11,602	11,082	10,914	9,909	7,850	7,900	7,471			1,000	7.47
West Berkshire	1,045	3,155	3,096	3,025	2,803	2,695	2,642	2,567	2,530	2,520			233	10.82
West Sussex	4,801	4,459	3,909	3,652	c	3,735	2,715	3,184	2,389	2,026			460	4.40
Total	**81,486**	**77,604**	**70,014**	**76,362**	**73,746**	**72,032**	**72,356**	**68,976**	**65,426**	**53,998**			**6,839**	**8**

Notes: c – confidential figure

Appendix 5: Imported aggregate sales at wharves in SEEAWP area

Thousand tonnes

Mineral Planning Authority	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	10-year average	3-year average
	Imported Land-won Sand and Gravel Sales @ Wharves (ISG-W)											
Medway	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	0	0	n/a	0
Kent	146	127	0	175	231	244	235	0	19	274	145	98
Medway & Kent	**n/a**	**n/a**	**n/a**	**175**	**231**	**311**	**287**	**0**	**19**	**274**	**185**	**98**
East Sussex	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	c	n/a	n/a
West Sussex	0	0	0	0	0	0	0	0	0	0	0	0
East Sussex, West Sussex	**n/a**	**n/a**	**n/a**	**n/a**	**0**	**0**	**33**	**0**	**0**	**c**	**n/a**	**n/a**
Hampshire	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1,340	1,350	1,334	n/a	1,341
Isle of Wight	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7	n/a	n/a
Hampshire & Isle of Wight	**n/a**	**n/a**	**n/a**	**4**	**4**	**5**	**5**	**1,340**	**1,350**	**1,341**	**n/a**	**1,344**
SEEAWP: ISG-W	**n/a**	**n/a**	**n/a**	**n/a**	**179**	**235**	**322**	**1,340**	**1,369**	**1,658**	**850**	**1,455**
	Imported Land-won Crushed Rock Sales @ Wharves (ICR-W)											
Medway	761	856	775	1,086	912	945	1,247	1,612	1,277	1,374	1,085	1,421
Kent	433	546	697	976	1053	1058	1044	709	1,119	1,770	941	1,199
Medway & Kent	**1,194**	**1,402**	**1,372**	**2,062**	**2,415**	**2,002**	**2,291**	**2,321**	**2,396**	**3,144**	**2,060**	**2,620**
East Sussex	n/a	n/a	n/a	n/a	n/a	n/a	58	58	76	c	n/a	c
West Sussex	123	63	77	66	62	164	90	124	111	73	95	103
East & West Sussex	**249**	**95**	**93**	**89**	**114**	**206**	**138**	**182**	**187**	**c**	**154**	**c**
Hampshire	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

	Imported Land-won Crushed Rock Sales @ Wharves (ICR-W)											
Isle of Wight	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	20	n/a	n/a
Hampshire & Isle of Wight	**33**	**31**	**1**	**26**	**67**	**38**	**48**	**0**	**0**	**20**	**n/a**	**n/a**
SEEAWP: ICR-W	**1,476**	**1,528**	**1,466**	**2,177**	**2,596**	**2,246**	**2,477**	**2,264**	**2,374**	**3,351**	**2,195**	**2,663**

Appendix 6: Imported aggregate sales at rail depots in SEEAWP area

Thousand tonnes

Mineral Planning Authority	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	10 year average	3 year average
	Imported Land-won Sand & Gravel (ISG-RD)											
Medway	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	0	0	n/a	0
Kent	41.2	35.7	92	29	29.1	24.2	28.2	25	25	22	35	24
Medway & Kent	**41**	**36**	**92**	**29**	**29**	**24**	**28**	**25**	**25**	**22**	**35**	**24**
East Sussex	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	0	0	n/a	0
West Sussex	140	147	42	63	77	84	108	103	76	c	93	c
East & West Sussex	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**293**	**390**	**103**	**76**	**c**	**n/a**	**c**
Hampshire	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	632	n/a	n/a
Berkshire	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a
Hampshire & Berkshire	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**190**	**206**	**n/a**	**n/a**	**632**	**n/a**	**n/a**
Buckinghamshire	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Milton Keynes	c	c	c	c	c	c	c	c	c	c	34	47
Oxfordshire	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bucks, MK. Oxfordshire	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**c**	**c**	**c**	**c**	**c**	**n/a**	**47**
SEEAWP: ISG-RD	**n/a**	**n/a**	**n/a**	**n/a**	**467**	**528**	**1,219**	**1,011**	**637**	**804**	**n/a**	**817**
	Imported Marine Dredged Aggregates (IMDA-RD)											
Medway	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	0
Kent	0	0	0	0	0	0	0	0	0	0	0	0
Medway & Kent	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
East Sussex	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	74	153	n/a	76

Mineral Planning Authority	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	10 year average	3 year average
West Sussex	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
East & West Sussex	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**2**	**74**	**153**	**76**	**76**
Hampshire	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Berkshire	c	c	c	c	c	c	c	c	c	136	92	108
Hampshire & Berkshire	**c**	**c**	**c**	**c**	**c**	**c**	**c**	**c**	**c**	**136**	**92**	**108**
Buckinghamshire	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Milton Keynes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Oxfordshire	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bucks, MK. Oxfordshire	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
SEEAWP: IMDA-RD	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**289**	**289**	**289**
	Imported Crushed Rock (ICR-RD)											
Medway	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	0	0	n/a	0
Kent	270	326	372	405	453	469	533	562	538	441	437	514
Medway & Kent	**270**	**326**	**372**	**405**	**453**	**469**	**533**	**562**	**538**	**441**	**437**	**514**
East Sussex	n/a	n/a	n/a	n/a	n/a	n/a	n/a	122	140	167	n/a	143
Surrey	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	260	n/a	n/a
West Sussex	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	640	n/a	n/a
East/West Sussex & Surrey	**1,000**	**1,192**	**1,688**	**1,456**	**820**	**993**	**954**	**n/a**	**n/a**	**1,067**	**1,146**	**n/a**
Berkshire	c	c	c	c	c	c	c	c	c	1,439	779	1,058
Hampshire	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	503	503	503
Berkshire & Hampshire	**1,222**	**1,090**	**1,208**	**1,565**	**1,381**	**1,733**	**2,010**	**n/a**	**n/a**	**1,942**	**1,519**	**1,942**
Buckinghamshire	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Milton Keynes	c	c	c	c	c	c	c	c	c	c	203	275
Oxfordshire	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Mineral Planning Authority	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	10 year average	3 year average
Bucks, MK. & Oxfordshire	**552**	**762**	**975**	**918**	**1,009**	**1,021**	**1,006**	**n/a**	**n/a**	**c**	**821**	**n/a**
SEEAWP: ICR-RD	**3,087**	**3,509**	**4,404**	**4,384**	**3,667**	**4,222**	**4,405**	**4,523**	**3,800**	**3,772**	**3,977**	**4,032**

Appendix 7: Marine Dredged Aggregates Sales/ Landings at wharves in SEEAWP area

Thousand tonnes

Mineral Planning Authority	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	10-year average	3-year average
	Marine Dredged Aggregate (MDA) Sales											
Kent	2,035	1,752	1,947	1,897	1,789	1,783	1,833	618	1,440	1,644	**1,674**	**1,234**
Medway	1,215	1,400	1,586	1,597	1,978	1,794	1,213	1,115	1,786	1,798	**1,548**	**1,566**
Kent & Medway	**3,250**	**3,152**	**3,533**	**3,494**	**3,767**	**3,577**	**3,046**	**1,733**	**3,226**	**3,442**	**3,222**	**2,800**
East Sussex	n/a	n/a	n/a	n/a	n/a	n/a	n/a	159	128	299	**n/a**	**195**
West Sussex	1,470	1,616	1,267	1,639	1,810	1,340	1,348	1,295	1,467	1,262	**1,451**	**1,341**
East & West Sussex	**1,735**	**1,694**	**1,626**	**1,601**	**1,775**	**1,457**	**1,350**	**1,373**	**1,151**	**1,561**	**1,532**	**1,362**
Hampshire	1,100	1,430	1,360	1,550	1,550	1,520	1,420	1,340	1,350	1,334	**1,395**	**1,341**
Isle of Wight	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	97	**n/a**	**n/a**
Hampshire & Isle of Wight	**1,190**	**1,511**	**1,459**	**1,638**	**1,654**	**1,242**	**1,507**	**1,360**	**3,208**	**1,431**	**1,620**	**2,000**
Total (MDA) Sales	**6,154**	**6,420**	**6,609**	**6,827**	**7,356**	**6,224**	**5,905**	**5,991**	**6,459**	**6,459**	**6,438**	**6,295**
	Marine Dredged Aggregate (MDA) Landings											
Kent	n/a	n/a	n/a	n/a	n/a	n/a	1,643	1,521	1,474	1,695	**n/a**	**1,563**
Medway	n/a	n/a	n/a	n/a	n/a	n/a	1,605	1,825	1,337	1,739	**n/a**	**1,634**

Kent & Medway	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**3,248**	**3,346**	**2,811**	**3,434**	**n/a**	**3,197**
East Sussex	n/a	n/a	n/a	n/a	n/a	n/a	419	34	112	427	**n/a**	**191**
West Sussex	1,053	1,029	1,090	1,173	1,254	1,307	1,319	1,213	1,023	1,078	**1,154**	**1,105**
East & West Sussex	**1,053**	**1,029**	**1,090**	**1,173**	**1,254**	**1,307**	**1,738**	**1,247**	**1,135**	**1,505**	**1,402**	**1,296**
Hampshire	1,076	1,354	1,334	1,497	1,614	1,559	1,483	1,390	1,235	1,337	**1,388**	**1,321**
Isle of Wight	n/a	n/a	n/a	n/a	n/a	n/a	63	65	54	66	**n/a**	**62**
Hampshire & Isle of Wight	**1,076**	**1,354**	**1,334**	**1,497**	**1,614**	**1,559**	**1,546**	**1,455**	**1,289**	**1,403**	**1,450**	**1,382**
Total (MDA) Landings	**2,129**	**2,383**	**2,424**	**2,670**	**2,868**	**2,866**	**6,532**	**6,048**	**5,235**	**6,341**	**3,950**	**5,875**