13th Annual Minerals and Waste Monitoring Report

1st April 2018 to 31st March 2019

Kent Minerals and Waste Local Plan

May 2020

Kent County Council
kent.gov.uk

Contents

Abbreviations **5**
Executive Summary **7**
The Key Mineral Findings 7
The Key Waste Findings 8
Kent Minerals and Waste Local Plans 8
1. Introduction **9**
1.1 The Kent Minerals and Waste Annual Monitoring Report 9
1.2 Kent Contextual Overview 10
1.3 The Kent Minerals and Waste Local Plan 17
1.4 The Kent Mineral and Waste Sites Plans 17
1.5 Early Partial Review of the KMWLP 18
1.6 Mineral Sites Plan 19
1.7 Progress Against the Development Scheme 20
2. Plan Monitoring **21**
2.1 Introduction 21
2.2 Plan Monitoring Indicators 21
3. Mineral Indicators **22**
3.1 Production of Aggregates 22
3.2 Production of Primary Landwon Aggregates 22
3.3 Landwon Soft sands 22
3.4 Land-won Sharp Sands and Gravels 23
3.5 Land-won Hard Rock 25
3.6 Production of Secondary/Recycled Aggregates 25
4. Landwon Mineral Reserves **26**
4.1 New Mineral Reserves 26
4.2 Aggregate Landbank 26
4.3 Landwon Sand and Gravel Permitted Landbank 27
4.4 Landwon Hard Rock Permitted Landbank 29
4.5 Landwon Other (Non-Aggregate) Mineral Landbanks 31
4.6 Brick and Tile making from Clay or Brickearth 31
4.7 Silica Sand 32
5. Chalk and Clay **33**
5.1 Chalk for Agricultural and Engineering Uses 33
5.2 Chalk for Agricultural and Engineering Uses 33
5.3 Engineering Clay 34
6. Imported Mineral Supply via Wharves and Rail Depots **34**
6.1 Sales of Aggregates at Wharves and Rail Depots 35
7. Construction Aggregate Summary **37**

8. Waste Indicators 39
8.1 Local Authority Collected Waste Arisings by Management Type 39
8.2 Waste Generation Growth Rates 42
8.3 Exports and Imports of Waste in Kent 44
9. Monitoring the Delivery of the adopted KMWLP Strategy 46
10. Duty to Co-operate Activity 47
11. Conclusion and Next Steps 47
11.1 Mineral Indicator Monitoring 47
11.2 Waste Indicator Monitoring 49
11.3 Kent Minerals Sites Plan 50
Appendix 1: Permitted Quarries in Kent 2018 51
Appendix 2: Safeguarded Wharves and Rail Transportation Depots 2018 53

Tables and Figures

Figure 1: Kent Population Forecast up to 2050 10
Figure 2: Planning and Environmental Constraints in Kent 12
Figure 3: Geology of Kent both Solid and Superficial 14
Figure 4: The Waste Hierarchy 16
Figure 5: Kent Waste Arisings 16
Figure 6: Sales of Landwon Soft Sand and Sharp Sand and Gravel in Kent, 2009-18 (Tonnes) 24
Figure 7: Sales of Secondary and Recycled Aggregates in Kent 200-18 26
Figure 8: Location of Active Quarries and Safeguarded Wharves and Rail Depots in 2018 30
Figure 9: Graphical Representation of all Sales of Sand and Gravel and Crushed Rock from Kent Wharfs 2009-18 36
Figure 10: Graphical Representation of Sand and Gravel and Crushed Rock Sales from Rail Depot 2009-18 37
Figure 11: Collected LACW by Management Method 20014-15 to 2018-19 in Tonnes 41
Figure 12: Collected LACW by Management Method 2014-15 to 2018-19 in Percentages 41
Figure 13: Waste Import and Export Balance in Kent 2018-19 by management method and waste type where known (tonnes) 45

Table 1: Revised Local Development Scheme Timetable 20
Table 2: Minerals and Waste Annual Monitoring 'Indicators' 21
Table 3: Sales of land-won Soft Sand in Kent 2006-18 23
Table 4: Sales of land-won Sharp Sand and Gravel in Kent 2005-18 24
Table 5: Sales of Secondary and Recycled Aggregates in Kent 2009-18 25
Table 6: Kent Aggregate Reserves and Aggregate Landbank as of 2018 Data 29
Table 7: Clay and Brickearth Landbanks at Active Brick and Tile Works 32
Table 8: Landbanks at Silica Sand Quarries in Kent 33
Table 9: Chalk and Clay Landbanks at Cement Works in Kent 33
Table 10: Agricultural and Engineering Chalk Landbank in Kent in 2018 34

Table 11: All Wharf landed Sand and Gravel and Crushed Rock Sales in Kent 2009- 2019 (tonnes).....35
Table 12: All Rail Depots Sand and Gravel and Crushed Rock Sales in Kent 2009-2018.....36
Table 13: Total Aggregate Production in Kent during 2009-2018 (Million tonnes) 38
Table 14: Quantities of LACW Managed in Kent by Management Type in 2018/19 39
Table 15: Forecast arisings of C&I Waste in Kent (tonnes per annum).....42
Table 16: CD&E Waste Arisings Predictions as Requirements against Existing Capacity in Kent 2017 ...43
Table 17: Tonnages of Kent waste managed in permitted facilities within Kent and outside, and tonnages of other waste managed at Kent facilities 2018 45

Abbreviations

AA	Appropriate Assessment
AMR	Annual Monitoring Report
AONB	Area of Outstanding Natural Beauty
BEIS	Department for Business, Energy and Industrial Strategy
C, D&E	Construction, Demolition and Excavation (waste materials arising from this sector)
C&D (Recycling)	Construction & Demolition (Recycling)
C&I	Commercial and Industrial (waste materials arising from this sector)
MHCLG	Ministry of Housing, Communities and Local Government
DEFRA	Department for Environment, Food and Rural Affairs
DTA	Detailed Technical Assessment
EA	Environment Agency
EfW	Energy from Waste (combustion of waste to produce electricity (and heat) by driving a steam turbine, or use of a fuel (syngas) created in gasification or pyrolysis)
EIA	Environmental Impact Assessment
ESCC	East Sussex County Council
EPR	Early Partial Review
EU	European Union
HRA	Habitat Regulations Assessment
HWRC	Household Waste Recycling Centre
KCC	Kent County Council
KMWLP	Kent Minerals and Waste Local Plan
KJMWMS	Kent Joint Municipal Waste Management Strategy
KWP	Kent Waste Partnership
LAA	Local Aggregate Assessment
LACW	Local Authority Collected Waste (mainly that collected from households)
LEP	Local Enterprise Partnership
LNP	Local Nature Partnership

LNR	Local Nature Reserve
LPA	Local Planning Authority
MHCLG	Ministry for Housing, Communities and Local Government
MMO	Marine Management Organisation
mt	Million Tonnes
mtpa	Million Tonnes Per Annum i.e. Million Tonnes Per Year
MLP	Minerals Local Plan
MPA	Minerals Planning Authority
MRF	Material Recycling Facility
MSW	Municipal Solid Waste
MWDF	Minerals and Waste Development Framework
MWDS	Minerals and Waste Development Scheme
NDA	Nuclear Decommissioning Authority
NPPF	National Planning Policy Framework
NPPW	National Planning Policy for Waste
NNR	National Nature Reserve
NPPG	National Planning Practice Guidance
PROW	Public Rights of Way
RSPB	Royal Society for the Protection of Birds
RSS	Regional Spatial Strategies
SA	Sustainability Appraisal
SEEAWP	South East England Aggregate Working Party
SEWPAG	South East Waste Planning Advisory Group
SPA	Special Protection Area
tpa	Tonnes Per Annum i.e. tonnes per year)
UK	United Kingdom
WCA	Waste Collection Authority
WDA	Waste Disposal Authority
WPA	Waste Planning Authority

Executive Summary

This Kent AMR covers the financial period 2018/2019. This is post adoption of the KMWLP in 2016, and significantly during the formulation, submission and Independent Examination of the Early Partial Review of the KMWLP and the Mineral Sites Plan and reports on various matters including the following using the best available data:

- The progress of preparing minerals and waste planning policy in Kent, against the latest MWDS timetable, up to the end of March 2019;
- The minerals supply and waste management indicator data for Kent for the calendar year or the financial year; and,
- A summary of the co-operation on plan making activities with other local authorities and prescribed bodies, up to the end of March 2019.

The Key Mineral Findings

The total aggregate mineral sales in Kent during 2018 from all sources amounted to some 5.83mt. This was a slight decrease in sales overall from that reported in AMR 2017/18 (by approx. 260,000 tonnes). Imports of sharp sand and gravel and particularly the land-won extraction of this mineral have had reduced sales. The latter from 0.15mt in 2017 to 0.12mt in 2018. Though the proximity of a significant site at Lydd (Scotney Court) Quarry that is extracting aggregates in East Sussex and is still supplying the Kent market is not being represented in the monitored sales data. The reserves are currently meeting the NPPF's at least 7-year maintained landbank requirement, the historical lack of new reserves indicates that the landbank is soon to be below this level and that the land-won sharp sand and gravel resource is depleting in Kent. The landbank for this aggregate has not been replenished with any additional reserves in 2018/19. It can be described as now becoming attenuated as it approaches the 'at least' 7-year maintained level. However, it is the case that the adopted Plan's strategy is to progressively supplant land-won supply with alternatives.

Importation of predominantly marine dredged sands and gravels via wharfs has decreased, though only very slightly. Rail depots continue to be only a marginal suppler of sands and gravel into Kent, (though significant for hard rock importation). Wharf importation may well increase its contribution to this primary aggregate supply, given that there remains unused capacity and the land-won sharp sands and gravels are now depleting. Safeguarding will be imperative to maintain the NPPF's requirement of a 'steady and adequate supply' of aggregates into the future. Further soft sand supply will be required toward the end of the Plan period to maintain an at least 7-year landbank for the period and at the end of the period.

The observed recent upturn in sales may have leveled off, further monitoring will demonstrate how demand for this aggregate mineral is changing. The landbank for soft sand currently meets the NPPF requirement for the maintenance of a landbank of at least 7-years. The permitted reserves of hard rock are sufficient to secure the ability of Kent to maintain a 10- year landbank of crushed rock at any time over the life of the Kent MWLP 2013-30.

Secondary and recycled aggregates are showing an upturn in sales and may play an increasing role in overall aggregate supply into the future. Further monitoring will demonstrate whether the circa 1.0mtpa level of production has peaked or is increasing. More information about the supply of aggregates in Kent can be found in the Kent Local Aggregates Assessment (LAA) yearly monitoring documents.

Throughout the monitoring period there were no planning applications for mineral transportation and processing that changed the overall available capacity to manage

imports. The loss of the importation capacity at Dunkirk Jetty (safeguarded Site M) Dover Western Docks, in the east of the county, has not been replaced. The aggregate sales data does not illustrate a marked change in overall aggregate demand, that has been maintained at around the 6.0mtpa level since 2016.

The permitted landbanks of clay and brickearth with remaining reserves in Kent combined gives a landbank of marginally below 25 years. Given that the adopted Plan is nearing its 5th year since adoption, any concerns regarding the level of reserves of this mineral will be addressed at that time. Kent has two operational silica sand sites, and both meet the NPPF's requirement of maintaining a 10- year landbank per site at existing sites.

Kent's reserves for cement manufacture are entirely contained at the strategic site at Holborough Cement Works, though not constructed. This meets the NPPF requirement where substantial new investment in a kiln is required.

Kent's chalk reserves for agriculture and engineering purposes are not required to meet any prescribed landbank. Based on data for chalk reserves and sales in the period 2011- 2014 it is estimated that the permitted reserves have dropped to 1.16mt. This may give an indicative permitted landbank of 16.57 years of chalk reserves. Given the need to supply sufficient quantities of minerals of all there is an arguable need to permit further chalk reserves to meet this level of demand towards the end of the Plan period. Review of the Plan in 2021 will clarify if the magnitude is significant.

The Key Waste Findings

There has been a marginal increase in the arisings of LACW in 2018/19 (+0.54%) to just over 721,000 tonnes. This contrasts with 2017/18 which showed a negative rate of growth of minus 3.15%. While Kent's population is growing, there is an expectation that arisings will increasingly decouple from population growth, and hence while arisings of LACW are predicted to continue to grow over the Plan period, it will be at a reduced rate. Hence it is forecast that arisings will stand at around 740,000 tonnes in 2030/31.

The LACW management profile data for 2018/19 shows that the waste recycling and landfill targets included in the Early Partial Review for the first milestone year of 2020/21 are already being met. In particular landfilling no more than 2% in 2020/21 was surpassed with landfill being the management option for only 1.7% of the LACW and recycling/composting of at least 50% of LACW by 2020/21 was met in 2018/19 standing at 50.32%. The remainder managed through incineration with EfW being 48% as predicted.

Some 6.2 million tonnes of waste was reported as being managed at Kent waste management facilities in 2018. This compares with around 1.4 million tonnes managed outside the county. However, this export is more than offset by imports, so taking a simple balance, Kent remains net self-sufficient. Of the imports, just over half a million tonnes came from London, of which 52,000 tonnes went to EfW, 17,000 tonnes to non-inert landfill and 203,000 tonnes to inert landfill.

Throughout the monitoring period there were no planning applications for waste management that changed the overall available capacity to manage waste. This shows that existing capacity remains sufficient to support the continued shift towards a more sustainable waste management profile.

Kent Minerals and Waste Local Plans

Significant progress has been made with the next stage of the KMWLP 2013-30 (the Plan) work. It was reported in 2017-18 that early monitoring of the permitted waste recovery capacity, immediately following adoption of the Kent Minerals and Waste Local Plan in 2016,

highlighted the necessity for an Early Partial Review (EPR) to update the waste recovery capacity requirements specified in Policy CSW 7 and CSW 8. Following this review, the recovery requirements were changed to percentage targets per milestone year giving flexibility over the plan period. These targets are incorporated into an amended Policy CSW 4 in the modified version of the Plan subject to an EPR. Other waste policy changes considered by the Inspector, included the deletion of the need for the allocation of specific sites for the disposal of dredgings and for asbestos. As reported in the previous AMR 2017-18, these changes to the Plan strategy demonstrated that production of a separate Waste Sites Plan was not justified. The EPR was submitted to the Planning Inspectorate for Independent Examination in May 2019.

In addition, as was reported in AMR 2017-18, experience gained in implementing the waste and mineral safeguarding exemption policies (Policy DM 7 and DM 8), demonstrated that there was a degree of ambiguity of the exemption criteria relating to the interpretation of the status of the local plan coverage at the Borough and District level in Kent.

Given this difficulty, or perceived lack of clarity, of the way these policies should be interpreted and implemented led to their review and proposed amendment as part of the EPR of the Plan. As mentioned above, subject to modifications that changes to these policies have been found sound.

The findings of the Inspector's report on the EPR and their implications for the County Council's minerals and waste plans will be reported in the next AMR, covering the period 1st April 2019 to the 31st March 2020. The Kent Mineral Sites Plan has also been progressed in 2018 and 2019. Detailed Technical Assessment of the sites to assess their acceptability and deliverability over a broad range of material planning considerations. This resulted in the identification of one soft sand site (Chapel Farm, Lenham) and two sharp sand and gravel sites (Moat Farm and Stonecastle Farm in the Tonbridge area).

These sites were published in a document entitled the Mineral Sites Plan. Submission to the Planning Inspectorate of this local plan document occurred in May 2019; simultaneously with the submission of the EPR. Examination Hearings were held in October 2019 and the Inspector published his report in April confirming that, subject to modifications, the Kent Mineral Sites Plan is sound.

1. Introduction

1.1 The Kent Minerals and Waste Annual Monitoring Report

1.1.1 Monitoring of Local Plans is a statutory requirement of all Local Planning Authorities (LPA) and Minerals and Waste Planning Authorities. According to the National Planning Policy Framework (NPPF) each LPA should ensure that their Local Plan is based on adequate, up-to-date and relevant evidence about the economic, social and environmental characteristics and prospects of the area.

1.1.2 The Kent Annual Monitoring Reports (AMR) document the progress made in preparing Kent's Minerals and Waste Local Plans (and any relevant reviews) against the timetable set out in the Kent Minerals and Waste Development Scheme (MWDS) and monitors their adoption and implementation.

1.1.3 This Kent AMR covers the financial year 2018/2019 (i.e. 1 April 2018 to 31 March 2019) and reports on various matters using best available data including the following:

- The progress of preparing minerals and waste planning policy in Kent, following adoption of the KMWLP 2013-30 in i2016, against the latest MWDS timetable; and

- The minerals supply and waste management indicator data for Kent; and
- A summary of co-operation on plan making activities with other local authorities and prescribed bodies.

1.1.4 In accordance with the Regulation 35 (1.) of the Town and County Planning (Local Planning) (England) Regulations 2012[1], this and previous AMRs are available to view online[2], and in hard copies, which are available for inspection during normal office hours by appointment with the Minerals and Waste Planning Policy Team, based at Invicta House in Maidstone.

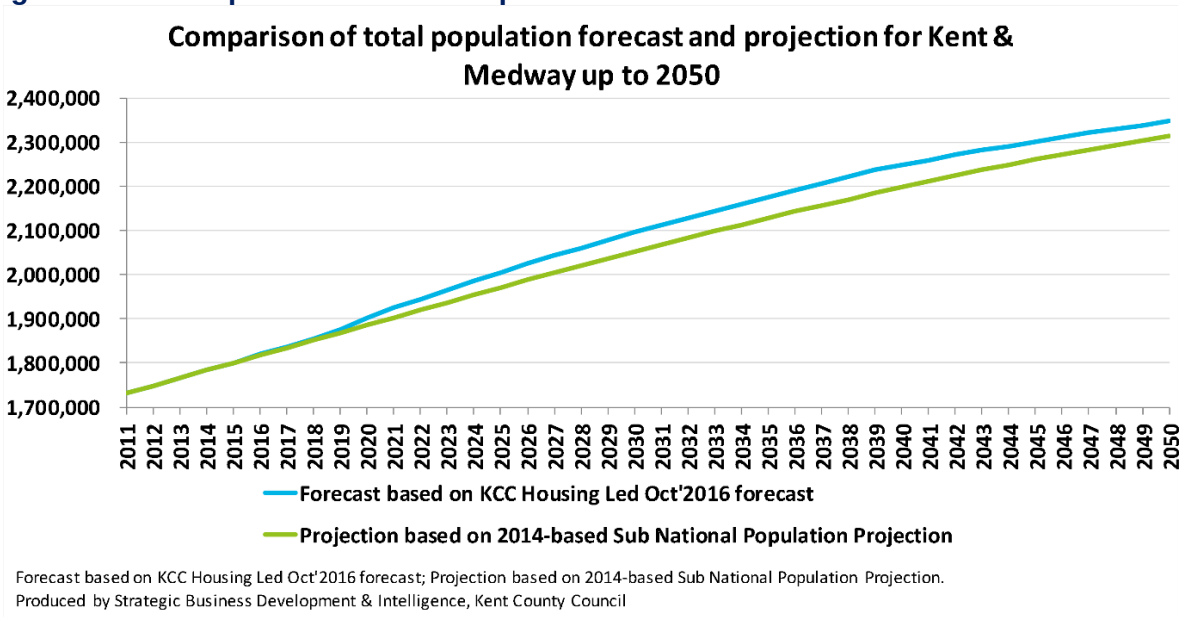
1.2 Kent Contextual Overview

Population

1.2.1 The approximate population for the administrative area of Kent was estimated to be 1,554,600 people in 2017 (KCC 2017 Mid-Year Population Estimates). Work on the Kent Growth Infrastructure Framework (GIF)[3] includes population and housing projections between 2011 and 2031 for Kent and Medway. In 2011 the population of Kent and Medway was 1,731,400 people, and it is anticipated that the area will experience 23% growth by 2031, resulting in a population of 2,127,600. Figure 1 below shows the degree of variance between a projection based on the County Council's housing lead projection (2016 forecast) and that of the slightly lower Sub-National Population Projection based on 2014 data. The GIF has not been updated as of 2019.

1.2.2 This growth in population will have to be accommodated in terms of mineral supply and waste management capacity. While this AMR is not a forward projection document, it does consider whether over the period to 2030 (the current Plan period), planning policy will allow sufficient opportunities to meet requirements for sustainable development, related to waste management and minerals supply.

Figure 1: Kent Population Forecast up to 2050



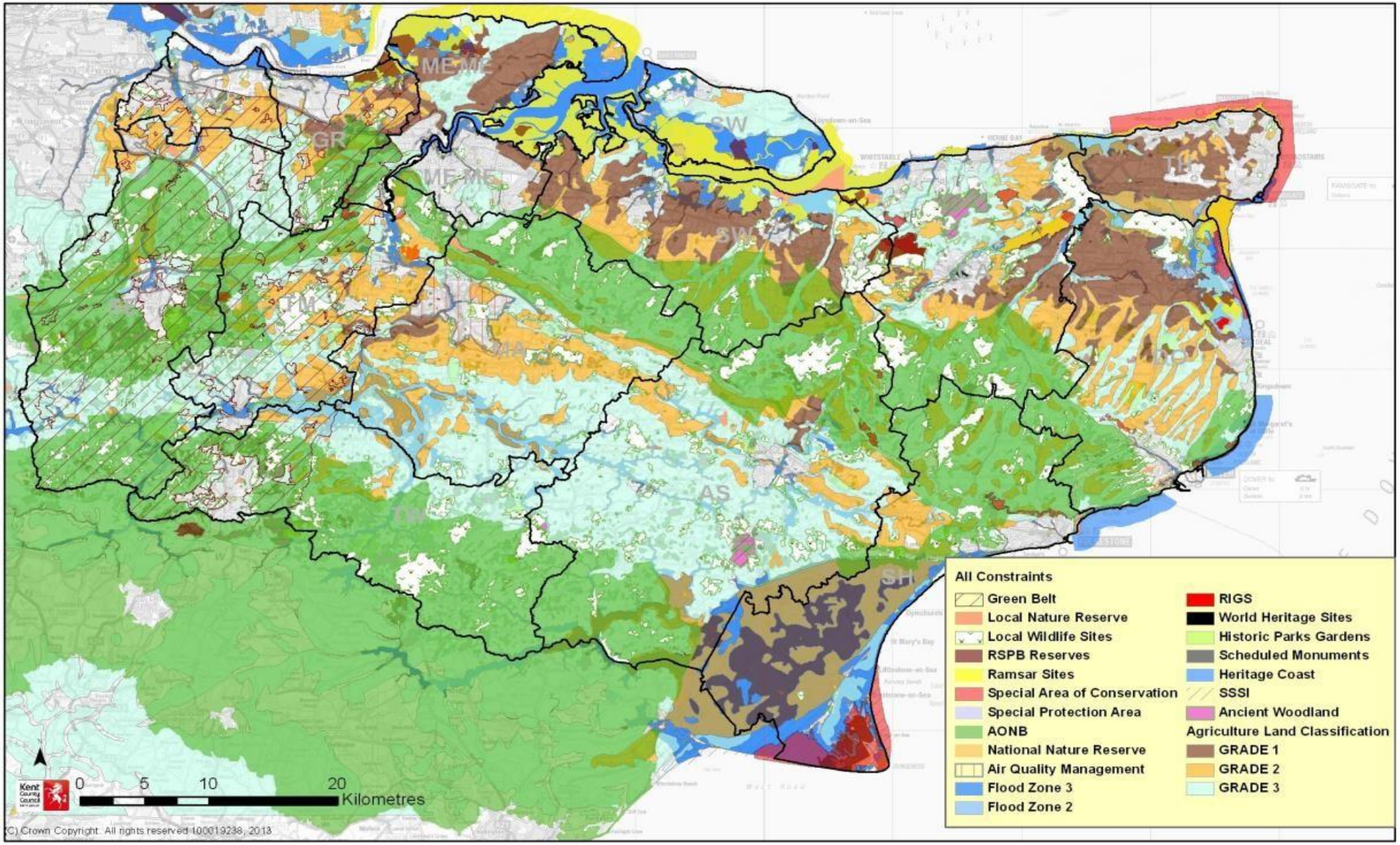
Forecast based on KCC Housing Led Oct'2016 forecast; Projection based on 2014-based Sub National Population Projection.
Produced by Strategic Business Development & Intelligence, Kent County Council

[1] The Town and Country Planning (Local Planning) (England) Regulations 2012
[2] https://www.kent.gov.uk/about-the-council/strategies-and-policies/environment-waste-and-planning-policies/planning-policies/minerals-and-waste-planning-policy#tab-4
[3] https://www.kent.gov.uk/about-the-council/strategies-and-policies/environment-waste-and-planning- policies/growth-and-infrastructure-framework-gif

Environment

1.2.3 The County is subject to a number of planning and environmental constraints, with 20% of its area covered by sites that are internationally or nationally important for their nature conservation value, and one third of its area is covered by the Kent Downs or High Weald Areas of Outstanding Natural Beauty (AONB). There are significant areas within coastal or fluvial flood plains and land of high (best and most versatile) agricultural quality. Figure 2 overleave shows the key planning and environmental constraints within Kent, including the Medway Unitary authority.

Figure 2: Planning and Environmental Constraints in Kent

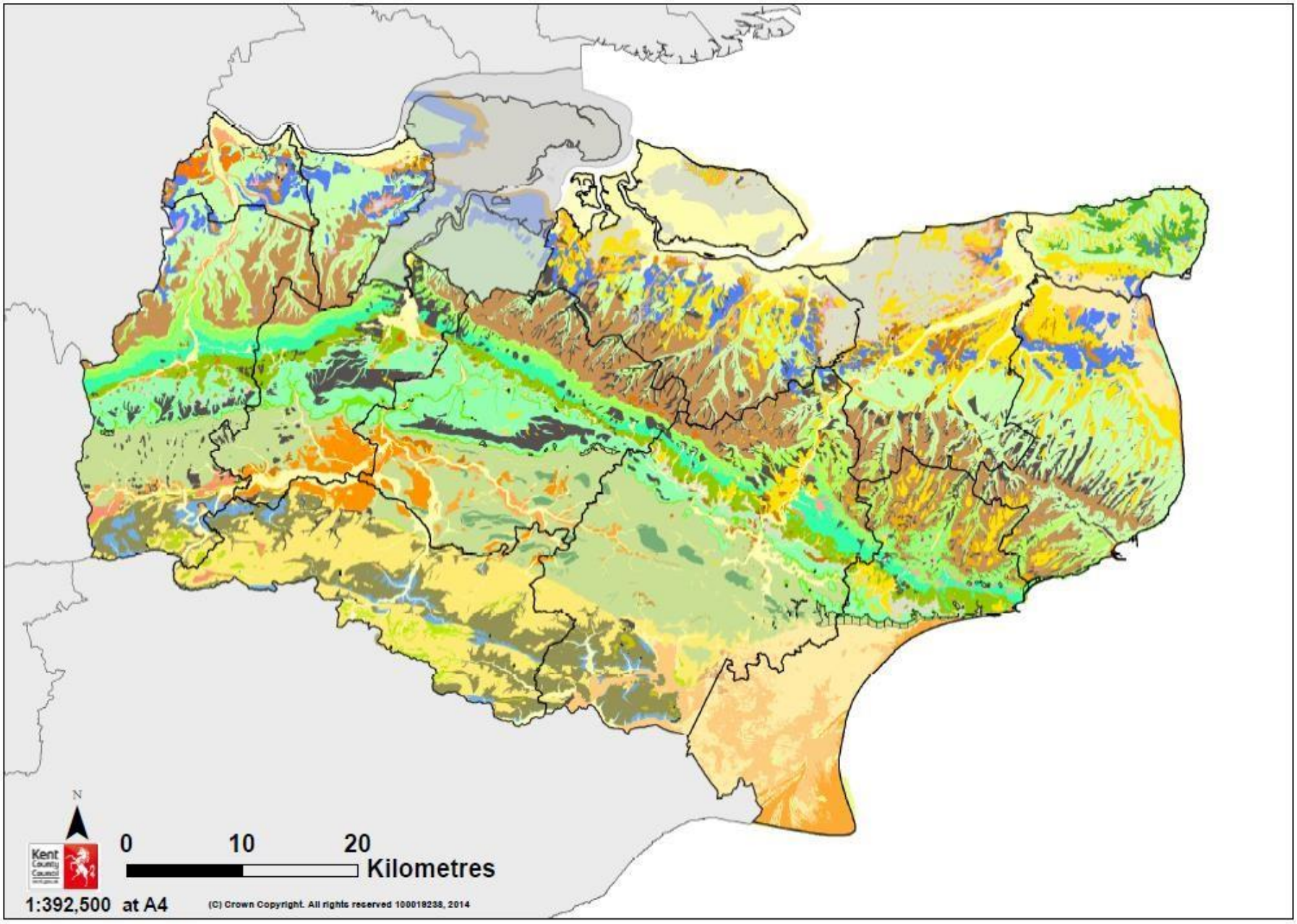


Economic Minerals

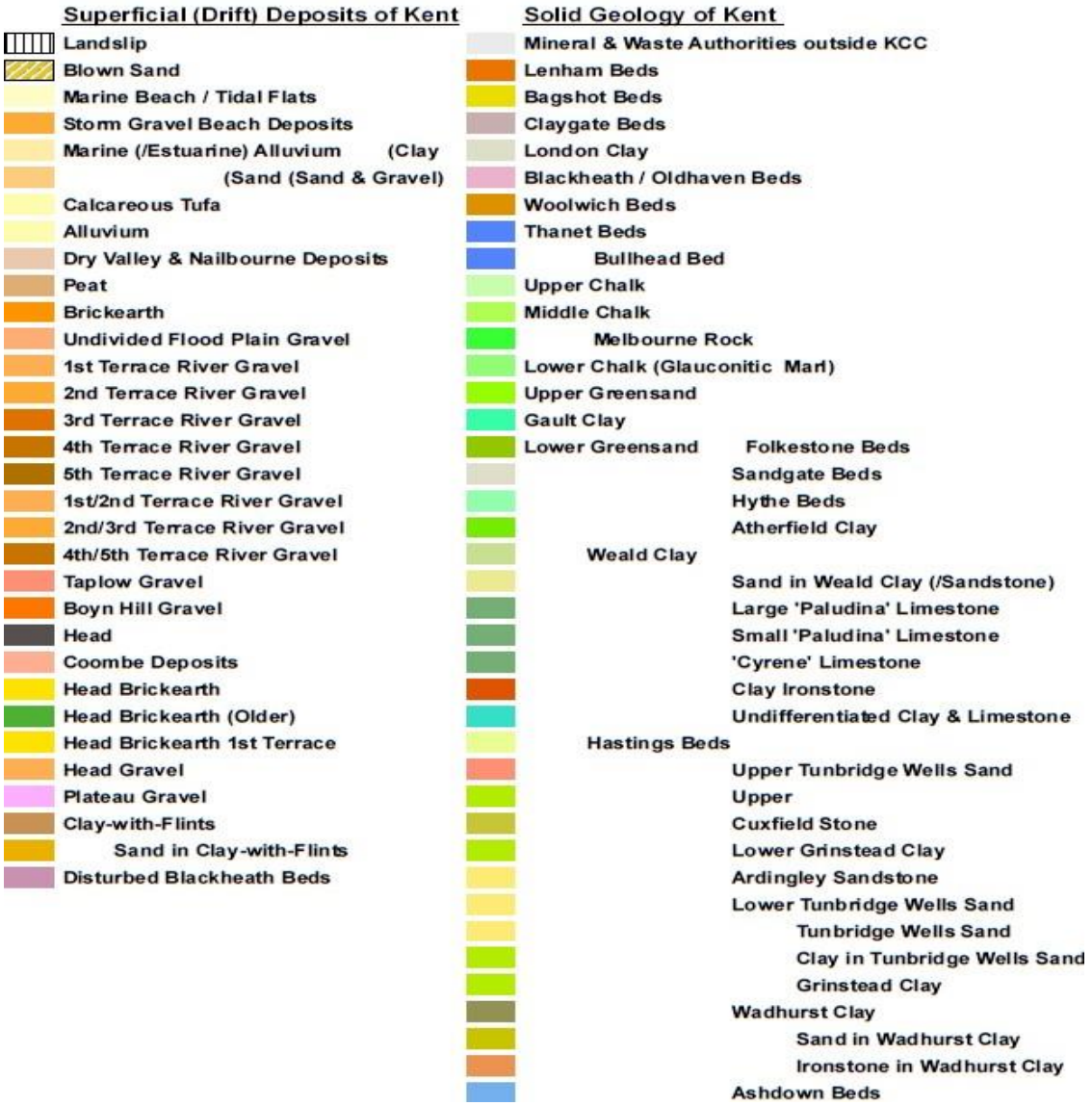
1.2.4 Kent is underlain by several naturally occurring minerals of economic importance including chalk, clays, brickearth, ragstone (a hard rock limestone), and a variety of superficial sand and gravels deposits. There are also large scale stratigraphically defined units of sand that give rise to both construction aggregates (soft sand) and industrial minerals, including high purity or silica sand. The construction aggregates (sand, gravel and ragstone) are the main types of economically important minerals extracted in Kent at this time. Although brickearth (for stock brick manufacture) clay (for tile manufacture and engineering clay) and chalk (for engineering and agricultural lime applications) is also extracted. See Figure 3 for Kent's geology, and geological key overleaf.

1.2.5 To compliment the land-won aggregate supplies, significant proportions of the aggregate minerals used in Kent are imported via rail and wharf facilities, with these minerals also serving the market in London and the wider south east. Moreover, the recycling or re-use of wastes, particularly from construction, demolition and excavation waste (CD&E) arisings, makes a significant contribution to Kent's construction aggregate need. Ensuring that appropriate provision is made for land-won, imported and secondary and recycled minerals is a key objective for the County Council as the Mineral Planning Authority (MPA) to meet Kent's current and future objectively assessed needs.

Figure 3: Geology of Kent both Solid and Superficial



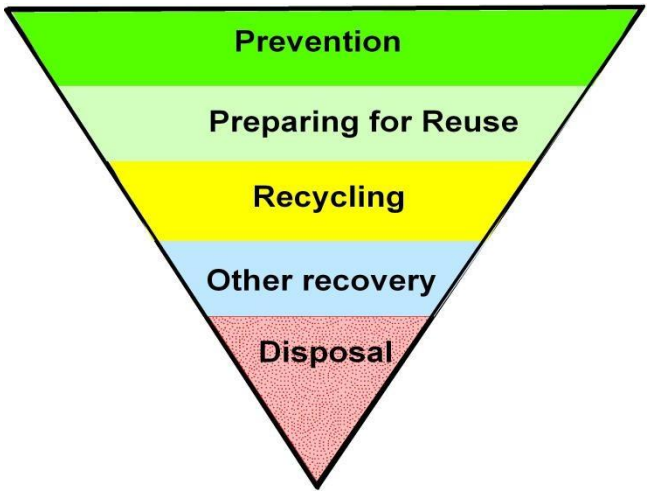
Legend: Geology of Kent



Waste

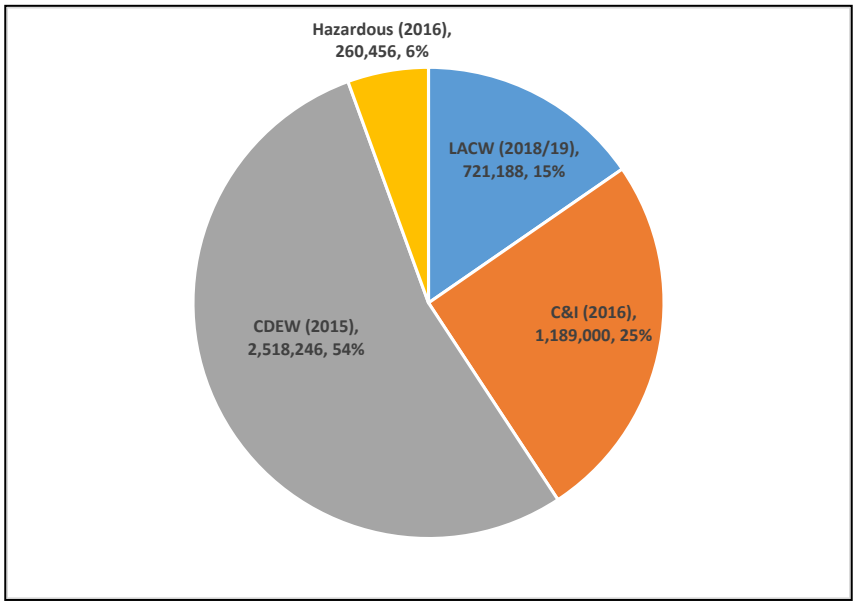
1.2.6 Waste requires careful management and treatment in an environmentally sustainable manner, following national policy requirements including the waste hierarchy (see Figure 4 below) and the objective of maintaining net self-sufficiency in waste management within Kent. Maintaining net self-sufficiency whilst moving waste up the waste hierarchy are key objectives for the County Council as the Waste Planning Authority (WPA) for Kent.

Figure 4: The Waste Hierarchy



1.2.7 It is estimated that around 4.7million tonnes of waste requiring management is produced in Kent each year. The majority of this waste is generated within the Construction, Demolition and Excavation (CD&E) waste stream (as of 2015, the arisings in Kent were estimated to be over 2.5mtpa). Local Authority Collected Waste (LACW), which is mainly composed of household waste, represents around 15% of the overall waste produced with Commercial & Industrial waste and hazardous waste making up the difference. The principal waste streams are shown in Figure 5 below.

Figure 5: Kent Waste Arisings



1.2.8 Kent has a range of operational waste management facilities, from non-inert and inert landfills, to recycling and composting facilities, and energy from waste (EfW) plants providing over a million tonnes of processing capacity. Import and export of waste occurs from, and to, other parts of the country, the south east and London in particular.

1.3 The Kent Minerals and Waste Local Plan

1.3.1 Kent County Council (KCC) is responsible for waste and minerals planning in the county of Kent, excluding the Medway Council area. As part of its responsibilities the County Council is required to produce a Minerals and Waste Local Plan. As was reported in AMR 2017/18 the Kent Minerals and Waste Local Plan was to consist of three separate spatial planning documents. These included the core strategic document, the Kent MWLP 2013-30 (adopted in July 2016), the Kent Mineral Sites Plan and the Kent Waste Sites Plan.

1.3.2 The KMWLP 2013-30 sets out the County Council's strategy and policy framework for minerals and waste development in Kent. It is a key policy document for the determination of planning applications and appeals in Kent. The KMWLP includes forecasts of future waste capacity and mineral supply requirements. The KMWLP committed the Council to identifying and allocating land considered suitable for minerals and waste development in a subsequent Waste Sites Plan and a Minerals Sites Plan. However, coincident with the time of adoption was the implementation of significant (0.5plus mtpa) permitted 'other recovery' capacity for waste that meant the recovery requirements set out in policy (Policy CSW: 7) had already been largely met. This initiated an immediate early review of the waste capacity requirements detailed in the Plan. The outcome of which would have ramifications for the need to produce a Waste Sites Plan as discussed below.

1.4 The Kent Mineral and Waste Sites Plans

1.4.1 Work was initiated on the Mineral and Waste Sites Plans in 2017.

1.4.2 For minerals, due to the passage of time, it was considered inappropriate to simply roll forward the sites identified as potential allocation sites in a Preferred Options Consultation (a Regulation 18 stage consultation[3]) in May 2012 and so a fresh 'Call for Sites' exercise was undertaken in 2017. As part of this exercise, all previous site promoters (of the sites containing mineral deposits that were identified by the KMWLP as being required to be planned for) were contacted, in addition landowners with land coincident with potentially economically important aggregate deposits were invited to nominate sites regardless of whether they had previously promoted a site.

1.4.3 Several sites were submitted for consideration that included potentially important sand and gravel aggregate bearing sites as well as mineral deposits not identified by the KMWLP as required (i.e. Carboniferous Limestone, chalk, clay and Lambeth Group materials, that include sands, silts and clays). Also, secondary and recycled aggregate sites were promoted that were classified as waste operations and therefore not relevant to the Mineral Sites Plan.

1.4.4 As was reported in AMR 2017/18 the conclusions of a waste data review instigated after adoption of the Kent MWLP 2013-30 were that allocation of specific sites in a Waste Sites Plan for further recovery capacity and the management of asbestos and dredgings (as required by the KMWLP) was not justified. This essentially negated the need for a stand-alone Kent Waste Sites Plan. The corollary of this finding was that it triggered the need for an Early Partial Review of the relevant waste policies of the adopted Kent MWLP 2013-30. This analysis occurred through 2017 into late 2018 (and is set out in evidence documents

published with the Pre-Submission Early Partial Review documentation[4]).

1.5 Early Partial Review of the KMWLP

1.5.1 As reported in AMR 2017/18 experience of implementing the Plan policies regarding mineral and waste safeguarding had revealed ambiguity in the wording of certain of their exempting criteria which had been determined to be hindering their effectiveness. As has been reported before, amongst other aims, the intention of these safeguarding policies is to ensure that development on sites for non-mineral or non-waste development (i.e. housing and commercial development) allocated in a Borough or District Local Plan would be exempt from the KMWLP's safeguarding policy provisions *if* the need to safeguard any mineral resource underlying the site, and/or proximate minerals and waste infrastructure, had been assessed and factored into the decision to allocate the site(s).

1.5.2 In practice during 2017, 2018 and into 2019 there were occasions where the policies had been interpreted as to exclude *any* site allocations in adopted development plans from the safeguarding process, *regardless* of whether minerals and waste safeguarding matters were considered during the site's local plan allocation process. This was not the intention of the policies, nor national policy guidance. This interpretation had the potential to undermine the effectiveness of these policies, unless reviewed and modified.

1.5.3 The Early Partial Review provided the opportunity to address both the revised waste capacity requirements and the waste and minerals safeguarding policies. Thus, ensuring that the presumption to safeguard is properly applied equally at local plan preparation as it is when dealing with planning applications.

1.5.4 With regard to the change to the wording of safeguarding exemption criterion (7) of Policy DM 7 and criterion (2) of Policy DM 8. The draft changes were the subject of a public consultation between December 2017 and March 2018. A workshop was also held in May 2018 with the Borough and District Councils to discuss the proposal and invite comments. As a result, a number of minor changes were made to the related explanatory text to address the concerns raised. The proposed revisions to the adopted safeguarding policies and explanatory text were set out in the Pre-Submission Draft of the Early Partial Review of the Kent Minerals and Waste Local Plan.

1.5.5 In summary, the modifications of the KMWLP proposed by the Early Partial Review address the following policy areas:

Waste Management Capacity Provision

- The provision of future waste management capacity in particular 'Other Recovery' for the management of non-hazardous residual waste; and
- The need to identify site allocations in a Waste Sites Plan for waste management facilities to deliver the waste strategy of the adopted Plan.

Minerals and Waste Safeguarding - The approach to safeguarding mineral resources and waste management and minerals supply infrastructure.

- The amendment of the presumption to safeguard exemption criteria that addresses the need for allocations in adopted Local Plans to take account of the presumption to safeguard minerals. Including clarification that any development proposed on land allocated in a Local Plan since adoption of the KMWLP will be in compliance with the

[4] https://consult.kent.gov.uk/portal/second_call_for_sites_2016/document_library

safeguarding policies of the Plan; having included regard for any exemption criteria that may be relevant in their formulation.

1.5.6 The Pre-Submission Draft of the Early Partial Review of the Kent Minerals and Waste Local Plan was subject to public consultation in accordance with Regulation 19 of the Town and Country Planning (Local Planning) (England) Regulations in early 2019. Submission to the Planning Inspectorate of the Early Partial Review documentation occurred in May 2019. Though outside the coverage of this AMR it can be reported that the Independent Examination Hearings were held in October 2019 and the Inspector published his report in April confirming that, subject to modifications, the changes to the KMWLP proposed by the EPR are sound. The findings of the Inspector's report and their implications for the County Council's adopted Plan will be reported in the next AMR, that covers the period 1st April 2019 to the 31st March 2020[5]

1.6 Mineral Sites Plan

1.6.1 As has been reported in AM 2017/18, work on the Kent Mineral Sites Plan began with a 'Call for Sites' exercise in late 2016. This invited nominations (from landowners and potential minerals operators etc.) for sites to be considered for allocation, to meet the KMWLP mineral supply requirements. All those parties that had previously had an interest in the Minerals and Waste Local Plan work were notified and invited to nominate sites, as well as to comment on a draft Site Selection Methodology (see the Site Selection Methodology 2018 document KCC/SP49 in the online Documents Library[5]).

1.6.2 In response to the Call for Sites exercise 19 mineral sites were promoted for consideration. They were initially screened against the Council's site selection methodology[6] and further assessed to arrive at nine 'Option sites' (the 'reasonable alternatives') that were then subject to public consultation (in accordance with Regulation 18) that was initiated in late 2017 to early 2018.

1.6.3 The Options sites were subjected to 'Detailed Technical Assessment (DTA)'. The DTA stage considered a range of environmental impacts, including landscape and visual impact, amenity, highways and transportation, biodiversity, historic environment, waste resources and flood risk, land stability and need. It also considered, where necessary, an assessment of Green Belt policy. Full details of the DTA stage and the outcome of the assessment can be found in the supporting document 'Kent Mineral Sites Plan – Minerals Site Assessment Document 2018'. The DTA work concluded that three of the nine sites were suitable for allocation in the Minerals Sites Plan, they are:

- M3: Chapel Farm (West), Lenham - Soft Sand (3.2mt)
- M13: Stonecastle Farm, Hadlow/Whetsted - Sharp Sand and Gravel (1.0mt)
- M10: Moat Farm, Five Oak Green, Capel - Sharp Sand and Gravel (1.5mt)

1.6.4 These sites are considered acceptable in principle for mineral development, though any actual development at these sites would be subject to separate planning applications demonstrating that certain development management criteria caveats can be met.

1.6.5 The results of the DTA process was reported to the County Council's Environment and Transport Cabinet Committee (E&TCC) of the 28th November 2018, and then to the County Council's Full Council on the 13th December 2018. At the meeting on 13 December 2018 the Council resolved to progress the Mineral Sites Plan to a Regulation 19 Pre-submission

[5] See document SD02 of the County Council's Document Library for the Pre-Submission Early Partial Review of the Kent Minerals and Waste Local Plan 2013-30 the following link https://consult.kent.gov.uk/portal/second_call_for_sites_2016/document_library

Draft Public Consultation.

1.6.6 The Pre-Submission Draft of the Kent Mineral Sites Plan was subject to a public consultation in accordance with Regulation 19 of the Town and Country Planning (Local Planning) (England) Regulations in early 2019. Submission to the Planning Inspectorate of this local plan document occurred in May 2019. Though outside the scope of AMR 2018-19 it can be reported that the Independent Examination Hearings were held in October 2019 and the Inspector published his report in April 2020 confirming that, subject to modifications, the Kent Mineral Sites Plan is sound. The findings of the Inspector's report and their implications for the County Council's strategy for the supply of aggregate minerals will be reported in the next AMR, that covers the period 1st April 2019 to the 31st March 2020.

1.7 Progress Against the Development Scheme

1.7.1 The Local Development Scheme (LDS) sets out the County Council's program for preparing minerals and waste planning documents. The LDS timetable was updated in February 2019 to reflect progress with the EPR and Mineral Sites Plan and is set out in Table 1 below.

Table 1: Revised Local Development Scheme Timetable

Stage (where regulations are referred to this applies to *The Town and Country Planning (Local Planning) (England) Regulations 2012)*	**Milestone Dates**
Call for Sites	November 2016- January 2017
Minerals Sites Options and Partial Review of KMWLP 2013-30 Consultation (Regulation 18)	December 2017-March 2018
Pre-Submission Mineral Sites Plan and Partial Review of KMWLP 2013-30 Consultation (Regulation 19)	11 January 2018- 8 March 2019
Submission of documents and information to Secretary of State (Regulation 22)	3 May 2019
Independent Examination Hearings (Regulation 24)	Early October 2019
Inspector's Report	April 2020
Adoption (Regulation 25)	September 2020 (anticipated)

[5] http://mylimehouse.kent.gov.uk/portal/second_call_for_sites_2016/document_library

[6] Kent Minerals and Waste Local Plan Site Selection Methodology, Living draft October 2016. See the following link: http://mylimehouse.kent.gov.uk/portal/second_call_for_sites_2016/document_library/

2. Plan Monitoring

2.1 Introduction

2.1.1 In accordance with the Localism Act 2011, it is the responsibility of each Local Planning Authority (LPA) to decide what to include in their AMRs, whilst ensuring that they are prepared in accordance with the relevant UK and relevant EU legislation (at the time of writing the UK is still within the transition period having decided to formally leave the European Union).

2.2 Plan Monitoring Indicators

2.2.1 The County Council continues to attach importance to the former national indicators[6] used as the basis for minerals and waste monitoring in previous years. However, in addition KCC has developed its own 'local' indicators and continues to monitor and report on these sources of information. Table 2 below sets out the main indicators used in previous AMR documents. For a full, understanding of how all the policies of the Plan are monitored, see Section 8 Managing and Monitoring the Delivery of the Strategy of the adopted Plan. This sets out the detailed local indicator targets and triggers that will demonstrate if the policy is still 'fit for purpose', or alternatively requires review. The Plan was adopted in 2016. Therefore, a full review of the adopted Plan will have to occur in 2021. The monitoring schedule has slightly altered as a result of the 2019 EPR of the relevant waste management and safeguarding policies to reflect the changes to these policies.

Table 2: Minerals and Waste Annual Monitoring 'Indicators'

Data Indicator	Source	Former National Indicator Number
Production of Primary Land- won Aggregates	Annual Aggregates[7] Monitoring Survey	Core Output Indicator 5A
Production of Secondary/Recycled Aggregates	Annual Aggregates Monitoring Survey	Core Output Indicator 5B
New Mineral Reserves	KCC Planning Permissions	Local Output Indicator 1
Construction Aggregate Landbank	Annual Aggregates Monitoring Survey	Local Output Indicator 1
Other Mineral Landbanks	Annual Aggregates Monitoring Survey	Local Output Indicator 3
Mineral extraction other than aggregates	Mineral extraction in Great Britain 2013[8]	Not directly applicable

[6] DCLG (July 2008) National Indicators for Local Authorities and Local Authority Partnerships

[7] Co-ordinated and published by South East England Aggregates Working Party (SEEAWP), takes account of the Kent Local Aggregates Assessment prepared by Kent County Council

[8] Published in February 2015, the data is for 2013 and has not been updated, is indicative and is supplemented with local enquiry sourced data where possible

Wharves and Rail Depots Safeguarding	Annual Aggregates Monitoring Survey	Local Output Indicator 4
Sales of Construction Aggregates at Wharves and Rail Depots	Annual Aggregates Monitoring Survey	Local Output Indicator 5
Additional Capacity at Waste Management Facilities by Type	KCC Planning Permissions/ Environment Agency	Core Output Indicator 6A
Municipal Waste (aka LACW) Management Profile	Defra Waste Datasets	Core Output Indicator 6B
LACW Growth Rate	Defra Waste Datasets	Local Output Indicator 6
Exports and Imports of Waste	Environment Agency Datasets	Local Output Indicator 7
Capacity for Managing Waste in Kent	Environment Agency Datasets/ KCC planning permission and monitoring data	Local Output Indicator 8

3. Mineral Indicators

3.1 Production of Aggregates

3.1.1 Sections 3 and 4 of this AMR reports on the land-won primary aggregates (soft sand, sand and gravel and crushed rock) production (as expressed as sales) and the secondary/recycled aggregates that originate from industrial process and the construction, demolition and excavation (CD&E) waste stream. Data for which is also collected by the yearly Aggregate Monitoring (AM) process. The data reported is for the calendar year 2018, data for production in 2019 will be collected in 2020. Mineral imports, via wharves and railheads (mainly marine aggregates and hard crushed rock) are addressed in Section 5, as this is a distinctive subject that has no bearing on any land-banks of permitted reserves in Kent. Though they are important in overall supply.

3.2 Production of Primary Landwon Aggregates

3.2.1 The National Planning Policy Framework (NPPF) 2019 requires Mineral Planning Authorities (MPA) to plan for a steady and adequate supply of aggregates through preparing an annual Local Aggregates Assessment (LAA) from which future provision requirements should be derived based on a rolling average of 10-years' aggregates sales data and an assessment of all supply options (including marine dredged, secondary and recycled sources), and other relevant local information. This LAA data informs the AMR and is summarised here.

3.3 Landwon Soft sands

3.3.1 Land-won soft sand is supplied from the Folkestone Beds in Kent and is a distinct aggregate material (used in mortar and coated stone applications) for which a separate landbank is required to be maintained. Kent has a total of 9 sites (see Appendix 1: Permitted Quarries in Kent 2018), three were classified as inactive in 2018. A further had no offsite sales of any magnitude. The level of sales of soft sand between 2006 and 2018 is shown in Table 3 below:

Table 3: Sales of land-won Soft Sand in Kent 2006-18

Year	Tonnes
2006	621,215
2007	681,012
2008	755,590
2009	1,199,120
2010	621,573
2011	438,909
2012	387,746
2013	483,165
2014	289,087
2015	480,215
2016	506,663
2017	519,414
2018	493,179
Average last 10-years (2009-18)	**506,416**
Average last 3-years (2016-18)	**541,907**

3.3.2 Trends in sales can be more easily appreciated in graphical form, as show in Fig 5 below. The general decline from 2009 to 2014 may correspond to the recessional effect of the financial crash of 2008. Since 2014 there has been an upturn in sales of soft sands to slightly under 0.5mtpa in 2018. The 10-year average being slightly greater than 0.5mtpa.

3.4 Land-won Sharp Sands and Gravels

3.4.1 The land-won sharp sand and gravel (or 'flint'[9]) resources exploited in Kent have traditionally centred around the important extraction areas of the Stour Valley between Ashford and Canterbury. There has also been extraction in the Darent Valley (Taplow Formation) around Dartford.

3.4.2 The Upper Medway River Valley has also experienced extraction of the locally called 'sandstone' or 'siltstone' sands and gravels. So called due to the preponderance of the silica polymorph mineral Chalcedony, with its light brown colouration. This material has fewer applications in construction in terms of the more highly specified concrete products associated with structural concrete. However, it does form a construction aggregate that can be used in a number of ways including buried concrete structures and can be blended with other aggregates to meet higher specification construction aggregate uses.

3.4.3 At the Dungeness peninsula the aggregate material has been substantially rounded in its particle shape by past marine action, though is mineralogically the same as the other terrestrial deposits in Kent (apart from those deposits found in the Upper Medway River Valley). The remaining unpermitted 'storm beach sand and gravels' resources are heavily constrained by the Dungeness, Romney Marsh and Rye Bay Site of Special Scientific Interest (SSSI), Special Protection Area (SPA) and Wetland of International Importance designated under the Ramsar Convention (Ramsar Site).

3.4.4 Available land-won resources for the land-won sharp sand and gravel are rapidly depleting in Kent. There are four operational quarries producing sharp sand and gravel to varying

[9] 'Flint' is a term used for amorphous pseudo-crystalline silica that often has an angular particle shape having been deposited in river terraces and not substantially re-worked

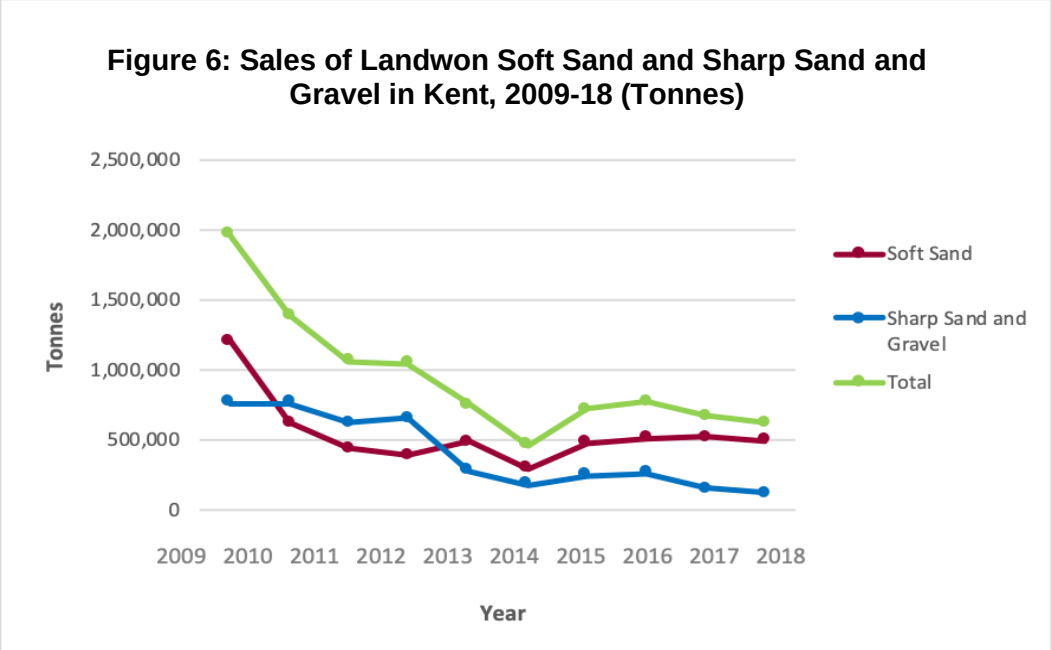
degrees of output, and there are six inactive sites (see Appendix 1: Permitted Quarries in Kent 2018). The recent sales data of this aggregate resource are shown in Table 4 overleaf.

Table 4: Sales of land-won Sharp Sand and Gravel in Kent 2005-18

Year	Tonnes
2006	760,574
2007	1,078,357
2008	827,208
2009	764,000
2010	763,924
2011	619,855
2012	652,285
2013	273,000
2014	172,672
2015	239,366
2016	259,550
2017	151,165
2018	119,259
Average last 10-years (2009-18)	**401,508**
Average last 3-years (2016-18)	**176,658**

3.4.5 The trend in sales can be more easily appreciated in graphical form, as show in Fig 6 below. Essentially the data is indicating that, in terms of the remaining sustainably exploitable resources, land-won sands and gravels are becoming exhausted in Kent. The ten-year sales average is below 0.5mtpa and sales in 2018 were the lowest recorded over the 10-year period. This trend does not fully represent the demand, as while the extraction operations at Lydd Quarry are now in East Sussex (since 2017) (and so reported in the East Sussex AMR), the site continues to serve the markets in Kent as well as East Sussex.

Figure 6: Sales of Landwon Soft Sand and Sharp Sand and Gravel in Kent, 2009-18 (Tonnes)



3.5 Land-won Hard Rock

3.5.1 Kent has natural hard rock resources in the form of the Hythe Formation (Kentish Ragstone) that has traditionally been quarried, significantly in the Maidstone area. Given that there are currently only two active sites in Kent and there is a need to maintain commercial confidentiality detailed reporting of sales in 2018 and 2019 is not possible. In the Local Aggregate Assessment (LAA) a proxy sales value of 0.78mtpa has been used to represent sales since the KMWLP 2013-30 was adopted. For the purposes of this AMR there are no compelling grounds to depart from this. If further sites were to gain planning permission and become operational, then future AMRs would be able to detail the sales of this important land-won aggregate mineral in Kent.

3.6 Production of Secondary/Recycled Aggregates

3.6.1 The NPPF requires MPAs to plan for secondary and recycled aggregates; paragraph 204 of Section 17 'Facilitating the Sustainable Use of Minerals' states that MPAs shall:

> *so far as practicable, take account of the contribution that substitute or secondary and recycled materials and minerals waste would make to the supply of materials, before considering extraction of primary materials, whilst aiming to source minerals supplies indigenously*

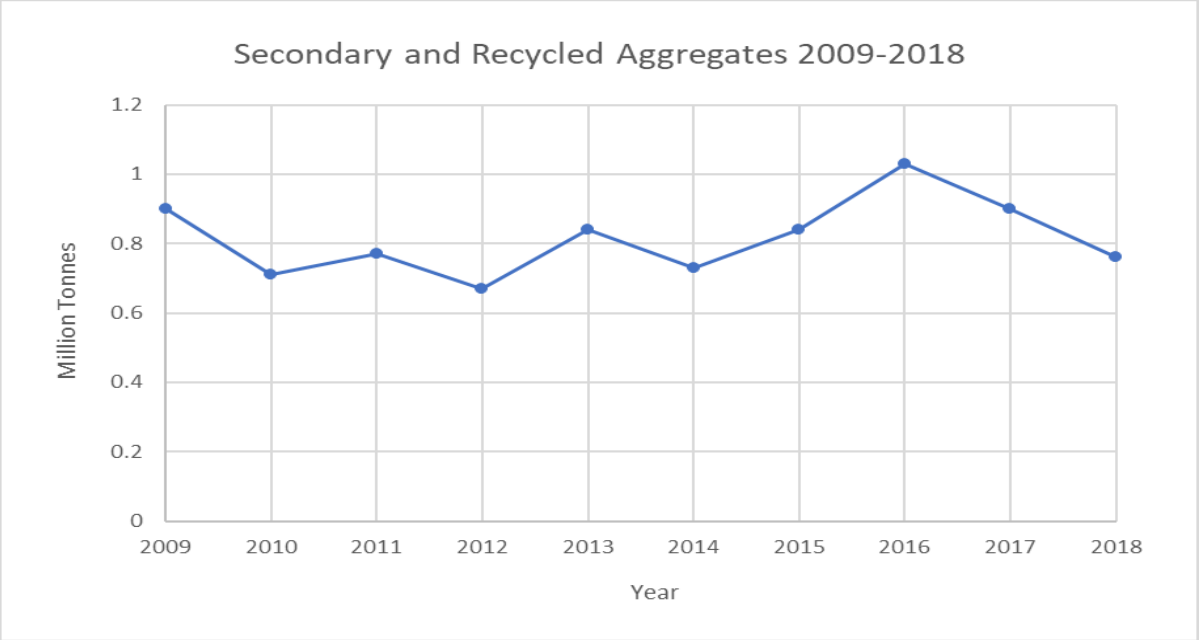
3.6.2 Table 5 below shows the sales of secondary and recycled aggregates that originate from both the CD&E waste stream and those that have arisen from industrial processes that can yield a substitute aggregate material (e.g. incinerator bottom ash).

Table 5: Sales of Secondary and Recycled Aggregates in Kent 2009-18

Year	Tonnes (millions)
2009	0.90
2010	0.71
2011	0.77
2012	0.67
2013	0.84
2014	0.73
2015	0.84
2016	1.03
2017	0.90
2018	0.76
Average last 10-years (2008-17)	**0.82**
Average last 3-years (2015-17)	**0.90**

3.6.3 Figure 7 overleaf shows graphically the trend in annual production of this material from 2009 to 2018 graphically. In the previous AMR the data showed a recovery from the recessional impact of the financial 'crash' of 2008. Since that time there has been a return to what appears to be a relatively steady state where output is within the 0.8 - 1.0 mtpa range. Though in 2018 sales marginally reduced to below 0.80mtpa.

Figure 7: Sales of Secondary and Recycled Aggregates in Kent 2009-18



3.6.4 Policy CSM 8 of the KMWLP 2013-30 requires productive capacity of this type of aggregate material to be maintained at a level of at least 2.7 mtpa throughout the Plan period. The reported permitted productive site capacity is some 4.18mtpa as reported in LAA2019. The waste needs assessment work of 2017 to support the Early Partial Review of the Plan looked at Kent's Construction, Demolition and Excavation [C,D&E] waste arisings and to what degree London's C,D&E arisings are being managed in Kent and found that overall secondary/recycled aggregate production was 0.804mt, slightly lower than that reported in the AM2018 survey, which resulted in a figure of 0.90mt. Therefore, it can be stated that the AM2018 survey is likely to be of indicative value It should be noted that the AM did not receive a 100% participation rate. Therefore, any further in-depth analysis of the secondary/recycled aggregate production in Kent may result in a different outcome as regarding the output from this sector of aggregate supply. However, overall capacity is at a point well in excess of current production level. This will allow flexibility to enable this production to rapidly ramp up if circumstances were to change in terms of market conditions and/or legislative requirements that alter construction material specifications, allowing a greater application of secondary and recycled aggregates in the construction sector.

4. Landwon Mineral Reserves

4.1 New Mineral Reserves

4.1.1 For the period 1st April 2018 to 31st March 2019 there were 15 minerals related planning applications, of which 14 were granted planning permission. Of the 14 determined there were 10 Section 73 applications to vary conditions on existing planning permissions. None of the applications altered the available reserves of the land-won minerals in Kent.

4.2 Aggregate Landbank

4.2.1 Recorded aggregate landbank figures are as of 31st December 2018 and are based on the returns for the Aggregate Monitoring (AM) for the calendar year 2018, as reported in LAA2019.

4.2.2 The annual LAA assessment of aggregate need or requirements, has replaced the mineral apportionments that historically came from the from the partially (but substantively) revoked

Regional Spatial Strategy, otherwise called the South East Plan. The South East Plan's Policy M3 on Construction Aggregates required the supply of land-won sand and gravel maintained at 1.63mtpa and 0.78mtpa of crushed rock[10] respectively until 2026, while maintaining at least 7 (sands and gravels) and 10 (for crushed rock) year landbanks at any one time. The quantum based on the latest 10-year average sales figures, and any relevant 'local circumstances' that should be taken into account.

4.2.3 The NPPF, as amended in 2019, has retained the requirement for MPAs to make provision for the maintenance of landbanks of primary landwon aggregates, whilst ensuring that the capacity of operations to supply a wide range of such materials is not compromised. Safeguarding of both the mineral resources themselves along with the production and transportation infrastructure is seen as fundamental to securing a steady and adequate supply of aggregate materials.

4.3 Landwon Sand and Gravel Permitted Landbank

4.3.1 The 2018 data (AM2019) collected for Kent shows the reserves for the following aggregate mineral types *as of the end* of 2018:

- Soft sand 8,296,344 tonnes or 8.30 million tonnes; and
- Sharp sands and gravel 3,296,344 tonnes or 3.30 million tonnes, in the previous AMR 2017/18 reserves had significantly increased from 2.71 million tonnes in 2016 to 3.69mt due to a re-evaluation of one particular site's remaining reserves that was not counted before due to lack of robust data at the time. The re-evaluation was done in order to attempt to distinguish between the soft sands reserve from sharp sands and gravel reserve on the site. It was concluded that any soft sands were in fact only available in negligible quantities. Therefore, in 2018 there has been a decline in reserves since 2017, no replenishing new planning permissions have been permitted in 2019.

4.3.2 These reserves are the reported estimates from the operators of all the respective aggregate mineral sites (soft sand, sharp and gravel (not crushed rock)) operating in Kent for the end of 2018. Therefore, the data is now (at the time of publication) out of date by another year of production. Any significant magnitude of change from 2018 will not be known until the data for 2019 is collected by AM2020. However, reserves can be approximated at any one time for forward planning policy formulation purposes. This can be done by further reducing the out of date reserves commensurately by using at least the most recently recorded yearly production figures and possibly the last three-year averages as a proxy for reducing the recorded reserve level for any one aggregate type.

4.3.3 Table 6 demonstrates how the total permitted reserves can be expressed as time duration landbanks. The current adopted policy predicted mineral requirements for Kent are set out in Policy CSM 2 of the adopted Kent Minerals and Waste Local Plan 2013-30 Plan. This supply prediction was based on 2014 aggregate monitoring data, while the emerging Minerals Sites Plan is based on the updated landbank requirement prediction for both the soft sands and sharp sands and gravel set out in the published LAA 2018.

4.3.4 The current sharp sand and gravel landbank, based on the adopted local requirements, is calculated at 4.23 years, which is below the 7-year NPPF requirement of the adopted Plan's 10-year average of 0.78mt multiplied over 7 years (giving 7.8mt as the landbank required at any one time). The recently monitored landbank (3.30mt) for 2018, when divided by the recent 10-year (2009-18) average sales data (0.401mt), equals 8.2 years which is above

[10] The RSS 0.78mtpa apportionment is retained as a proxy for the yearly hard rock sales as the AM survey cannot report the actual amount due to confidentiality issues (less than three operational sites renders any sales data confidential as agreed by SEEAWP)

the minimum NPPF requirements, but insufficient reserves exist for the plan period of 2013-30.

4.3.5 It is concluded that the landbank figures for the land-won sharp sands and gravels are demonstrating a decline in available resources, based on a geological scarcity that is retarding the process of replenishment with new reserves. This has become increasingly apparent. New reserves for this aggregate mineral are not coming on-stream as planning permissions.

4.3.6 Output from one significant Kent quarry has been lost to the consideration of Kent's aggregate assessment process, due to extraction passing over the administrative boundary (Lydd Quarry) into East Sussex in 2017. This was not unexpected. Nor the increased geological scarcity of additional resources. This is reflected by the supply requirement estimated in adopted Policy CSM 2 which is caveated as follows "….*at least seven years supply (5.46mt) will be maintained <u>while resources allow</u>*". The potential for Kent to be able to provide any additional reserves of this aggregate type is a matter that is being addressed by the Minerals Sites Plan. Two sites are proposed as allocations in the Plan (Moat Farm and Stonecastle Farm). Taken together, they could provide 2.5mt. The revised need calculation, based on the LAA2019 findings, shows that there is a 6.82mt requirement over the Plan period. Available reserves reduce this to 3.92mt. Clearly the proposed allocated sites, if permitted, would not meet the objectively assessed needs of Kent for this aggregate type and so the strategy to move towards alternatives, significantly marine dredged materials, therefore remains in place.

4.3.7 With regard to the soft sand supply situation this is less attenuated, in that Kent has an, at present, 16 year plus landbank of soft sand. The Kent Mineral Sites Plan, if adopted in 2020, will have a 17-year plan period (notionally 2020-30 plus 7 years) rather than a 24-year plan period of the adopted Plan (2013-30 plus 7 years). Therefore, there is a need for a lower amount of new soft sand provision than the 5.0 mt identified in the adopted Plan. Essentially, enough soft sand will have to be provided to meet the identified need to maintain the NPPF's requirement of a "*steady and adequate supply of aggregates*" over the Mineral Sites Plan period. This will be based on being able to meet at least the 10-year sales average per year, over the respective Plan period. This is to come from the existing reserves currently permitted, with the identified shortfall being addressed by the site identified for allocation (Chapel Farm, Lenham at 3.2mt resources) in the Mineral Sites Plan. LAA2019 has assessed the new 2018 sales data averages. If the site is part of the development plan for Kent, as an allocation, this will meet the NPPF's requirements and provide a surplus of some 1.2mt for the wider need.

4.3.8 The potential effect of increased development rates (mainly housebuilding) that are identified in the local plan coverage within Kent and the predicted number of infrastructure projects, are inherently difficult to model with any accuracy. Therefore, in light of this, it is considered that the 10-year average represents a reasonably reliable metric on which to base estimates for future requirements for the Sites Plan period. Table 6 overleaf shows the latest data available, and the landbank scenarios based on the differing extraction rates.

Table 6: Kent Aggregate Reserves and Aggregate Landbank as of 2018 Data

	Permitted Reserve (mt)	Current Landbank based upon adopted KMWLP Policy Requirement (years)*	Current Landbank based upon 10yr average sales between 2009-2018 (years)	Landbank based upon 3yr average sales between 2016-2018 (years)	Current Landbank based upon 2018 sales alone (years)
Soft Sand	8.30	12.7	16.4	15.3	16.8
Sharp Sand & Gravel	3.30	4.23	8.2	18.6	27.7

Source: Aggregate Monitoring Surveys data for years 2009-2018

*The local requirement is as set out in the adopted KMWLP 2013-30 Policy CSM 2 (and explanatory memoranda) for Sharp Sand & Gravel 13.26mt (some 0.78mtpa) overall, while resources allow, and for Soft Sand- 15.6mt (some 0.65mtpa) overall, as based on the 10-year average sales data of the adopted Plan

4.4 Landwon Hard Rock Permitted Landbank

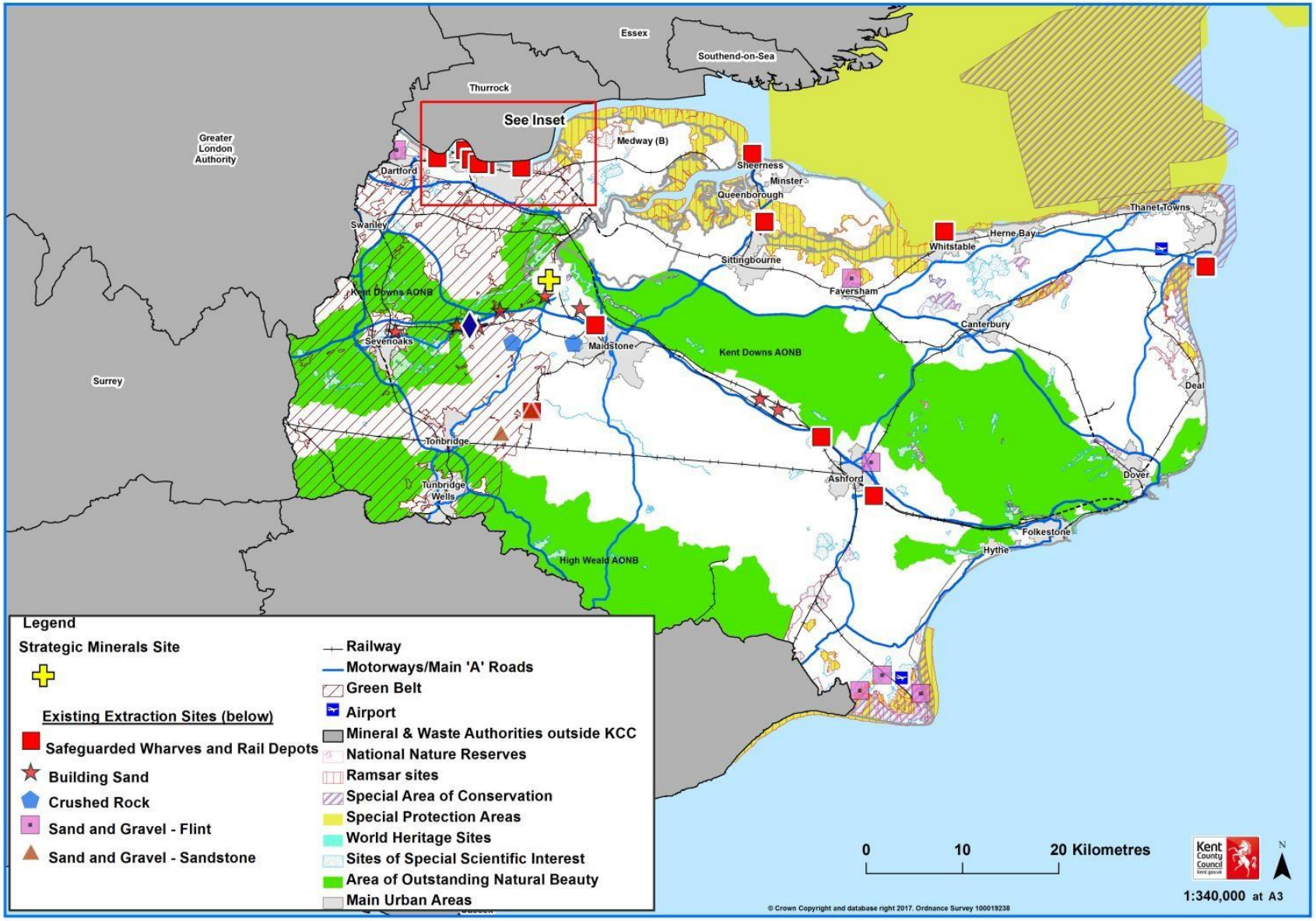
4.4.1 Sales of hard rock are not reported in this AMR (or any recent LAA) given the need to maintain confidentiality. There are currently only two operational hard rock quarries in Kent. Therefore, this is below the minimum of three operational sites where the sales data can be aggregated and reported, thus maintaining confidentiality, as agreed with the operators of the sites and their Minerals Products Association representative on the AWP for the South East area. This issue has not altered since the 2015 Independent Examination and subsequent adoption of the Minerals and Waste Local Plan in 2016. The assumption of 0.78 mtpa for yearly production (this in turn being based on the apportionment for Kent in the South East Plan) was, and continues to be, used as a proxy for hard rock sales (and demand) in Kent.

4.4.2 The adopted Plan does not make any provision for additional hard rock reserves over the plan period, given the significant extent of the permitted reserves in the county at this time and that at least a 10-year landbank is required to be maintained over the Plan period (see NPPF, Section 207, part f) page 60). Permitted reserves were significantly boosted by an additional 16 million tonnes of ragstone (Hythe Formation limestone) in a westerly extension of Hermitage Quarry close to Maidstone in 2013.

4.4.3 This material, and the existing permitted reserves currently available at Blaise Farm, are considered more than sufficient to meet the NPPF requirement at this time as it is estimated that the landbank based on reserves still remaining are sufficient for over 30 years. In addition, significant amounts of hard rock are imported into Kent via wharves and rail depots that further ensure the security of supply and a diversity of sources for hard rock derived aggregates for construction and infrastructure maintenance purposes.

4.4.4 As well as other features, Figure 8 overleaf shows the safeguarded wharves (general locations of the lower Thames wharves, inset map not shown) and rail depots in Kent.

Figure 8: Location of Active Quarries and Safeguarded Wharves and Rail Depots in 2018



4.5 Landwon Other (Non-Aggregate) Mineral Landbanks

4.5.1 Permitted reserves and production rates for other (non-aggregate) minerals are not monitored in the same way as construction aggregates. The County Council conducted its own extensive Non-Aggregates Mineral Surveys in 2008 and 2011 as part of the evidence gathering for the KMWLP 2013-30. Updates using the latest figures (where provided, however, this has not been comprehensive in all cases) are included in this AMR for the 2018/19 period.

4.5.2 Moreover, unlike the AM survey conducted by SEEAWP, the County Council's own surveys do not benefit from the support of trade associations and as such they do not necessarily achieve a full response rate. The information obtained for this AMR (and previous AMR reports) has therefore been combined with estimates of reserves and production rates drawn from previous survey returns, planning applications and other publicly available documents.

4.6 Brick and Tile making from Clay or Brickearth

4.6.1 The NPPF requires MPAs to maintain landbanks of brickclay (therefore including brickearth) of at least 25 years and to take account of the need for provision of brick clay from a number of different sources to enable appropriate blends to be made. This requirement is reflected in Policy CSM 2 of the KMWLP.

4.6.2 As has been reported before, brickwork closures in previous years have had a substantial impact on the brick manufacturing capacity in Kent and on the distance that material extracted from currently consented sites travels within the county. Whilst there are currently no operational brickworks in Kent which use clay as a raw material, there is a tile manufacturer (Babylon Tile Works) in the Weald of Kent south of Maidstone, which makes Kent peg tiles from clay reserves adjacent to the works. The permitted reserves at this site more than meet the requirements within the NPPF for supplies of brick clay (at least 25 years). The planning permission required extraction to cease by April 2022 and for Kent peg tile manufacture to cease a year later. A new planning permission was granted in October 2019 (while outside this AMR time period it is important to note) to extend the life of the site for a further 25 years.

4.6.3 Brickearth has historically been an important mineral in Kent for stock brick manufacture (also called London Stock Bricks), that significantly characterises Victorian structures in Kent and further away, such as in many parts of London. At present, only one operator, Weinerberger (UK) Ltd, has an active brickwork that uses brickearth to produce stock brick products at the Smeed Deen Works in Sittingbourne. Current reserves come from 2 sites: Orchard Farm (with limited reserves) and Paradise Farm (significant reserves) in the Sittingbourne area. Total permitted reserves are now below the NPPF requirement of at least 25 years, estimated as potentially 21-22 years. Though yearly production is variable and can significantly reduce in any one year that would commensurately increase the landbank significantly. Table 7 overleaf illustrates the anticipated remaining lifespans of the permitted reserves left in Kent at this time.

Table 7: Clay and Brickearth Landbanks at Active Brick and Tile Works

Works	Operator	Source	Estimated Length of Supply
Babylon Tile Works, Maidstone (Kent peg tile manufacturer)	V&M Gash	Weald Clay	Over 25 years
Orchard Farm, Sittingbourne	Weinerberger Ltd	Brickearth	Considered likely exhausted by late 2019
Paradise Farm, Sittingbourne	Weinerberger Ltd	Brickearth	Less than 25 years
Pluckley Quarry, Ashford[11]	Pluckley Brick Company	Weald Clay	Over 25 years supply

4.7 Silica Sand

4.7.1 National minerals policy guidance on silica sand requires MPAs to plan for a steady and adequate supply of industrial minerals by the provision of a stock of permitted reserves of silica sand. This should be of at least 10 years for individual existing sites and for at least 15 years for sites where significant new capital is required for the establishment of a reception site for the extracted brickearth and the production plant necessary for the manufacture of bricks, their storage and onward distribution. This requirement is reflected in Policy CSM 2 of the adopted KMWLP.

4.7.2 Previously Aylesford Quarry Sand Pit, Addington (Wrotham) near Maidstone was identified as a site with substantial reserves of silica sand. Production ceased in 2012 and remaining reserves are substantially below the water table and no longer considered viable to extract. Nepicar Sand Pit and Addington Quarry are now regarded as sites that produced silica sand in Kent. It should be understood that the mineral comes from the same geological formation as building or soft sand, which is an aggregate mineral and thus sites producing building sand may also be capable of producing silica sand.

4.7.3 Both soft and silica sands are extracted from the Folkstone Formation, while the latter is in its particularly pure form, free of iron rich minerals (Hematite) that would give it the characteristic ‘buff’ colouration, and can be used in a range of industrial applications where a pure source of silicon dioxide (quartz) is required. The estimated timespan of supply at these sites, as indicated in Table 8 below, was calculated from 2018 sales rates. One site meets the KMWLP required of a 10-year minimum landbank for existing sites. However, Nepicar Sand Quarry has reserves below this local and national planning policy requirement. Therefore, the situation remains essentially unchanged since reporting in previous AMRs. Aylesford Quarry remains inactive and there is, as stated above, significant doubt that the below water table reserves of silica sand can be extracted, processed and brought to market economically in current market conditions.

[11] Pluckley Brickworks ceased to operate in 2016, and the plant site is subject to a planning allocation for residential development (Ref. 18/01402/AS), however clay extraction for production outside the County continues

Table 8: Landbanks at Silica Sand Quarries in Kent

Site	Operator	Estimated Length of Supply
Addington (Wrotham) Quarry, Addington, West Malling	Fern Aggregates	Over 20 years
Nepicar Sand Quarry, Wrotham Heath, Nr Sevenoaks	J. Clubb Ltd	Less than 10 years

5. Chalk and Clay

5.1 Chalk for Agricultural and Engineering Uses

5.1.1 The requirement for Chalk and Clay for cement manufacture is reflected in Policy CSM 2 of the adopted KMWLP with the identification of the strategic Site for Minerals, this being the Medway Cement Works at Holborough in the River Medway Valley (that is partially within the area of the unitary authority of Medway). The mineral resources at this site are sufficient for at least 25 years of cement manufacture.

5.1.2 There are currently no active cement quarries in Kent, the consented reserves of chalk and clay for cement manufacture at the permitted, but not yet built, Holborough Cement Works will address this requirement when it becomes an operational site, as detailed in Table 9.

Table 9: Chalk and Clay Landbanks at Cement Works in Kent

Site	Operator	Estimated Length of Supply
Holborough Cement Works	Lafarge Cement UK	Not yet constructed though planning consent legally implemented, supply sufficient at planned consumption rate for over 25 years

5.2 Chalk for Agricultural and Engineering Uses

5.2.1 Chalk is used in agriculture and engineering in Kent, as well as being used in the production of bricks, tiles and cement and some engineering processes. Chalk for engineering and agricultural use is not covered specifically in current national minerals policy guidance, in the NPPF or the guidance issued by the Ministry of Housing, Communities and Local Government (MHCLG) for the planning for mineral extraction in plan making and the application process. However, the general advice on maintaining a sufficient supply of minerals, as set out in part 17, section 203 of the NPPF, remains pertinent to the planning of all mineral types. This requirement is reflected in Policy CSM 2 of the KMWLP: permitted reserves are required to enable an adequate supply to be maintained through the plan period.

5.2.2 For AMR purposes, the County Council has conducted surveys of chalk extraction. However, this has not always resulted in comprehensive results. In the absence of more reliable data, the current position in Kent for chalk used in agricultural and engineering applications can be extrapolated using past data on reserves and extraction rates as set out in Table 10 below.

Table 10: Agricultural and Engineering Chalk Landbank in Kent in 2018

Average sales (2011-2014) per annum rate used as a proxy to reduce recorded reserves of 1.516 million tonnes in 2014	Total Estimated Reserves at end of 2019
70,000 tpa	1.16 million tonnes

5.2.3 The indicative data above shows that Kent has potential agricultural and engineering chalk landbank equal to 16.6 years as of 2019. The Plan will last another 10 years (2020-30), therefore, there is a high probability that there is a sufficient permitted landbank to maintain a supply of chalk for these purposes over the remainder of the Plan period.

5.3 Engineering Clay

5.3.1 Kent has freestanding clay working permissions with significant deposits of consented clay. However, only one of these sites remains active at this time. The reserves in other sites have not been worked for many years or are dormant 'Interim Development Order'[12] sites and therefore cannot be realistically included in the current landbank.

5.3.2 Whilst this AMR cannot report on sales from individual sites due to commercial confidentiality, it can be reported that an average of 27,400tpa of clay from land-won sources was sold in the years between 2000-2009, for which data was available. In 2014 there was activity to supply 25,000 tonnes of sea defence engineering clay (via a temporary permission now expired), and some 64,000 tonnes of materials for construction material manufacture. Although Recent sales activity data is unavailable it is the County Council's view that, given the NPPF does not require specific landbanks to be maintained and the likely reserves in existence in 2018/19, no argued justification can be made for any release of significant quantities of London Clay can be made at this time.

6. Imported Mineral Supply via Wharves and Rail Depots

6.0.1 National minerals policy requires all MPAs to safeguard existing, planned and potential sites which can accommodate railheads, wharfage and associated storage, handling and processing facilities for the bulk transport, by rail, sea or inland waterways, of minerals.

6.0.2 In 2010, the County Council worked jointly with Medway Unitary Authority to produce joint Kent and Medway Imports Survey report. An updated report was published as part of the evidence base for the Kent Minerals and Waste Local Plan - Strategy and Policy Directions consultation in May 2011. The study confirmed the importance of continuing a steady supply of both marine dredged aggregates from the dredging grounds around the coast and crushed rock from continental Europe (and other parts of the UK), as land-won resources of aggregates are slowly depleted in Kent.

6.0.3 The adopted KMWLP 2013-30 includes both strategic and development management policies to safeguard wharves and rail depots and associated mineral and waste management infrastructure on-site, including:

- Policy CSM 6: Safeguarded Wharves and Rail Depots

[12] Interim Development Order sites are those with permissions granted between 1943-48 that were successfully registered by Kent County Council as the responsible Mineral Planning Authority in accordance with the Planning and Compensation Act 1991

- Policy CSM 7: Safeguarding Other Mineral Plant Infrastructure
- Policy CSW 16: Safeguarding of Existing Waste Management Facilities
- Policy DM 7: Safeguarding Mineral Resources
- Policy DM 8: Safeguarding Minerals Management, Transportation & Waste Management Facilities

6.0.4 At the end of 2019 there were 9[13] active wharves, and one potential wharf (Old Sun Wharf, Gravesham) and five rail depots in the county, though only two are currently active for aggregate importation. Since the joint study in 2011 and the adoption of the KMWLP in 2016, one wharf has been lost (Site M: Dunkirk Jetty, Dover Western Docks) to redevelopment initiatives (Dover Western Docks redevelopments). Though this facility is technically a safeguarded wharf it is unrealistic to conclude that it will ever be re-activated as a marine aggregate importation facility. The redevelopment process will, no doubt, make a case to invoke an exemption criterion to the presumption to safeguard, as set out in Policy DM 8: Safeguarding Minerals Management, Transportation Production & Waste Management Facilities.

6.1 Sales of Aggregates at Wharves and Rail Depots

6.1.1 The construction aggregate sales (from both land-won and marine sources) at Kent's wharves in 2018 were as follows:

- 2.1mt of sand and gravel[14] (4.45% decrease from 2017)
- 1.56mt of crushed rock (1.9% increase from 2017)

6.1.2 Compared to 2017, imports of crushed rock have shown a very marginal increase (continuing the upward trend from 2012). Sands and gravel (all types) imports have shown a decrease of almost 5%. The total amount of primary aggregates imported via wharves and rail depots in Kent in 2018 was 3.68 million tonnes. This is an overall a slight decrease of 47,200 tonnes over that recorded in 2017, when total primary aggregate imports were recorded at 3.73 million tonnes. This is a marginal drop of 1.3% compared to 2017.

6.1.3 However, when considering a longer period, from 2009 to 2018 (the latter year being the last data set available in this AMR period), the wharf landings of sand and gravel (marine dredged and landwon supply from elsewhere, though excluding the marine soft sands that are marginal in overall quantity, though these are showing an increasing trend) have remained essentially stable at around the 2.0 mtpa since 2014. Crushed rock wharf landings show some more variability during 2009-15, since that period sales have stabalised around the 1.0 mtpa level. Table 11 below shows the sales tonnages per year and Figure 9 overleaf demonstrates this relationship graphically.

Table 11: All Wharf landed Sand and Gravel and Crushed Rock Sales in Kent 2009- 2019 (tonnes)

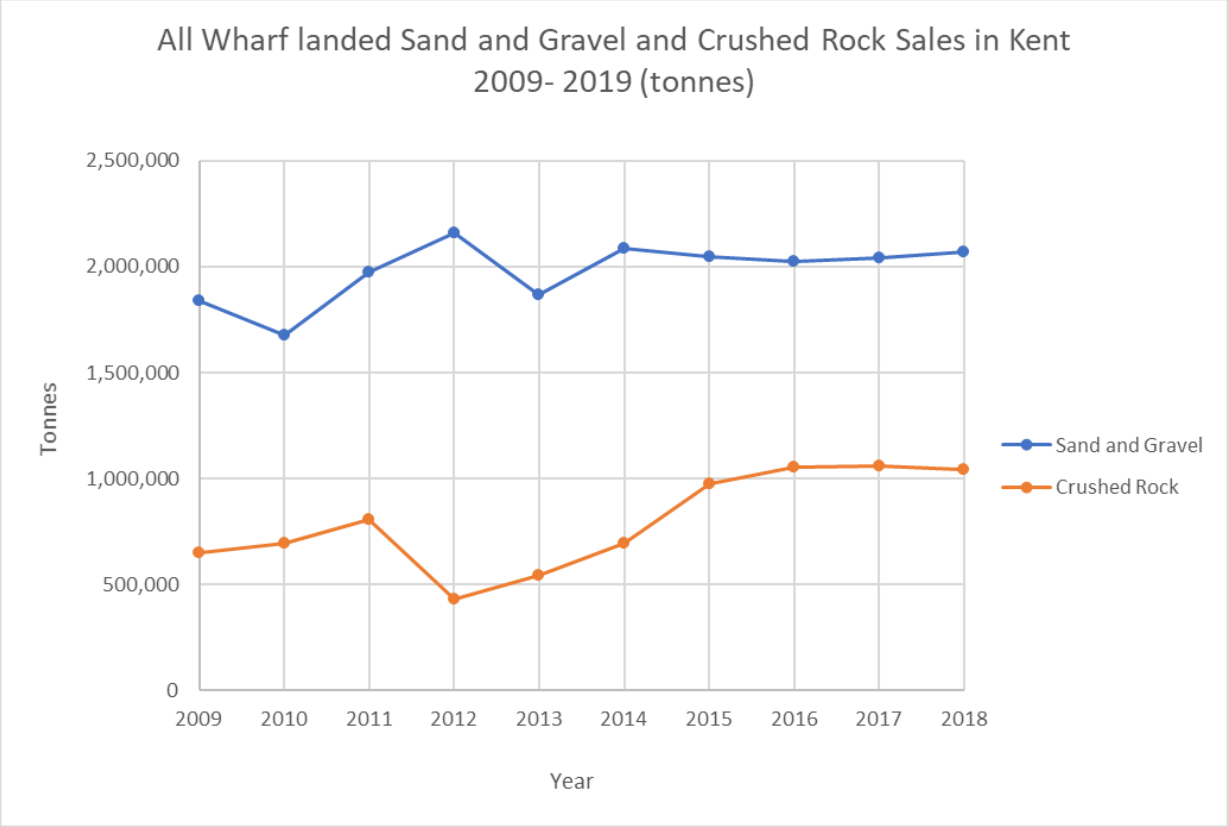
Sales	Sand and Gravel	Crushed Rock
2009	1,841,948	647,810
2010	1,674,949	693,302

[13] See Appendix 2: Safeguarded Wharves and Rail Transportation Depots 2018
[14] Including 32,600 tonnes of soft sand of marine and land-won origin

2011	1,972,653	807,373
2012	2,161,031	432,677
2013	1,869,709	546,541
2014	2,085,806	697,421
2015	2,049,546	975,875
2016	2,022,419	1,052,971
2017	2,040,747	1,057,785
2018	2,068,350	1,043,721
Last 3-year average	**2,043,839**	**795,548**
Last 10-year average	**1,978,716**	**1,051,492**

Source: Aggregate monitoring surveys, 2009-2018

Figure 9: Graphical Representation of all Sales of Sand and Gravel and Crushed Rock from Kent Wharfs 2009-18



6.1.4 With regard to the importation of aggregates via the rail depots this is considerably less in magnitude than that seen at Kent's wharfs for the sands and gravels. The rail depots crushed rock importation is approximately half of all hard rock imports by sea, being in the 4-300,000 tpa range. Though it is showing a marked trend of increase year on year since 2012. Table 12 below shows the sales tonnages per year and Figure 10 overleaf demonstrates this relationship graphically.

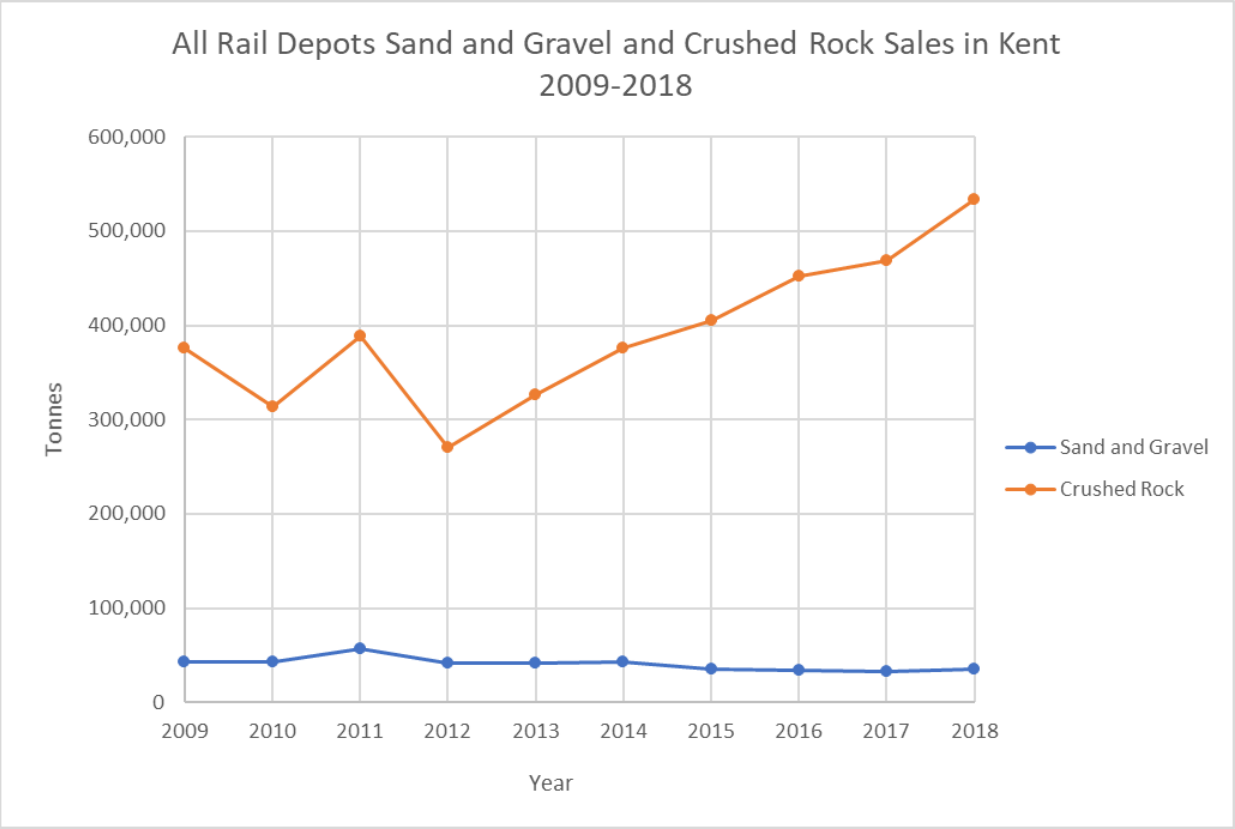
Table 12: All Rail Depots Sand and Gravel and Crushed Rock Sales in Kent 2009-2018

Sales	Sand and Gravel	Crushed Rock
2009	42,892	375,938
2010	43,408	313,007

2011	56,921	389,006
2012	42,128	270,586
2013	41,890	326,578
2014	42,832	375,938
2015	34,631	405,331
2016	34,488	452,751
2017	32,426	468,785
2018	34,671	533,110
Last 3-year average	**33,862**	**484,882**
Last 10-year average	**40,629**	**391,103**

Source: Aggregate monitoring surveys, 2009-2018

Figure 10: Graphical Representation of Sand and Gravel and Crushed Rock Sales from Rail Depot 2009-18



7. Construction Aggregate Summary

7.0.1 The sales data for construction aggregates in Table 13 overleaf does not demonstrate actual consumption of aggregates within Kent from 2009 to 2018, as a degree of exportation out of Kent has occurred. In addition, imports to users in Kent by road are not picked up by aggregate monitoring in Kent. Import and export balance survey work that can reveal the degree of aggregate consumption (to a reasonable degree of accuracy) was completed in a comprehensive form in 2009. Further work on this matter was commissioned in 2014; the data is unpublished by the British Geological Survey who carried out the survey work. However, mineral planning authorities, including Kent, have had access to the information that was collected.

7.0.2 However, the data shows that Kent consumes 80-90% of all the aggregate produced in Kent

(both as landwon and the imports of sand and gravel and crushed rock) and 10-20% of materials 'produced' in Kent were exported to the wider South East in 2014. The import-export data does not disaggregate soft sand from sharp sands and gravels and thus has limitations on how it can be used to determine what is taking place with these distinctly different materials, serving distinctly different markets. However, due to the relative scarcity of sharp sand and gravel reserves in Kent it is considered highly likely that any exports of soft sand exceed those of any exports of land won sharp sand and gravel.

7.0.3 The total primary and recycled/secondary aggregate sales as tonnage (including imports) during the period 2009 to 2018 are shown in Table 13 overleaf. For AMR 2018/19 reporting period, the observable change in trend is the reduction of sales of landwon sharp sands and gravels, presumably this related to supply depletion: with overall increases in importation of sharp sand and gravels. This trend has become clearer since 2015 as a result of the need to address market needs (being particularly reliant on marine resources via wharves, rail depots being relatively insignificant). Sales of landwon soft (building sands) are showing a slight downturn, the 3-year average sales figure is still below that of the 10-year average sales figure, though the latter has reduced from 0.568mtpa reported in AMR2017/18 to 0.542mtpa.

7.0.4 Sales of landwon crushed hard rock are unknown, with imports being relatively stable through both wharfs and rail depots, though rail depots are showing a steady year on year increase in hard rock sales. This visible trend started in 2012 (see Figure 9). The recycled and secondary aggregate sales also remain relatively stable; with the three-year average at 0.90mtpa, down slightly from the 10-year average of 0.92mtpa reported in AMR 2017/18. Overall Kent sales of aggregates of all types was recorded at 5.83mt compared to the previous AMR2017/18 report at 6.09mt in 2017. Though slightly down, the overall upturn following the 2009 peak of 6.43mt and subsequent recession that appeared to depress sales until 2013/14, is clear.

7.0.5 Given the observed consistent decline in landwon sharp sand and gravel sales since 2009 (see Table 4 page 24) it can be anticipated that imports of sharp sand and gravel will continue to increase unless a landwon replenishment occurs in the future. Given the work to date on the Mineral Sites Plan this appears to be unlikely, as insufficient sites were deemed acceptable for allocation to fully replenish the landbank. Safeguarding of importation infrastructure, particularly the wharfs in Kent, is, and will be, of great importance in maintaining a steady and adequate supply of aggregates, of the right type, into the foreseeable future.

Table 13: Total Aggregate Production in Kent during 2009-2018 (Million tonnes)

Year	Soft Sands Land-won £	Soft Sands Imports	Sharp Sands & Gravel Land-won £	Sharp Sands & Gravel Imports $	Crushed Rock Land-won	Crushed Rock Imports	Secondary / Recycled Aggregates	Total
2009	1.20	0.0150	0.76	1.76	0.78	1.02	0.90	**6.43**
2010	0.62	0.0182	0.76	1.67	0.78	1.01	0.71	**5.57**
2011	0.44	0.0160	0.62	2.01	0.78	1.17	0.77	**5.85**
2012	0.39	0.0230	0.65	2.18	0.78	0.70	0.67	**5.40**
2013	0.48	0.0152	0.27	1.77	0.78	0.87	0.84	**5.00**
2014	0.29	0.0098	0.17	1.97	0.78	1.07	0.73	**5.02**
2015	0.48	0.0288	0.24	2.06	0.78	1.38	0.84	**5.77**

2016	0.51	0.0079	0.26	2.05	0.78	1.50	1.03	**6.14**
2017	0.52	0.0098	0.15	2.19	0.78	1.53	0.91	**6.09**
2018	0.49	0.0326	0.12	2.07	0.78	1.58	0.76	**5.83**
Total 2009-18	**5.42**	**0.1763**	**4.00**	**19.73**	**7.80**	**11.83**	**8.16**	**10-year average 5.71mt**
Last 3-year average	**0.506**	**0.0167**	**0.1766**	**2.103**	**0.78**	**1.536**	**0.90**	**3-year average 6.02mt**
Last 10-year average	**0.542**	**0.0176**	**0.400**	**1.973**	0.78	**1.183**	**0.816**	

Source: Aggregate Monitoring Surveys, 2009-2018. $ denotes marine dredged and landwon sands and gravels via railheads and wharves. £ denotes sales for constructional fill not included.

8. Waste Indicators

8.1 Local Authority Collected Waste Arisings by Management Type

8.1.1 The Local Authority Collected Waste (LACW) arising and managed in Kent in 2018/19 was reported by Defra as being 721,188 tonnes. This represents an increase of 0.53% on the 2017/18 value. The 2018/19 tonnages, proportions by management type and the percentage change from the previous monitoring year (based on actual tonnage) are set out in Table 14 below. The data shows that LACW sent to landfill remains below 2% of collected waste. Recycling and composting have increased to exceed 50%, with Energy from Waste standing at 48%.

Table 14: Quantities of LACW Managed in Kent by Management Type in 2018/19

Management Type	Tonnes	Percentage of Total LACW	Change from 2017/18
Recycling/Composting	362,878	50.32%	348,464 (an increase of 1.74%)
Energy Recovery (EfW)	345,985	47.97%	352,048 (a decrease of 1.10%)
Landfill	12,050	1.67%	7,442 (an increase of 0.63%)
Total	**721,188**	100%	**717,388 tonnes** An increase of 2.61% overall (3,800 tonnes)

8.1.2 The objectives of the current Waste Management Plan for England (Defra, December 2013) include a target that by 2020 at least 50% by weight of waste from households for the target materials (glass, paper, plastic and metal) is prepared for re-use or recycled. Management of Kent's collected MSW continues to progress towards this target, and to continue to divert biodegradable waste from landfill as required by the EU Landfill Directive (1999).

8.1.3 The Kent Joint Municipal Waste Management Strategy (KJMWMS) was adopted by the collection and disposal authorities of Kent (Kent Waste Partnership) in 2007. The work of the Partnership has been taken on by the Kent Resource Partnership (KRP) and the following targets for household waste adopted:

- recycling/composting rates of at least 45% by 2015/16;
- landfilling no more than 10% by 2015/16;
- recycling/composting rates at least 50% by 2020/21; and
- landfilling no more than 5% by 2020/21.

8.1.4 The data in Table 14 demonstrates that the earlier targets (2015/16) have been sustained, while the 2020/21 recycling/composting target has now also been attained, while the landfill diversion target was surpassed some two years earlier than planned.

8.1.5 Figures 11 and 12 illustrate the trends in the management of the LACW between 2014-15 and 2018-19, both in tonnes (Figure 11) and percentages (Figure 12) overleaf.

Figure 11: Collected LACW by Management Method 2014-15 to 2018-19 in Tonnes

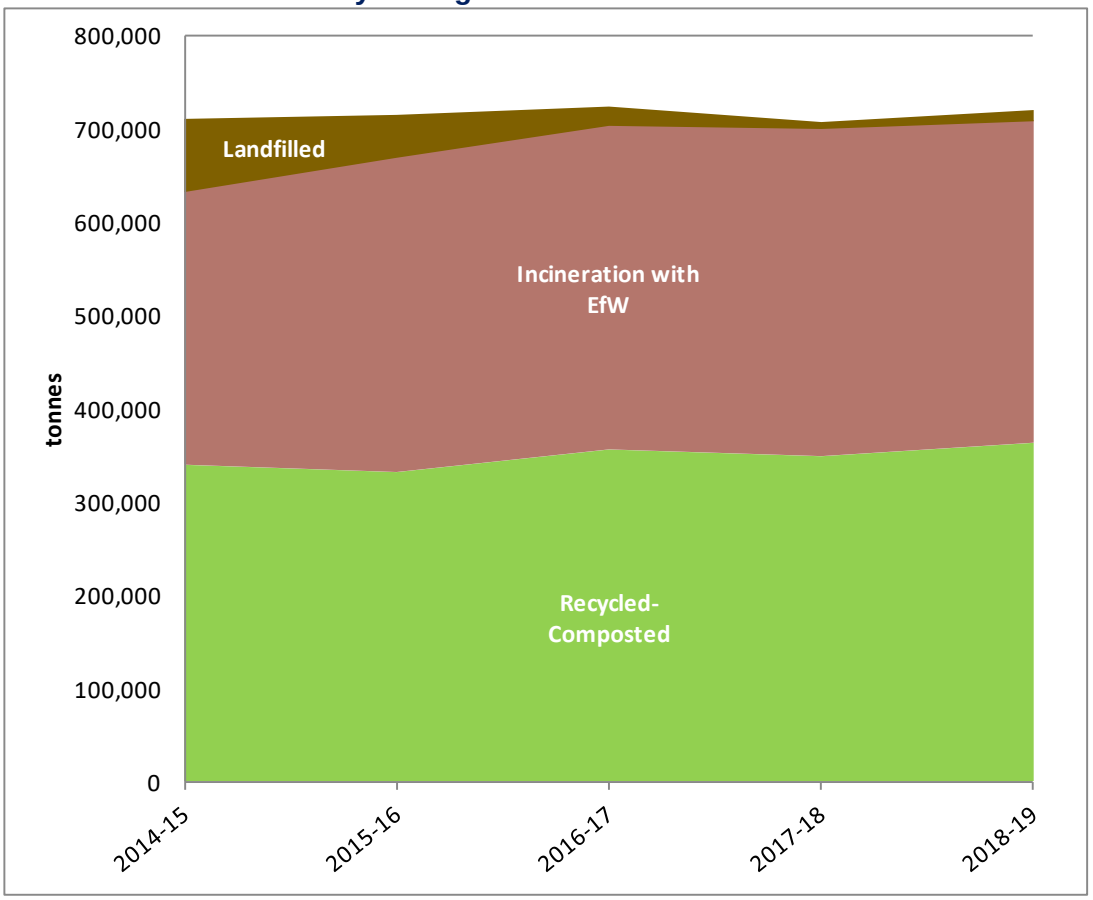
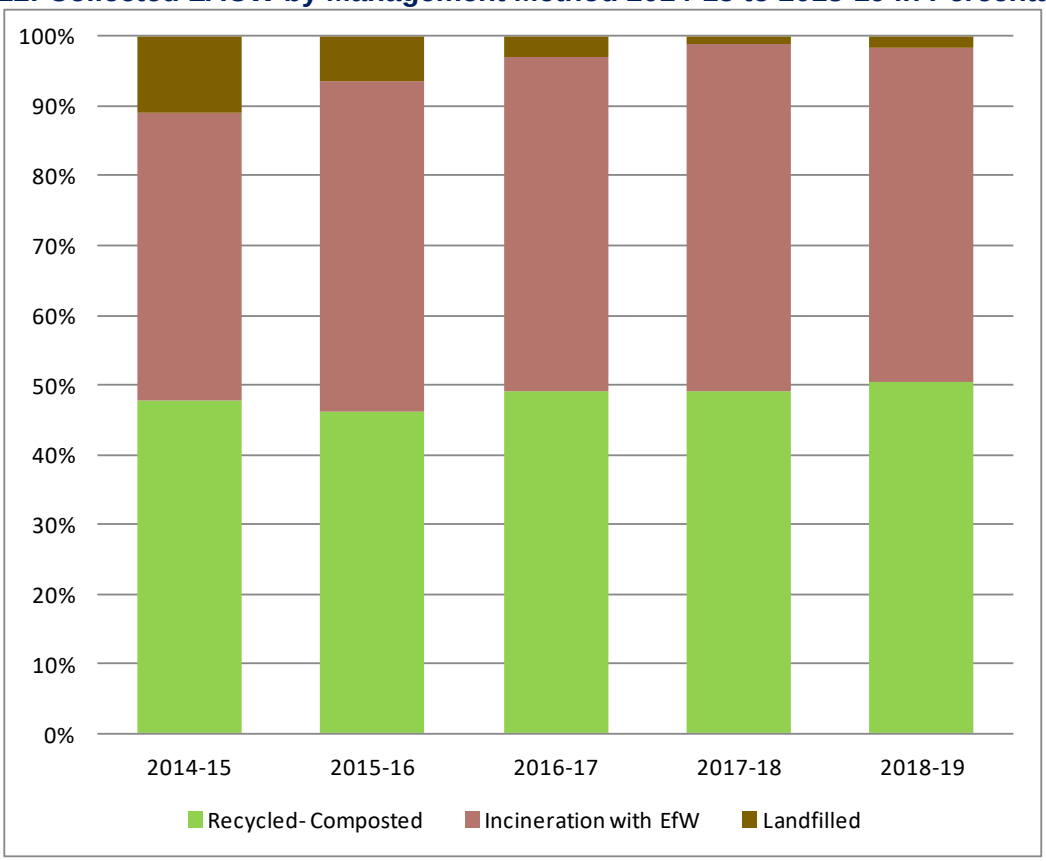


Figure 12: Collected LACW by Management Method 2014-15 to 2018-19 in Percentages



8.1.6 During the period between 2014-15 and 2018-19 overall LACW arisings have remained more or less stable with a continuing decline in the proportion being sent to landfill (11% in 2014-15 to 1.67% in 2018-19). Recycling and composting being taken in combination increased from 47.7% in 2014- 15 to exceed 50% in 2018-19 for the first time.

8.2 Waste Generation Growth Rates

Local Authority Collected Waste (LACW)

8.2.1 As shown in Table 14 (page 39), the amount of LACW in 2018-19 increased marginally from 717,388 tonnes in 2017-18 to 721,188 tonnes, an increase of some 0.53%. This is a reversal of the decline on 2016-17.

Commercial and Industrial Waste (C&I)

8.2.2 Commercial waste is waste from premises used mainly for trade, business, sport, recreation or entertainment, as defined under Section 5.75(7) of the Environmental Protection Act 1990[15]. For example, it is likely to include timber, metal, paints, textiles, chemicals, oils and food waste, as well as paper, card, plastic and glass. While industrial waste is waste from any of the following activities/premises: factory, provision of transport services (land, water and air), purpose of connection of the supply of gas, water, electricity, provision of sewerage services, provision of postal or telecommunication services.

8.2.3 Annual data on the amount of C&I wastes produced in Kent is not routinely available. Recent work undertaken by BPP Consulting[16] to support the Early Partial Review estimated that arisings in 2015 were just under 1.2mt which by 2031 could rise to some 1.4mt. In line with national Planning Practice Guidance (Paragraph: 032 Reference ID: 28-032-20141016 Revision date: 16 10 2014) it has been assumed that there will be positive growth.

8.2.4 Table 15 below sets out the growth rates applied over the period 2016-2031 to generate the updated baseline estimate used to inform the Early Partial Review of the Plan.

Table 15: Forecast arisings of C&I Waste in Kent (tonnes per annum)

	2016	**2021**	**2026**	**2031**
Growth Factor applied	0.10	0.07	0.05	0.05
Forecast with Updated Baseline	1,189,000	1,274,082	1,338,702	1,407,630

Construction Demolition & Excavation Waste (CD&E)

8.2.5 The adopted Kent Minerals and Waste Local Plan (KMWLP) defines CD&E waste as follows:

"This is a waste arising from any development, redevelopment, or demolition of existing schemes. It includes vegetation and soils from land clearance, demolition waste,

[15] http://www.legislation.gov.uk/ukpga/1990/43/contents

[16] See Kent Waste Needs Assessment (WNA) 2017, Commercial & Industrial Waste Generated in Kent Management Requirements, November 2017, Version 1.2

discarded materials and off-cuts from building sites, road schemes and landscaping projects. It is mostly made up of stone, concrete, rubble and soils but may include timber, metal and glass."

8.2.6 It remains the case that most recent comprehensive national study on inert CD&E waste arisings was conducted in 2005 for the former DCLG, now Ministry of Housing, Communities and Local Government. This data was disaggregated to estimate the waste arisings in Kent alone, based upon the relative populations of Kent and Medway. This method generated an estimate of 2.6mt of inert CD&E waste that arose in Kent in 2005.

8.2.7 An estimate of the arisings of the CD&E wastes in Kent in 2015 applying the national methodology found that just over 2.5mt was produced. A zero-growth rate was adopted in line with national Planning Practice Guidance (Paragraph: 033 Reference ID: 28-032-20141016 Revision date: 16 10 2014)

8.2.8 This work found that when considering the consented capacity to manage the predicted arisings following a preferred management profile there was sufficient capacity available over the Plan period. Table 16 below summarises the findings of this work.

Table 16: CD&E Waste Arisings Predictions as Requirements against Existing Capacity in Kent 2017

Management Route	Peak Annual or Cumulative (for landfill) Requirement (tonnes)	Capacity Assessed as available	Comment
Inert Recycled Aggregate	1.4m	Min 2.07mtpa Max 4.18mtpa	The LAA 2019 reports some 4.18mtpa of capacity is consented. **No additional capacity required.**
Non-Inert CDEW Separated for recycling/composting	377,736	2.0mtpa[17]	Overall non-inert recycling capacity (referred to as MSW and C&I) as being 2.0million tpa while peak projected recycling & composting capacity requirement is 1.4million tpa, indicating that there is sufficient capacity for the non- inert CDEW fraction at c 0.4mtpa. **No additional capacity required.**

[17] Table 10 Non Hazardous Waste Recycling/Composting Capacity Requirement September 2018 Update v1.1 05.09.2018 BPP Consulting

Permanent Deposit to Land (Inert CDEW)	11.8 million m3	Latest data for inert landfill/ mineral working restoration stands at just under 14Mm3	**KMWLP states " 6.11.2** The *Needs Assessment* shows that Kent has existing permitted inert waste landfill capacity that is more than sufficient to meet Kent's need for the plan period. It is known that Kent receives a lot of waste originating out of the county, particularly from London, which goes into inert waste landfill in Kent. The *Needs Assessment* tested the effects of this import continuing throughout the plan period at a rate of 300,000 tpa and concluded that this would still result in a surplus of inert waste landfill capacity of over 10 mt at the end of the plan period." **No additional capacity required.**
Non-Inert (EfW)	125,912	170,000tpa (44ktpa surplus)	MVV Biomass Plant at Ridham taking waste timber has capacity c 170,000 tpa. So, it suggests a capacity surplus of c44ktpa. **No additional capacity required.**
Non-Inert Landfill	793,247	No projected shortfall	The *Capacity Requirement for the Management of Residual Non-Hazardous Waste* report establishes that the Plan area would have sufficient landfill capacity to accommodate LACW & C&I sourced residual waste prior to Kemsley SEP capacity coming on stream in 2021. Given the targets proposed in the Partial Review (Policy CSW4), increase the rate of diversion from landfill, and Kemsley has been commissioned a year earlier non-inert residues from CD & E waste could also be accommodated. **No additional capacity required.**

8.3 Exports and Imports of Waste in Kent

8.3.1 Information concerning the quantities, origins and destinations of waste managed at permitted sites is published annually in arrears by the Environment Agency in their Waste Data Interrogator (WDI) and Waste Incineration Returns (WIR). The Table 17 below shows the tonnages of Kent waste managed in permitted facilities within Kent and outside, and the

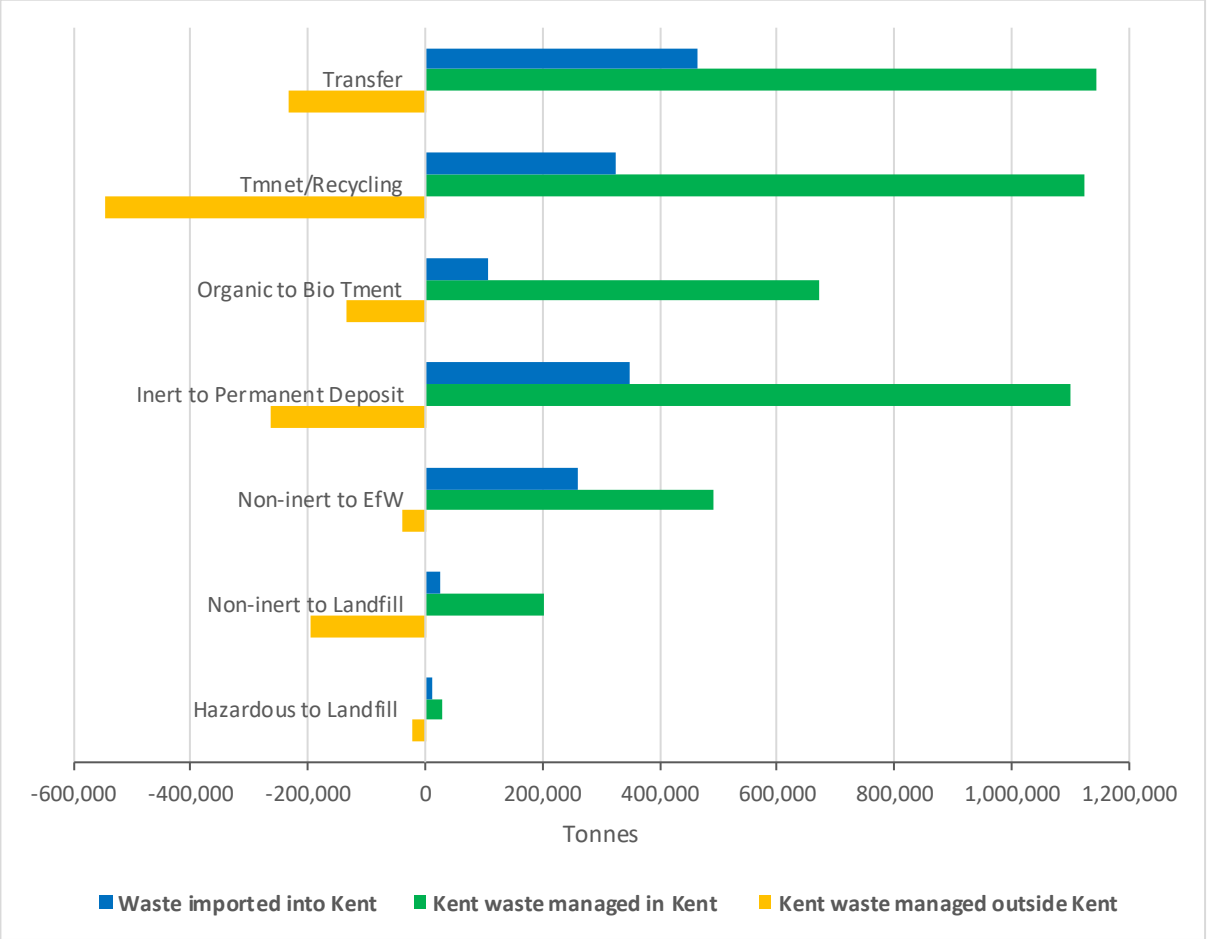
tonnages of waste managed in Kent, whether from within Kent or outside.

Table 17: Tonnages of Kent waste managed in permitted facilities within Kent and outside, and tonnages of other waste managed at Kent facilities 2018

Aspect	Component	Total
Kent waste managed	Kent waste exported for management	1,432,081
	Kent waste managed in Kent	4,724,764
Managed in Kent	Waste imported into Kent	1,540,867

8.3.2 The bottom two lines of Table 17 above show that some 6.2 million tonnes of waste was reported as being managed at Kent waste management facilities in 2018. This compares with around 1.4 million tonnes managed outside the county (top line of Table 17). As shown in Table 17 this export is more than offset by imports of waste for management from outside Kent (bottom line Table 17), so taking a simple balance, Kent remains net self-sufficient[18]. Figure 13 overleaf graphically displays the 2018 import and export balance by management method and waste type where known that make up the overall tonnages set out above in Table 17 above.

Figure 13: Waste Import and Export Balance in Kent 2018-19 by management method and waste type where known (tonnes)



[18] This presents a crude approximation for annual monitoring purposes. Net self-sufficiency is actually a measure of arisings against consented capacity.

8.3.3 Of the imports, just over half a million tonnes came from London, of which 52,000 tonnes went to EfW, 17,000 tonnes to non-inert landfill and 203,000 tonnes to inert landfill. This movement is consistent with the Plan provision for management of a reducing amount of waste from London.

9. Monitoring the Delivery of the adopted KMWLP Strategy

9.0.1 In order to ensure that the adopted KMWLP is based on adequate, and up-to-date and relevant evidence, the County Council has monitored the relevant KMWLP indicators for both waste capacity needs and for providing a steady adequate and supply of minerals, particularly with regard to aggregates. The relevant indicators are shown in the Kent Minerals and Waste Local Plan 2013-30 Monitoring Schedule: Sustainable Development Policies (see Section 8 Managing and Monitoring the delivery of the Strategy of the KMWLP 2013-30).

9.0.2 The production of evidence to support the Minerals Sites Plan demonstrated that the landbank requirements included in Policy CSM2: Supply of land-won Minerals were no longer up to date. This is unsurprising as the rates of supply and level of reserves have changed since the preparation of the KMWLP. However, the policy recognises this and has inherent flexibility by stating: *"A rolling average of ten years' sales data and other relevant information will be used to assess landbank requirements on an on-going basis, and this will be kept under review through the annual production of a Local Aggregates Assessment"*. In addition, the policy requirement to maintain at least 10.08mt and a landbank at least 7 years (5.46 mt) is caveated with "*while resources allow"*.

9.0.3 An assessment of other land-won mineral supply indicators undertaken to establish policy effectiveness, show that the Plan's policies are still generally adequate for delivering the mineral supply strategy. This is reflected in the proposed EPR Main Modification changes to the KMWLP to remove the requirement of a sites plan to allocate any chalk and clay sites, as there is no evidential requirement for such allocations at this time. Moreover, the other mineral transportation infrastructure safeguarding (wharfs and railheads) policy indicators demonstrated that review of these policies was unnecessary (CSM 6: Safeguarded Wharves and Rail Depots and CSM 7: Safeguarding Other Mineral Plant Infrastructure) as they are effective.

9.0.4 Early monitoring of the Plan's effectiveness in allowing for future waste management requirements indicated that several policies required review in that the policy requirements no longer were based on relevant data. As stated in section 1.5 (page 18) this is being addressed by the Early Partial Review (EPR) of several waste policies (see section on Minerals and Waste Local Plan 2013-30, Policy Monitoring). The EPR reached the Regulation 19 Pre-submission publication stage within the AMR 2018/19 reporting period. In May 2019 the EPR was submitted to the Planning Inspectorate for Independent Examination. The Hearings of which were held in October 2019 and the Inspector found the changes sound. Full details of the Inspector's finding will be included in AMR 2019/20.

9.0.5 The need to maintain net self-sufficiency in waste management (including a reducing amount of London's wastes) is part of the adopted Plan's overarching waste strategy. Import and export data demonstrates that in 2018/19 the balance is below the 10% of the indicator's trigger. Moreover, none of the recycling/composting and landfill diversion indicator trigger points are reached in the 2018/19 data for LACW.

9.0.6 Ensuring the effectiveness of Safeguarding policy requires Mineral Safeguarding Area (MSA) boundaries to be reviewed annually to ensure that where changes can be evidentially justified the MSA boundaries are updated. Early experience with implementation of exemptions from the need to safeguard (set out in policies DM 7: Safeguarding Mineral Resources and DM 8: Safeguarding Minerals, Transportation, Production & Waste

Management Facilities) demonstrated that there was an ambiguity in the wording relating to development on land allocated for non-mineral and non-waste development in adopted local plans. This would have a bearing on what development proposed within the adopted MSA boundaries could be considered as exempted from safeguarding. This ambiguity is addressed by the EPR of these policies. A formal review of the MSA proposals maps will be considered as part of the formal 5-year review of the Plan which is due in 2021.

9.0.7 The available monitoring data indicates that most other policies of the Plan regarding minerals supply, waste management capacity requirements, waste and minerals safeguarding are considered generally effective. This will be further enhanced with the proposed changes and modifications brought about by the Plan's EPR. These that will ensure waste recovery management capacity and Kent's arising (with a degree of input from London's wastes) accord with the Plan's objective for net waste self-sufficiency and more fully explained waste and mineral safeguarding exemption policy provisions. The whole Plan is to be subjected to a formal review in 2021, as required by the relevant planning regulations. Uncertainty surrounding the Brickearth landbank and maintaining future adequacy of supply by ensuring an at least 25-year landbank of this mineral is a matter that will be addressed in the formal fiver yearly review of the KMWLP 2013-30.

10. Duty to Co-operate Activity

10.0.1 LPA's AMRs must contain details of the co-operation undertaken with other LPAs and the prescribed Duty to Co-operate (DtC) bodies[19]. The Duty applies to all LPAs, councils and prescribed bodies and requires that they actively co-operate with each other to maximise the effectiveness with which development plans are prepared and implemented.

10.0.2 The Duty requires that engagement occurs constructively, actively and on an on-going basis during the plan making process and beyond into the plan monitoring process and that regard is given to the activities of other authorities where these are relevant to the LPA in question. For Kent this represents: The Districts and Boroughs within the county of Kent; planning authority areas bordering Kent; and, other local authorities linked to Kent by movements of mineral aggregates and waste (imports/exports).

10.0.3 For a full understanding of the County Council's DtC activity in 2018/19 see documents SD02 Early Partial Review Updated Duty to Cooperate Report and MSD10 Mineral Sites Plan Updated Duty to Cooperate Report. Both of which can be found on the County Council's online Document Library[20]. A summary of how the Duty has been complied with in the preparation of both Plans is also provided in the County Councils response to the Inspector's questions on Legal Compliance, which is document REP/1 in the Library.

11. Conclusion and Next Steps

11.1 Mineral Indicator Monitoring

11.1.1 The **aggregate** mineral sales in Kent during 2018 from all sources amounted to some 5.83mt. This was a slight decrease on the previous year in overall landwon aggregate sales (by approx. 260,000 tonnes). The significance of this drop will be determined in future AMR reports, though the low point in 2013/14 of 0.500-5.02mtpa aggregate sales appears not to be being returned to given that between 2015 to 2018 the average is 5.96mtpa. The shift away from landwon supply to imports, with particular reference to the **sharp sands and gravels**, illustrates the necessity for the safeguarding of wharf capacity. This will be

[19] According to Regulation 34 (6) of The Town and Country Planning (Local Planning) (England) Regulations 2012

[20] http://mylimehouse.kent.gov.uk/portal/second_call_for_sites_2016/document_library

imperative to maintain the NPPF's requirement of a 'steady and adequate supply' of **sharp sand and gravel** to meet market requirements into the future.

11.1.2 The situation with regard to **soft sand** supply is less attenuated than that of the sharp sands and gravels. The permitted landbank is 15.3 years (based on a 10-year sales average drawdown figure, that has reduced since 2017 from 0.568mtpa to 0.542mtpa). This will be, based on current data, likely to be sufficient to supply soft sand over most of the Plan period, but possibly not its entirety. The landwon resource, in contrast to the sharp sands and gravel, will remain the predominant supply of this aggregate mineral type over the plan period. Substitution with marine supply appears either too limited in resource terms or the marine dredging technology is not developed enough to exploit this potential resource viably, or there is a combination of these two factors. The aggregate supply industry does not appear to be expanding this supply option in Kent, though some limited marine won supply does occur in other parts of the South East. Allocation of 3.2mt at a new site at Chapel Farm, Lenham in the Mineral Site Plan would address the projected soft sand shortfall towards the end of the Plan period.

11.1.3 Landwon sales of **crushed rock** continue to be assumed as 0.78mtpa, given needs of confidentiality do not allow an actual sales figure to be reported. Sources of supply more than secure the ability of Kent to maintain a 10-year landbank of crushed rock over the life of the Kent MWLP 2013-30. Overall Kent meets the national planning policy requirements for construction aggregates landbanks for crushed rock as reflected in Kent by KMWLP Policy CSM 2: Supply of Land-won Minerals in Kent.

11.1.4 **Secondary and recycled aggregate** sales fell in 2018 to 0.76mt compared to that recorded in 2017 (0.90mt) and compared to sales of 1.03mt in 2016. The 10-year sales average is 0.816mt and the more recent 3-year sales average is 0.90mt, all broadly similar in scale. Though clearly the role of secondary and recycled aggregates is showing a recent reduction in sales, the overall long-term trend is stable around the 0.70-0.80mtpa level and may play an increasing role in overall supply terms into the future. Further monitoring will demonstrate whether the circa 1.0mtpa (in 2016) level of production represents a peak that will not be repeated. It should be noted that there is ample production capacity headroom available. Total productive capacity is 4.18mtpa (as reported in LAA2019) giving an unused capacity of up to 80%. Therefore, the market share of **secondary and recycled aggregate** of overall aggregate supply could significantly expand in response to economic trends as well as any further legislative changes to encourage their use.

11.1.5 There are four permitted **clay and brickearth** sites with remaining reserves in Kent. These sites have a combined landbank of less than 25 years. The estimated landbank is between 22 to 21 years. The formal review of the KMWLP 2013-30 in 2021 will address this matter further in sufficient detail to inform the review of adopted Policy CSM 2 and to determine whether changes are needed to inform planning applications and appeals so that they can be determined in accordance with national planning policy.

11.1.6 Kent has two operational **silica sand** sites the combined reserves meet the national policy requirement of maintaining a stock of permitted reserves of at least 10 years at established existing sites. One silica sand site (not one of the above) has been declared by the owner as containing un-viable reserves of silica sand and this was confirmed at the Independent Examination of the KMWLP in 2015 and its subsequent adoption in 2016.

11.1.7 Kent's **chalk** reserves for cement manufacture are entirely contained at the strategic site at Holborough Cement works. Though not constructed, the lawfully implemented planning permission has sufficient supply at the planned extraction rate for 25 years. This meets the NPPF requirement where substantial new investment in a kiln is required. The KMWLP makes provision for this level of resource required to support new kiln by identifying a Strategic Site (see Policy CSM 3 of the KMWLP).

11.1.8 Kent's chalk reserves for agriculture and engineering purposes are not required to meet any prescribed landbank level in the NPPF. The total reserves are estimated at over a million tonnes in 2019. Based on data for chalk reserves and sales in the period 2011- 2014 (that used a per annum proxy of 70,000 tpa and a reserve of 1.516mt in 2014) by 2019 it is estimated that the permitted reserves have dropped to 1.16mt. This may give an indicative permitted landbank of 16.57 years of chalk reserves in 2019. Given the need to supply sufficient quantities of minerals of all types as set out in the NPPF, and that the KMWLP has a period to 2030, it is possible that further chalk reserves will be needed to meet this level of demand towards the end of the Plan period. Review of the Plan in 2021 will clarify if the magnitude is significant.

11.2 Waste Indicator Monitoring

11.2.1 There has been a marginal increase in the annual arisings of LACW in 2018/19 (+0.54%) to just over 721,000 tonnes. This is in contrast to 2017/18 which showed a negative rate of growth of minus 3.15%. While Kent's population is growing, there is an expectation that arisings will increasingly decouple from population growth, and hence while annual arisings of LACW are predicted to continue to grow over the Plan period, it will be at a reduced rate. Hence it is forecast that arisings will stand at around 740,000 tonnes in 2030/31.

11.2.2 The LACW management profile data for 2018/19 shows that the targets included in the Early Partial Review for the first milestone year of 2020/21 are already being met. In particular landfilling no more than 2% in 2020/21 was surpassed with landfill being the management option for only 1.7% of the LACW and recycling/composting of at least 50% of LACW by 2020/21 was met in 2018/19 standing at 50.32%. The remainder managed through incineration with EfW being 48% as predicted.

11.2.3 Some 6.2 million tonnes of waste was reported as being managed at Kent waste management facilities in 2018, This compares with around 1.4 million tonnes of waste produced in Kent being managed outside the county. Therefore, the export of waste is more than offset by imports, so taking a simple balance, Kent remains net self-sufficient. Of the imported waste, just over half a million tonnes came from London, of which 52,000 tonnes went to EfW, 17,000 tonnes to non-inert landfill and 203,000 tonnes to inert landfill.

11.2.4 Significant progress was been made with the next stage of the KMWLP work. Early monitoring of the permitted waste recovery capacity immediately post adoption in 2016 highlighted the necessity for an Early Partial Review of the waste recovery requirements specified in Policy CSW 7. This is proposed to be changed to a percentage of all waste streams per milestone year over the plan period as incorporated into an amended Policy CSW 4. This change significantly reduces the requirement of new recovery capacity to ensure that Kent's overall capacity at this waste hierarchical level matches anticipated arisings, principally from the LACW stream.

11.2.5 Other policy changes are also required in the KMWLP, including the deletion of the need for a specific site for the disposal of dredgings and for landfill of asbestos. These changes mean that preparation of a separate Waste Sites Plan was no longer considered justified. Moreover experience gained in implementing the waste and mineral safeguarding exemption policies demonstrated that there was a degree of ambiguity of the exemption criteria (relating to the status of adopted Local Plans in the exemption to the presumption to safeguard process) in policies DM 7 and DM 8 and so the KMWLP Early Partial Review seeks to address this ambiguity

11.2.6 The proposed policy changes were subject to a Regulation 18 public consultation event in late 2017 into March 2018. Throughout the remainder of 2018 and into 2019 the results of the consultation were analysed and a Pre-Submission Regulation 19 of the proposed EPR of the KMWLP was held. This enabled a formal submission to the Planning Inspectorate in early May 2019 (just outside to scope of this AMR report). The Independent Examination

Hearings were held in October 2019. The findings of the Inspector's report will be detailed in the next AMR report but fundamentally the changes to the KMWLP arising from the EPR were found sound subject to modifications.

11.2.7 Provided the Early Partial Review of the relevant polices of the KMWLP are adopted then in 2020 the KMWLP will have been finalised. This is subject to whatever ongoing monitoring may demonstrate regarding the Plan's overall soundness and relevancy to changing circumstances in minerals supply and waste management until 2021. As this will be the fifth year since the Plan's formal adoption and at this point another formal review will be required.

11.3 Kent Minerals Sites Plan

11.3.1 Work on the Mineral Sites Plan was also successfully progressed in 2018 and 2019. The Regulation 18 'Options' consultation on 9 potential sites was conducted in late 2017 into March 2018. The information gathered assisted a Detailed Technical Assessment of the sites. This work demonstrated the acceptability and deliverability of the Option sites over a broad range of material planning considerations. This resulted in the identification of one soft sand site (Chapel Farm, Lenham) and two sharp sand and gravel sites (Moat Farm and Stonecastle Farm in the Tonbridge area). The Pre-Submission Plan was published in early 2019 enabling a formal submission to the Planning Inspectorate in early May 2019 (just outside to scope of this AMR report). The Independent Examination Hearings were held in October 2019. The findings of the Inspector's report will be detailed in the next AMR report but fundamentally the changes to Mineral Sites Plan was found sound subject to modifications.

Appendix 1: Permitted Quarries in Kent 2018

Site	Operator	Aggregate			Status
		Sand & Gravel	Soft Sand	Hard Rock	
Hermitage Quarry, Maidstone	Gallagher Aggregates Ltd	-	-	Yes	Active
Blaise Farm Quarry, West Malling	Hanson Aggregates Ltd	-	-	Yes	Active
Stone Castle Farm, Whetsted	*Lafarge Aggregates Ltd*	*Yes*	-	-	*Inactive*
Lydd Quarry, Lydd	Brett Aggregates Ltd	Yes	-	-	Active[21]
Allens Bank, Lydd	*Brett Aggregates Ltd*	*Yes*	-	-	*Inactive*
Conningbrook Quarry	*Brett Aggregates Ltd*	*Yes*	-	-	*Inactive*
Highstead Quarry, Chislet	*Brett Aggregates Ltd*	*Yes*	-	-	*Inactive*
Denge Quarry, Lydd	Cemex UK	Yes	-	-	Active
Darenth & Joyce Green Quarry, Dartford	J Clubb Ltd	Yes	-	-	Active
East Peckham Quarry, East Peckham	J Clubb Ltd	Yes	-	-	Active
Joyce Green Quarry, Dartford	*Ingrebourne Valley Ltd*	*Yes*	-	-	*Inactive*[22]
Aylesford Quarry, Aylesford	Aylesford Heritage Ltd	-	Yes	-	Active [23]
Addington Sand Pit (Wrotham Quarry)	Fern Aggregates	-	Yes	-	Active
Borough Green Sand Pit, Sevenoaks	Borough Green Sandpits Ltd	-	Yes	-	Active
Burleigh Farm, Charing	*Brett Aggregates Ltd*	-	*Yes*	-	*Inactive*[24]
Charing Quarry, Charring	*Brett Aggregates Ltd*	-	*Yes*	-	*Inactive*

[21] Extraction has moved into East Sussex, the processing of material and some reserves are within Kent
[22] Planning permissions to erect a new plan site and to extend the life of the extraction site until 2024 were granted planning permission subject to pre-commencement conditions in 2018
[23] No off-site sales in 2018 of soft sand though actively extracting a sand and gravel-based material (Hoggin) for construction fill purposes
[24] Inactive in 2018, early 2019 became active

Ightham sandpit (H&H Celcon)	***H&H Celcon***	**-**	***Yes***	**-**	***Inactive***
Lenham Quarry, Maidstone	**Brett Aggregates Ltd**	**-**	**Yes**	**-**	**Active**
Nepicar Sand Quarry, Wrotham	**J Clubb Ltd**	**-**	**Yes**	**-**	**Active**
Greatness Farm, Sevenoaks[25]	**Tarmac Ltd**	**-**	**Yes**	**-**	**Active**

[25] The site also produces sharp sand and gravel, though predominantly soft sands from the Folkestone Formation

Appendix 2: Safeguarded Wharves and Rail Transportation Depots 2018

Site Name	Current Operator	Site Code in KMWLP 2013-30	Activity
Allington Rail Depot	Hanson UK	A	Active
Sevington Rail Depot	Brett Aggregates (UK) Ltd	B	Inactive for aggregate importation currently
Hothfield Works Rail Depot	Tarmac	C	Active
East Peckham Rail Depot	J. Clubb	D	Active
Ridham Dock	Brett Aggregates (UK) Ltd & Tarmac	E	Active
Johnsons Wharf	Lafarge	F	Active
Robin's Wharf, Northfleet	Aggregate Industries (UK) & Brett Aggregates (UK) Ltd	G	Active
Clubbs Marine Terminal	J. Clubb	H	Active
East Quay, Whitstable	Brett Aggregates (UK) Ltd	J	Active
Red Lion Wharf	Stema Shipping Ltd	K	Active
Ramsgate Port	Brett Aggregates (UK) Ltd & Tarmac	L	Active
Dunkirk Jetty, Dover Western Docks[26]	Brett Aggregates (UK) Ltd	M	Inactive-considered decommissioned ahead of re-development
Wharf 42, Northfleet (including Northfleet Cement Works)	Lafarge UK	N	Active
Sheerness	Aggregate Industries	O	Inactive for marine aggregate importation currently
Northfleet Wharf	Cemex UK	P	Active
Old Sun Wharf	Fleetmix Ltd	Q	Inactive for marine aggregate importation currently

[26] Site still technically safeguarded though the operator has ceased operation and the site is cleared of all aggregate plant and machinery. It is anticipated that the redevelopment of Dover Western Docks will cause the permeant loss of this importation capacity