14th Annual Minerals and Waste Monitoring Report

1st April 2019 to
31st March 2020

Kent Minerals and Waste Local Plan

Kent County Council
kent.gov.uk

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Contents

Tables and Figures

Abbreviations

AA	Appropriate Assessment
AMR	Annual Monitoring Report
APCr	Air Pollution Control residues
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)
DEFRA	Department for Environment, Food and Rural Affairs
DLUHC	Department for Levelling Up, Housing and Communities
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
LLW	Low Level Radioactive Waste
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
ONS	Office of National Statistics
PCT	a physical and chemical treatment plant process
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
VLLW	Very Low Level Radioactive Waste
WNA	Waste Needs Assessment
WCA	Waste Collection Authority
WDA	Waste Disposal Authority
WPA	Waste Planning Authority

Executive Summary

This Kent Annual Monitoring Report (AMR) covers the financial period 2019/2020. This period is post adoption of the Kent Minerals and Waste Local Plan (KMWLP) in 2016 and covers the latter period of preparation of the Kent Minerals Sites Plan and the Early Partial Review of the KMWLP carried out to address matters of safeguarding policy clarity and waste recovery requirements that had manifestly changed due to implementation of an extant planning consent. The AMR report addresses the following using the best available data:

- The progress of adoption of minerals and waste planning policy in Kent, against the latest Minerals and Waste Development Scheme (MWDS) timetable, up to the end of March 2020;
- Progress against targets related to minerals supply and waste management as set out in the KMWLP using indicator data for Kent; and;
- A summary of the co-operation on plan making activities with other local authorities and prescribed bodies, up to the end of March 2020.

As this AMR is published in late 2021, some updates relating to activity post the 2019-20 have also been reported. An AMR for the period 2020/21 is now being prepared and will be published in the new year.

The Key Mineral Findings

The total aggregate mineral sales in Kent during 2019 from all sources (primary and secondary) amounted to some 3.61mt, markedly down from the 5.87mt of 2018. This then recovered significantly in 2020 to 5.32mt. The reasons for this are unclear though it is coincident with the UK's run up to its exit from the EU when economic output is known to have slowed. How the different sectors of aggregate supply reacted to this was variable. Sales of landwon soft sands did not significantly change, though they did reduce slightly depressing the 10-year average sales rate used to forecast future requirements. Reserves of soft sand increased on re-evaluation rather than by replenishing planning permissions granted. The soft sand landbank is currently just over 21 years and this, together with development of the allocation in the Mineral Sites Plan (Chapel Farm), ensures a sufficient supply to meet the objectively assessed needs.

Landwon sharp sands and gravel continued in their depletion, with no replenishment from planning permissions granted in 2019-20. There was almost no extraction in 2019 and only a modest recovery in 2020. This element of supply has been now largely (but not exclusively) displaced by importation of marine won sand and gravel. This sector showed the single largest fall in sales from over 2.0mt in 2018 to just 0.633mt in 2019, with a recovery to 1.442mt in 2020. As above, this potentially 'exceptional' event may be due to market uncertainty leading up to the UK's exit from the EU. Monitoring in the future will demonstrate how the marine won sector responds to changes to the economy and depletion of the sustainable landwon resource in Kent. If further expansion is required, the sector has significant unused wharf capacity remaining. Throughout the monitoring period there were no planning applications for mineral transportation and processing that changed the overall available capacity to manage aggregate imports. The loss of the importation capacity at Dunkirk Jetty (safeguarded Site M) Dover Western Docks, in the east of the county, remains unreplaced, though it retains its safeguarded status.

The landwon hard crushed rock data had hitherto been a matter of commercial confidentiality. This was waived by the operator on the basis that a re-evaluation of reserves at the two operational sites has revealed significantly lower reserves than that anticipated at this stage of the respective site's productive periods. Also, unlike sharp sands and gravel imports, landwon crushed rock sales significantly increased from the 0.70-0.80mtpa range of 2016 to 2018, with sales of almost 1.0mt in 2019 and 1.508mt in 2020. In light of this the operator has suggested that insufficient reserves to meet landbank requirements now exist. A related issue over whether there is a need for separate landbanks to be maintained for crushed rock put to different uses is also being investigated.

Secondary and recycled aggregates are showing an upturn in sales from only 0.42mt in 2019 to 0.90mt in 2020 (a recovery to levels in 2017). The available production capacity of an around additional 3.0mtpa will enable it to grow in importance. Further monitoring will demonstrate whether the circa almost 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.

The combined permitted reserves of clay and brickearth in Kent was thought be marginally below 25 years, as reported in AMR 2018/19. However, discussions with the operator have led to a more 'fine-tuned' understanding of the extraction rate that can be reasonably anticipated over the remaining adopted Plan period. This now has demonstrated that available permitted reserves of Brickearth will be between 25-30 years. This will meet the KMWLP requirements of at least 25 years of permitted reserves being available. Kent has two operational silica sand sites, if taken together they do meet the KMWLP requirement of maintaining a stock of 10- years of permitted reserves. However, the exact nature of the reserves is uncertain. It may be Kent will shortly revert to one silica sand site in the next few years, continued monitoring will demonstrate how the market for this mineral in Kent changes, and whether there will be a need to identify further potential reserves.

Kent's reserves for cement manufacture are entirely contained at the safeguarded strategic site at Holborough Cement Works, though not constructed. This meets the NPPF requirement for reserves equal to 25 years of supply to be maintained 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. As previously reported, based on data for chalk reserves and sales in the period 2011- 2014 it was estimated that the permitted reserves dropped to 1.16mt. This gave an indicative permitted landbank of 16.57 years of chalk reserves. In 2020 the estimated reserves are now 0.66mt, with an annual extraction rate of only 6,324 tonnes, giving a landbank of over 100 years. This illustrates the highly variable nature of chalk extraction meeting the markets in Kent at this time. Future monitoring will demonstrate if there is a need to identify further chalk reserves over the remainder of the adopted Plan period, but this seems unlikely.

The Key Waste Findings

Arisings of LACW in 2019-20 fell by 3.6% to just under 695,000 tonnes. This is primarily

due to the policy to charge for non-household waste at the Household Waste Recycling Centers introduced in June 2019, as well as the impact of the Covid-19 lockdown in March 2020. The data must be treated with caution, and due to these extenuating circumstances, the WDA do not see this as an appropriate year to base strategic decisions on. The period 2017-18 also showed a negative rate of growth of minus 3.15%. This is explained by the implementation of the Waste Treatment Final Disposal contract, where we specified no landfill, as well tightened enforcement with regards to contract management.

The LACW management profile data for 2019-20 shows that the waste recycling targets included in the Early Partial Review for the first milestone year of 2020-21 were not quite met, having been met in the previous year. However, the landfilling target of no more than 2% in 2020-21 continued to be surpassed with landfill being the management option for only 1.45% of the LACW. The remainder managed through incineration with EfW being 50% was slightly higher than predicted.

Some 6.8 million tonnes of waste were reported as being managed at Kent waste management facilities in 2019. This compares with around 1.65 million tonnes of Kent waste 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 under 800,000 tonnes came from London, of which 45,500 tonnes went to EfW, and around 4,500 tonnes to non-inert landfill[2] and 204,000 tonnes to inert landfill/permanent deposit to land.

Over the monitoring period there were 3 planning applications that increased the overall available capacity to manage waste by a total of 37,800 tpa contributing towards the continued shift towards a more sustainable waste management profile.
Housing growth in Kent is projected to continue to increase over the next 10 years and with that LACW tonnage is expected to rise. It should be noted that the varying distribution of arisings across the county brings increased pressure on existing infrastructure in particular parts, and it is these which the WDA is seeking to address. Furthermore, the likely impact of the Government's Resources and Waste Strategy, which aims to significantly increase recycling rates and will require further separation of waste streams, is expected to place additional pressures on facilities provided by the WDA for the management of LACW.

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[2] It should be noted that the non hazardous waste capacity assessment underpinning the Early Partial Review of the KMWLP projected c55,000 tpa of residual non hazardous waste from London which is close to the c50,000 tonnes reported for 2019.

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Kent Minerals and Waste Local Plans

Significant progress has been made with updates to planning policy being adopted in September 2020 (outside the AMR 2019-20 reporting period but of such significant it is considered important to report it in this AMR).

Changes to the KMWLP resulting from the Early Partial Review (EPR) were made which concentrated on updating the waste recovery capacity requirements specified in Policies CSW 7 and CSW 8. Other waste policy changes 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, these changes mean that production of a separate Waste Sites Plan is no longer justified.

The EPR also resulted in changes to the waste and mineral safeguarding exemption policies in the KMWLP. These changes followed experience of early implementation of the policies which revealed some ambiguity in the exemption criteria relating to the interpretation of the status of the local plan coverage at the Borough and District level in Kent.

The Kent Mineral Sites Plan (MSP) was also progressed to adoption in September 2020. The Inspector found the MSP sound in his report of April 2019. This has resulted in the allocation 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 detailed findings of the Inspector's report on the EPR and the MSP is more fully discussed in the following Introduction section of this AMR.

An updated Supplementary Planning Document on the KMWLP's approach to safeguarding mineral resources and minerals and waste infrastructure was adopted on 18 March 2021.

An updated Statement of Community Involvement, that sets out how the Council will consult on planning policy and planning applications concerning waste management and minerals supply, was adopted on 18 March 2021.

In the summer of 2021, the Plan reached its fifth year as Kent's adopted strategic and development management policy plan for waste and minerals in the county and so a formal review of the Plan has commenced. The full details of this will be covered by AMR 2020-21.

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) (including Minerals and Waste Planning Authorities). The National Planning Policy Framework (NPPF[2]) expects each LPA to ensure that their Local Plan is based on adequate, up-to-date, tightly focused and relevant evidence about the economic, social and environmental characteristics and prospects of the area, while taking into account the relevant market signals.

1.1.2 The Kent Annual Monitoring Reports (AMR) document the progress made in preparing, reviewing and updating Kent's Minerals and Waste Local Plans against the timetable set out in the Kent Minerals and Waste Development Scheme (MWDS) and monitors their adoption and implementation. The AMR is also used to help identify where changes to policies may be needed.

1.1.3 This Kent AMR covers the financial year 2019/2020 (i.e., 1 April 2019 to 31 March 2020) and reports on various matters using best available data including the following:

- The progress of minerals and waste planning policy in Kent, following adoption of the KMWLP 2013-30 in 2016 and its Early Partial Review etc., against the latest MWDS timetable; and
- Progress against targets related to minerals supply and waste management as set out in the KMWLP using 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[3], this and previous AMRs are available to view online[4], and in hard copies, which are available for inspection during normal office hours by appointment with the Minerals and Waste Planning Policy Team.

1.2 Kent Contextual Overview

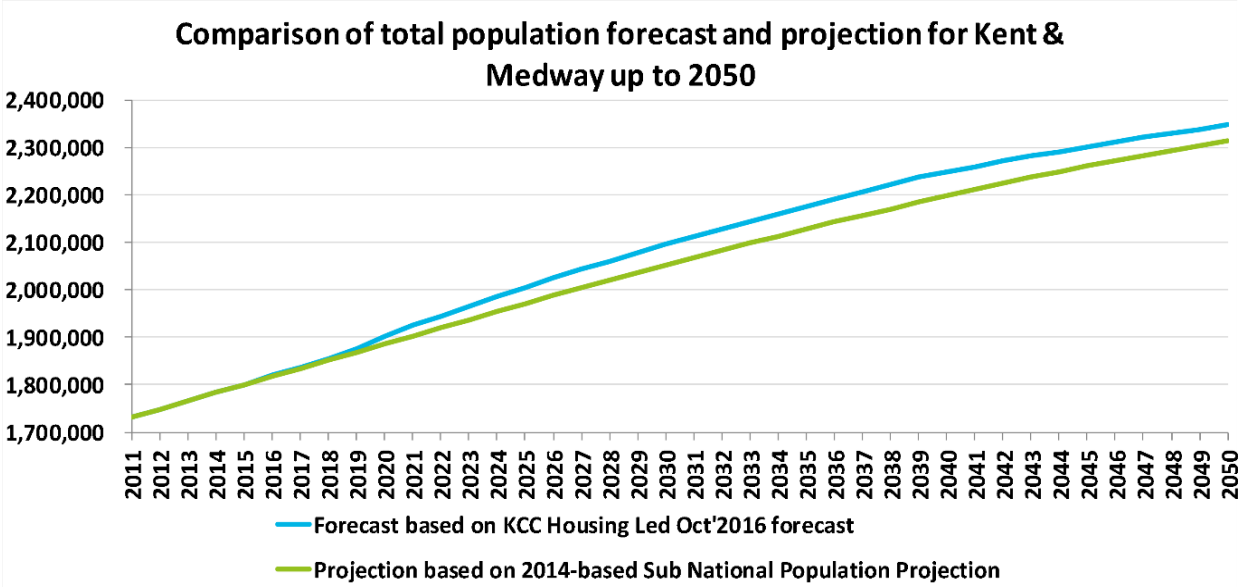
Population

1.2.1 The Kent Growth Infrastructure Framework (GIF)[5] 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

[2] NPPF (2021) Section 3. Plan-making, para. 33 Preparing and reviewing plans, page 11
[3] https://www.legislation.gov.uk/uksi/2012/767?timeline=false
[4] 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
[5] https://www.kent.gov.uk/about-the-council/strategies-and-policies/environment-waste-and-planning- policies/growth-and-infrastructure-framework-gif

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. More recent work by the Office of National Statistics (ONS) in 2020[6] projects Kent's population (excluding Medway) to be 1,688,100 by 2028 which appears to be in alignment with the GIF projection for 2031. Figure 1 below is taken from the GIF and projects population to 2050. 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 and Medway 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

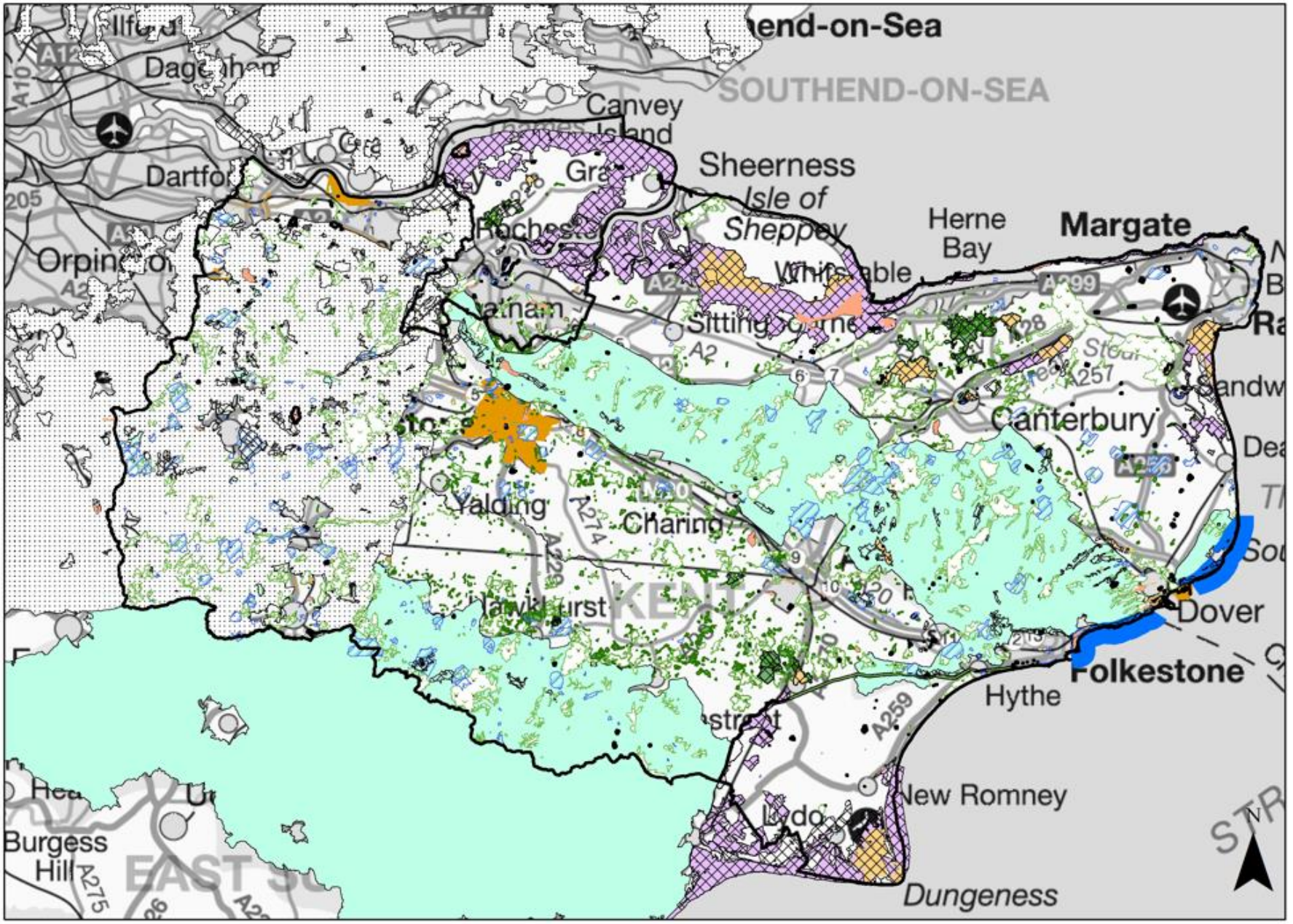
Environment

1.2.2 The County of Kent 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.

1.2.3 Figure 2 (and Legend) overleaf shows the key planning and environmental constraints within Kent, including the Medway Unitary Authority and the Ebbsfleet Urban Development Corporation areas, the list is not fully exhaustive, and the fully detailed constraint maps are to be found in the KMWLP.

[6] 2018-Based Subnational Population Projections Strategic Commissioning Statistical Bulletin July 2020; The bulletin presents the 2018-based Subnational Population Projections for Kent as published by the ONS 24 March 2020

Figure 2: Planning and Environmental Constraints in Kent (including the Medway Council and the Urban Development Corporation areas)



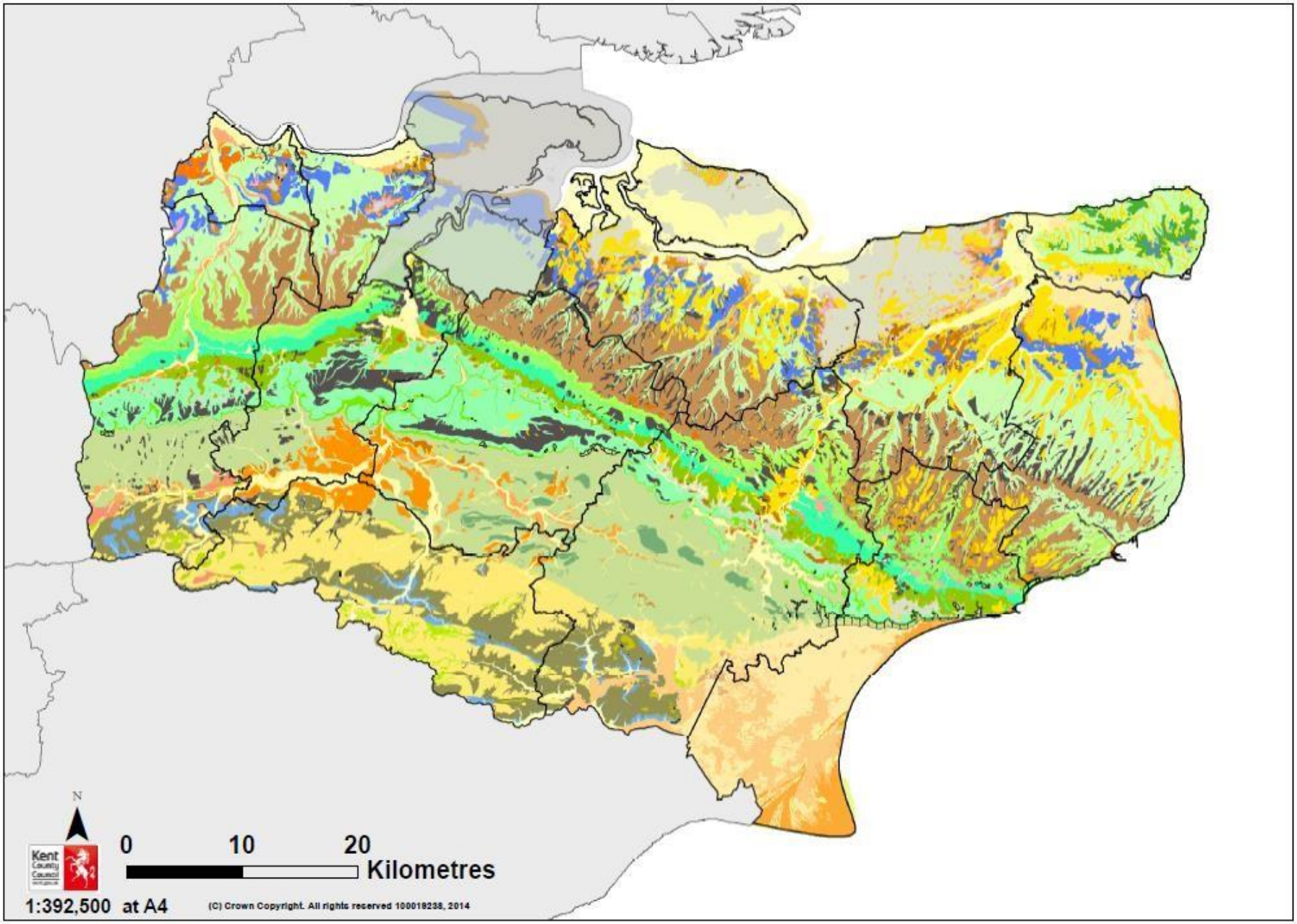
Main Constraints - Kent

Economic Minerals

1.2.4 Kent is underlain by several naturally occurring minerals of economic importance including chalk (that is also referred to as 'the Chalk', given that this is its geological nomenclature as it occurs in Kent's stratigraphy), clays (various types but essentially similar type deposits), brickearth (a superficial windblown deposit of mainly clay minerals), 'Ragstone' (a massive geological unit of hard limestone rock), 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 the 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) are also extracted. There are also a number of Wealden sandstones that have, historically, been important in construction, though this is not extensively used today. See Figure 3 for Kent's geology, and geological key overleaf.

1.2.5 To compliment the indigenous 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 and demolition waste (C&D) 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

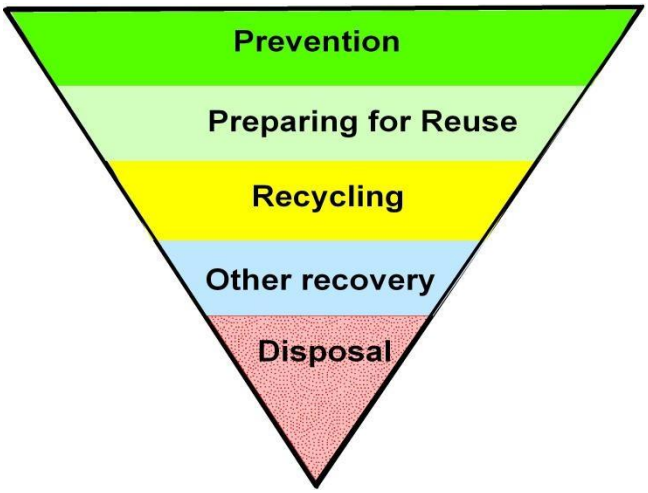


Legend: Geology of Kent

Waste

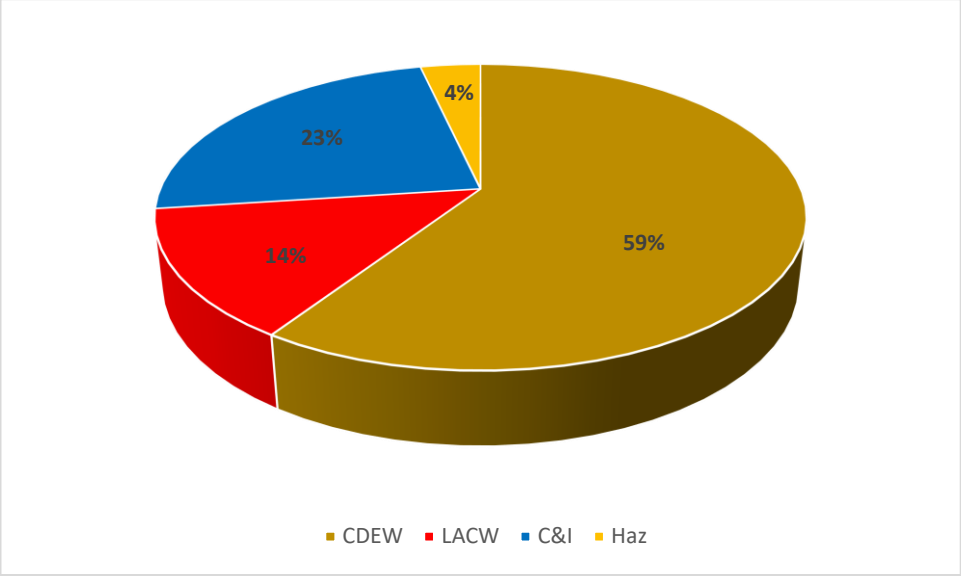
1.2.6 Waste requires careful management and treatment in an environmentally sustainable manner, following national policy requirements including the waste hierarchy (see Figure 4 below) and the objective of maintaining net self-sufficiency in waste management within Kent. Maintaining net self-sufficiency 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 5.06million tonnes of waste requiring management was produced in Kent in 2019. The majority of this waste is generated within the Construction, Demolition and Excavation (CD&E) waste stream (in 2019, the arisings of CD&E waste in Kent were estimated to be over 3.0mt). Local Authority Collected Waste (LACW), which is mainly composed of household waste, represents around 13.6% of the overall waste produced with Commercial & Industrial waste and hazardous waste making up the difference, at some 27.1% (1.37mt). 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 waste 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. Wastewater is treated via a network of wastewater and sewage sludge treatment facilities operated by Southern Water.

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. As part of its responsibilities the County Council is required to prepare planning policy for the production of minerals and management of waste. Such planning policy appears in a 'Minerals and Waste Local Plan (MWLP)'. As was reported in AMR 2018/19 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), the Kent Mineral Sites Plan and the Kent Waste Sites Plan.

1.3.2 The KMWLP 2013-30 was adopted in 2016 and sets out the County Council's core 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 that was adopted in 2016 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 (between 500,000 to 550,000tpa[7]) 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 Early Partial Review of the KMWLP 2019/2020

1.4.1 As reported in AMR 2018/19, in addition to there being no requirement for a Waste Sites Plan, the experience of implementing the adopted 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).

1.4.2 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

[7] Kent Waste Needs Assessment 2018, Capacity Required for the Management of Residual Non Hazardous Waste BPP Consulting; Section 3.6, page 15

to undermine the effectiveness of these policies, unless reviewed and modified.

1.4.3 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.

1.4.4 With regard to the change to the wording of safeguarding exemption criterion (7) of Policy DM 7 and criterion (2) of Policy DM 8, 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.

1.4.5 In summary, the modifications of the KMWLP resulting from the Early Partial Review addressed the following two main policy areas:

1. 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.

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

1.4.6 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. The Independent Examination Hearings were held in October 2019.

1.4.7 During the examination the need for certain modifications was identified which included:

- Clarification that reserves not resources of brickearth will be required over the remaining plan period
- Updating the commentary on available chalk permitted reserves and how

they will be monitored

- Clarification on the level of brickearth reserves will be required to be planned for over the remaining plan period
- Clarification on the level of chalk reserves for engineering and agricultural use will be required to be planned for over the remaining plan period
- Strategic waste site (Norwood Quarry) extension, amendment of requirement in criterion 1 relating to a demonstration that the site can be restored in the event that landfilling of hazardous flue dust residues from EfW plants cease as the availability for alternative treatment technologies for hazardous flue dust from EfW plants becomes actual, therefore the restoration needs of the site, in such an eventuality, would have to be deliverable and acceptable before extension to this site would be considered appropriate
- Additional changes to Policy DM 7 supporting commentary text to aid clarification of policy's application at both plan making (as with regard to allocations for non-minerals/waste development) and planning applications that may threaten sterilisation of economic minerals.

1.4.8 These modifications were consulted upon between November 2019 and January 2020. Responses to this consultation were deemed not to require further modification and the Inspector published his report in May 2020. This confirmed that, subject to the modifications, the changes to the KMWLP proposed by the EPR were sound and legally compliant. The final modified KMWLP was adopted by full Council in September 2020.

1.5 Mineral Sites Plan

1.5.1 As has been reported in AMR 2018/19, 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 adopted 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 Identification and Selection Methodology (Living Draft) document KCC/SP12 in the online Documents Library).

1.5.2 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[8] and further assessed to arrive at nine 'Option sites' (the 'reasonable alternatives'). The Options sites were subjected to 'Detailed Technical Assessment (DTA)' process. 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 nine 'Option sites' (the 'reasonable alternatives') were subject to public consultation (in accordance with Regulation 18) that was initiated in late 2017 to early 2018. The DTA work and results of the public consultation were used to reach the conclusion that the following three of the nine sites were considered acceptable in principle for mineral development and so

[8] 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/

potentially suitable for allocation in the Minerals Sites Plan:

- 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)

1.5.3 The results of the DTA process were 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 Draft Public Consultation.

1.5.4 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.

1.5.5 The Independent Examination Hearings were held in October 2019, and this identified the need for modifications including the following:

- Correction of sharp sands and gravel reserves in 2014 data quoted by the MSP
- Additional Green Belt impact development management (DM) assessment criterion for Stonecastle Farm Quarry allocation
- Amended biodiversity DM criterion to ensure net gain in biodiversity for Stonecastle Farm Quarry allocation
- Amended biodiversity DM criterion to ensure impact on listed buildings and their settings are fully assessed to avoid unacceptable adverse impact for Stonecastle Farm Quarry allocation
- Moat Farm allocation correctly described as being in Tunbridge Wells as opposed to Tonbridge and Malling Borough Council.
- Amended Green Belt impact development management DM assessment criterion for Moat Farm allocation to ensure any development is consistent with national Green Belt policy
- Addition to access DM criterion to ensure HGV exiting the site via a left turn only for the Moat Farm allocation
- Additional water resource protection management DM criterion to ensure no de-watering of working area to protect a Source Protection Zone (SPZ) 3 for the Moat Farm allocation
- Amended water resource protection management DM criterion to ensure a 16-metre buffer zone (of no working) around site boundary and watercourses including areas that have had mineral extracted already, to alleviate flood risk, for the Moat Farm allocation
- Amend the first biodiversity DM criterion to provide for a net gain in biodiversity for the Moat Farm allocation
- Additional heritage DM criterion to ensure impact on listed buildings and their settings are fully assessed to avoid unacceptable adverse impact for Moat Farm allocation
- Chapel Farm allocation to have restoration to agriculture using existing soils.
- Additional biodiversity DM criterion to address ecological matters with a

detailed ecological appraisal to ensure no adverse impact on important biodiversity assets for the Chapel Farm allocation

- Additional biodiversity DM criterion to provide for a net gain in biodiversity for the Chapel Farm allocation
- Amend the first biodiversity DM criterion to provide for a 15-metre buffer to be maintained around Ancient Woodland and protected trees for the Chapel Farm allocation
- Amend landscape DM criterion to ensure the landscape and visual impacts and views into and out of the Kent Downs AONB will not be adversely affected for the Chapel Farm allocation
- Amend first heritage DM criterion to ensure impact on listed buildings and their settings are fully assessed to avoid unacceptable adverse impact for the Chapel Farm allocation
- Additional transport and access DM criterion to ensure recognised Public Rights of Way (PROW) that run adjacent and within the site will require appropriate diversions to mitigate impact on the PROW network as necessary for the Chapel Farm allocation
- Additional transport and access DM to ensure the site is worked sequentially to the permitted site at Burleigh Farm, (Charing, Kent) for the Chapel Farm allocation

1.5.6 These modifications were consulted upon between November 2019 and January 2020. Responses to this consultation were deemed not to require further modifications and the Inspector published his report in May 2020 confirming that, subject to modifications, the Kent Mineral Sites Plan was sound and legally compliant. The Council subsequently adopted the Mineral Sites Plan in September 2020.

1.5.7 Any actual development at the allocated sites would be subject to separate planning applications demonstrating that certain development management criteria caveats can be met, these covered a range of issues such as access arrangements, visual screening, landscaping etc.

1.6 Progress Against the Development Scheme

1.6.1 The Local Development Scheme (LDS) sets out the County Council's program for preparing minerals and waste planning documents. The February 2019 LDS timetable was updated in January 2021. The timetable was updated again in November 2021. The updated LDS now reflects progress required for the full review and update of the KMWLP 2013-30 and is set out in Table 1 below and overleaf.

Table 1: Revised Local Development Scheme Timetable: Review of KMWLP 2013-30

Stage (where regulations are referred to this applies to *The Town and Country Planning (Local Planning) (England) Regulations 2012)*	**Milestone Dates**
Evidence gathering to inform review	June 2020- March 2021
Consultation with key stakeholders on need for review policies	January 2021 – May 2021

Report outcome of review to Members including recommendations on need to update policies	June – July 2021
Consultation on draft updated policy (Regulation 18)	November 2021 to January 2022
Publication of draft updated policy and supporting text (Regulation 19) for representations on soundness	June – July 2022
Submission to Secretary of State	September 2022
Independent Examination Hearings	December 2022
Inspector's Report	February 2023
Adoption	May 2023

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 legislation. Note that EU legislation was retained as UK legislation when the UK formally left the European Union on the 31st January 2020.

2.2 Plan Monitoring Indicators

2.2.1 The County Council continues to attach importance to the former national indicators[9] used as the basis for minerals and waste monitoring in previous years. In addition, KCC has developed its own 'local' indicators and continues to monitor and report on these sources of information. Table 2 below and overleaf sets out the main indicators used in previous AMR documents.

Table 2: Minerals and Waste Annual Monitoring 'Indicators'

Data Indicator	Source	Former National Indicator Number
Production of Primary Land- won Aggregates	Annual Aggregates[10] 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[11]	Not directly applicable
Wharves and Rail Depots Safeguarding	Annual Aggregates Monitoring Survey	Local Output Indicator 4

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

[10] 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

[11] 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

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

2.3 Kent Minerals and Waste Local Plan 2013-30 Review

2.3.1 The Kent Minerals and Waste Local Plan was adopted in 2016 and therefore a five-year review of this Plan was required in 2021. As stated above, a focused 'Early Partial Review' of the Plan has already taken place and so the limited number of policies updated by the Early Partial Review do not require review until by 2025.

2.3.2 The full formal review process included looking reviewing the Plan's Visions and Strategic Objectives, the strategic policies for minerals supply and waste management and development management policies. The review included consideration of changes in national and local policy. Findings of the review were set out in a report entitled 'Kent Minerals & Waste Local Plan 2013-30 –5 Year Review of 2016 adopted Plan' and were reported to the County Council's Environment & Transport Cabinet Committee on the 8th of September 2021 (see link: https://democracy.kent.gov.uk/ieListDocuments.aspx?CId=831&MId=8792&Ver=4). A red, amber, green system was used to identify which of the policies required modification. This is explained in the report in detail. Table 3 below and overleaf shows a summary of the outcome of the Plan review.

Table 3: Summary of Outcome of Review of the KMWLP

Policy Number & Title	**Update Required**
Policy CSM 1: Sustainable development	Yes
Policy CSM 2: Supply of Land- won Minerals in Kent	Yes
Policy CSM 3: Strategic Site for Minerals	No
Policy CSM 4: Non-identified Land-won Mineral Sites	No

Policy CSM 5: Land-won Mineral Safeguarding	No
Policy CSM 6: Safeguarded Wharves and Rail Depots	No
Policy CSM 7: Safeguarded Other Mineral Plant Infrastructure	No
Policy CSM 8: Secondary and Recycled Aggregates	Yes
Policy CSM 9: Building Stone in Kent	Yes
Policy CSM 10: Oil, Gas and Unconventional Hydrocarbons	Yes
Policy CSM 11: Prospecting for Carboniferous Limestone	Yes
Policy CSM 12: Sustainable Transport of Minerals	Yes
Policy CSW 1: Sustainable Development	Yes
Policy CSW 2: Waste Hierarchy and Policy	Yes
Policy CSW 3: Waste Reduction	Yes
Policy CSW 4: Strategy for Waste Management Capacity	Yes
Policy CSW 5: Strategic Site for Waste	No
Policy CSW 6: Location of Built Waste Management Facilities	Yes
Policy CSW 7: Waste Management for Non-hazardous Waste	Yes
Policy CSW 8: Recovery Facilities for Non-Hazardous Waste	Yes
Policy CSW 9: Non inert Waste Landfill in Kent	Yes
Policy CSW 10: Development at Closed Landfill Sites	Yes
Policy CSW 11: Permanent Deposit of Inert Waste	Yes
Policy CSW 12: Identifying Sites for Hazardous Waste	Yes
Policy CSW 13: Remediation of Brownfield Land	No
Policy CSW 14: Disposal of Dredgings	Yes
Policy CSW 15: Wastewater Development	Yes
Policy CSW 16: Safeguarding of Existing Waste Management Facilities	Yes
Policy CSW 17: Nuclear Waste Treatment and Storage Dungeness	Yes
Policy CSW 18: Non-nuclear Radioactive Low-Level Waste (LLW) Management Facilities	Yes
Policy DM 1: Sustainable Design	Yes
Policy DM 2: Environmental and Landscape sites of International National and Local Importance	Yes
Policy DM 3: Ecological Impact Assessment	Yes
Policy DM 4: Green Belt	No
Policy DM 5: Heritage Assets	Yes
Policy DM 6: Historic Environment Assessment	Yes
Policy DM 7: Safeguarding Mineral Resources	No
Policy DM 8: Safeguarding Minerals Management,	No

transportation Production & Waste Management Facilities	
Policy DM 9: Prior Extraction of Minerals in Advance of Surface Development	Yes
Policy DM 10: Water Environment Policy DM 11: Health and Amenity Policy DM 12: Cumulative Impact	Yes
Policy DM 11: Health and Amenity	Yes
Policy DM 12: Cumulative Impact	Yes
Policy DM 13: Transportation of Minerals and Waste	Yes
Policy DM 14: Public Rights of Way	No
Policy DM 15: Safeguarding of Transportation Infrastructure	No
Policy DM 16: Information Required in Support of an application	Yes
Policy DM 17: Planning Obligations	Yes
Policy DM 18: Land Stability	Yes
Policy DM 19: Restoration, Aftercare and After-use	Yes
Policy DM 20: Ancillary Development	Yes
Policy DM 21: Incidental Mineral Extraction	No
Policy DM 22: Enforcement	Yes

3.Mineral Indicators

3.1 Production of Aggregates

3.1.1 The principle aggregate monitoring process is the annual Local Aggregate Assessment (LAA). This is produced annually on the gathered previous calendar year sales and permitted reserve data supplied by the mineral operators to the County Council, as the Mineral Planning Authority for the area. The various LAA documents can be found on the County Council's web page[12]. The County Council's nineth LAA addresses the aggregate data from 2020. The executive summary is reproduced below to give the main findings of this monitoring process:

This is the ninth Local Aggregate Assessment (LAA) Kent County Council has produced, although in 2020 (2019 data) the Council reported some monitored data and extrapolated using 2018 data as the complete data set was not, at that time available being part of a national survey conducted by the British Geological Survey (BGS).

In the case of both land-won soft sands and the sharp sands and gravel it is considered that the appropriate 'LAA rate' for Kent remains that of the recorded 10-year sales average. Any estimated increases above this figure are not easily derived due to the inherent limitations in demand modelling at the county council scale. Moreover, the use of the 10-year average as a main determinate for calculating landbanks and future aggregate requirements is in accordance with the

[12] 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

National Planning Policy Framework (NPPF).

As in previous LAA reports It demonstrates that aggregate supply in Kent is provided by both imports and indigenous land-won materials. However, unlike the superficial sharp sands and gravels and soft sands are predominantly a land-won resource, and this material cannot easily be substituted by recycled or secondary materials. It also appears that little can be expected in the short to medium term, from marine resources, in terms of supply, as this has again demonstrated itself as only a small element of the overall supply. Therefore, Kent will likely remain a significant supplier of land-won soft sands to markets within and to an extent beyond Kent, into the future. Reserves have increased as has productive capacity. Sufficient reserves exist to meet and exceed the KMWLP requirements. Sales have, however fallen both in 2019 and 2020, depressing the LAA Rate.

With regard to the land-won sharp sands and gravel resource the evidence continues to demonstrate that these superficial deposits are depleting, the reserves are not being replenished and productive capacity has fallen. Therefore, there is a correspondingly limited potential for Kent to meet the demand from land-won resources of this aggregate type. The life of the landbank (less than the remaining Plan period) is more a consequence of reduced sales depressing the LAA Rate than that of a landbank meeting needs into the future. The replenishment of 2.50 mt from the Minerals Sites Plan allocations (subject to gaining planning permission) would make a contribution to the need although it is not anticipated that this will reverse the trend towards a greater reliance on importation of this land-won aggregate mineral.

Hard rock supply from the land-won resource in Kent is significant. The actual level of the current reserves and their depletion rate was subject to confidentiality. However, this has been waived by the operator for the matter of the supply of this aggregate discussed in the public domain, and the County Council is considering the implications for the supply of this important mineral type, at this time, given the need to formally review the Kent Minerals and Waste Local Plan 2013-30 (KMWLP).

Importation of sands and gravels from marine resources showed a marked decline in 2019, then a recovery in 2020, this was also a pattern displayed by marine hard rock supply. However, this pattern was not shown by rail depot importation, of primary aggregates of all types. Though, apart from hard rock, rail depots remain relatively insignificant in overall supply terms. Available wharf capacity is significant and has not altered, however it remains vulnerable to losses as their locations often coincide with competing regeneration initiatives.

Recycled and secondary aggregates showed a marked reduction is 2019, falling to under 0.5 mt of sales, then recovering again in 2020 to almost 1.0 mt. This pattern of sales, a marked fall in 2019 and a recovery in 2020, is consistent with the pattern displayed by marine imported primary aggregates, though not with the rail depot primary aggregates imports.

It remains the County Council's view that growth predictions in housing and infrastructure delivery and maintenance are indicative at best in terms of aggregate demand. The inherent modelling limitations necessitates that only a

likely upward trend in demand can be identified from the data available. Housing growth in Kent, based on the Kent local authorities objectively assessed needs are showing a potential 5% per annum growth to 2038. Irrespective of what level of growth occurs, it will necessitate a robust safeguarding regime if a steady and adequate supply of aggregates to meet the objectively assessed needs is to be maintained. Given the ongoing depletion seen with the land-won sharp sands and gravels this will place an emphasis on the importation infrastructure safeguarding in Kent.

3.1.2 The LAA includes a 'dashboard' to tabulate the main trends in aggregate supply and reserve levels (Appendix 3 lists all the land-won mineral sites used for landbank calculations in Kent) that can be observed, a simplified version of which is included below in Table 4 below.

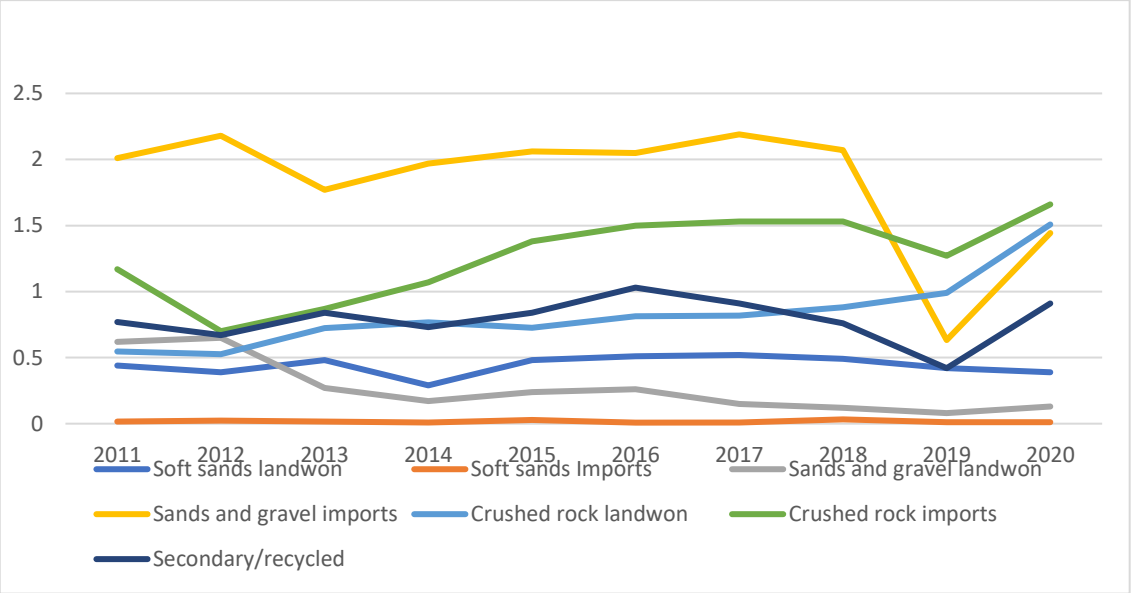
Table 4: Aggregate Minerals Supply and Reserve Monitoring

Aggregate type	2020 Sales	10-year Average	Reserv	Commentary
Soft Sand (landwon)	0.392mt ⬇	0.441mtpa ⬇	9.341 mt ⇧	Reserves have increased from 7.81mt to 9.341mt, this and the reduced 10-year average reduces the possibility that a 7-year permitted landbank will not be maintained over the Plan period
Sharp Sand and Gravel (landwon)	0.132 mt ⇧	0.270mtpa ⬇	0.779 mt ⬇	Landwon reserves are depleting and not being replenished. The NPPF landbank requirements are being met given the low sales average; this is unreflective of the real demand in Kent for sharp sand and gravel.
Crushed Rock (landwon)	1.508mt ⇧	0.830mt pa ⇧	Uncertain possibly range of 15.4mt to 18.5mt	Significant increase in sales and confidentiality and reserves now waived by operator. Discussion over reserves and characteristics of the material are ongoing; the outcome will influence how the life of the landbank is judged against NPPF requirements over the remainder of the Plan.

Recycled/Secondary Aggregates	0.909 mt ⇧	0.688mt pa ⬇	N/A	Productive capacity remains significant (4.0mtpa). Sales increased markedly in 2020 compared to 2019. The 10-year average
Imports of sand and gravel (wharfs)	1.44mt ⇧	1.68mtpa ⬇	5.60mtpa is the reported productive capacity.	The predominantly marine originated imports via wharfage (some land-won transshipments) reduced in 2019 and rebounded in 2020. Though significant underused importation capacity remains.
Imports marine crushed rock (wharfs)	1.120 mt ⇧	0.844mt pa ⇧	5.60mtpa is the reported productive capacity	Though sales fell in 2019 (reducing the 10-year sales average to 0.71mt) they rebounded to 1.12mt in 2020.
Rail Imports (Sand and Gravel)	24,017 tonnes ⇧	33,203 tonnes ⇧	N/A	Rail importation remains relatively insignificant in overall supply terms for sand and gravel in Kent.
Rail Imports (Soft Sand)	10,222 tonnes ⇧	6,801 tonnes ⇧		Soft sand importation remains insignificant in overall supply, however increased markedly in 2019 and 2020.
Rail Imports (Crushed Rock)	0.538mt ⇧	0.432 mtpa ⇧		Crushed hard rock importation 10-year average has slightly fallen back, though remains at the 0.5mtpa range that has been the case since 2018.

The graphical representation of the sales data is demonstrated below in Figure 6 overleaf.

Figure 6: Total Aggregate Production in Kent during 2011-2020 (Million tonnes)

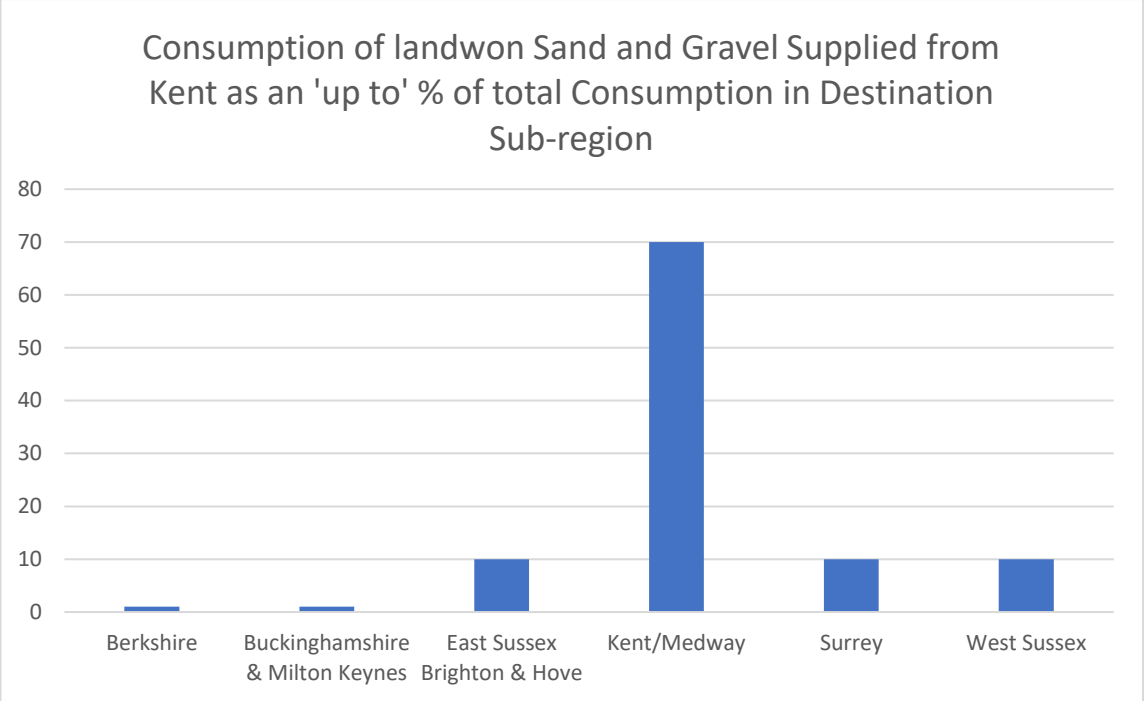


3.1.3 The uncertainty caused by the UK exiting the European Union (EU) clearly shows up in aggregate imports, particularly in the sand and gravel (predominantly marine origin) and hard crushed rock. This was reversed in 2020. The LAA is based on an understanding of sales and permitted reserves, to establish how a plan needs to respond to the need to maintain landbanks through the respective plan period. Though, an understanding of consumption that occurs in a mineral planning authority area is less well understood. In order to address this national periodic aggregate monitoring is undertaken. The most recent was undertaken by the British Geological Survey (BGS) in 2019. This included Kent and how it supplies aggregate materials to other area and an understanding of its consumption of primary landwon aggregates. The survey differentiated the Kent and Medway mineral planning authority areas when identifying the source of material, though aggregated them in consumption terms. The materials analyses were landwon sands and gravels (this included the soft sands as well as the sharp sands and gravels, the marine imported sands and gravels (predominantly sharp sand and gravel in type) and landwon crushed hard rock.

3.2 Landwon Sand and Gravel Consumption

3.2.1 The consumption of landwon sands and gravels sourced from Kent predominantly occurs in the Kent/Medway area. The graph in Figure 7 below shows the percentage (expressed as 'up to' so a figure of 10% may be less in actuality, though in region of 10%) of overall consumption of an area that was sourced from Kent. It shows that the Kent/Medway area is predominantly sourced from Kent, up to 70% of this aggregate type consumed in Kent/Medway originates from Kent. Some of the Kent sourced material goes to the immediate neighbouring areas of East Sussex, West Sussex and Brighton and Hove (up to 10% of their consumption). Very little (up to 1%) goes further to Buckinghamshire & Milton Keynes and Berkshire as part of their overall consumption.

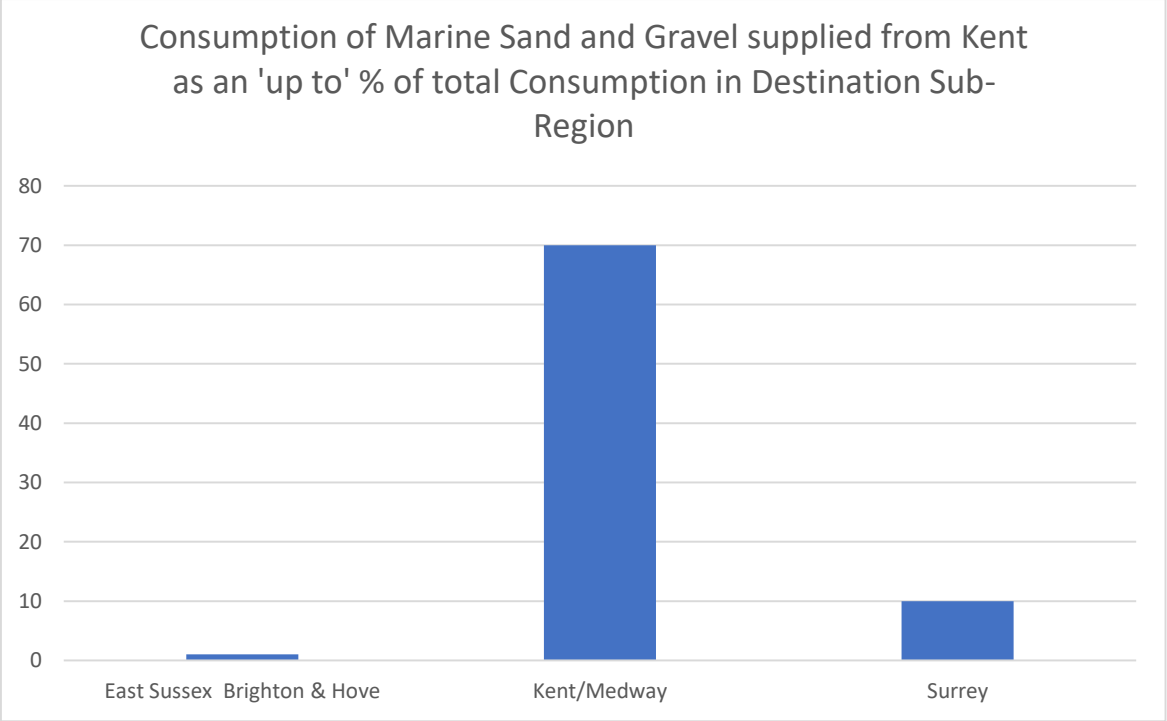
Figure 7: Graphical Representation of landwon Sand and Gravel in SEEAWP Sub-Region Derived from Kent



3.3 Marine Sand and Gravel Consumption

3.3.1 Figure 8 overleaf shows the consumption of marine sands and gravels sourced from Kent predominantly occurs in the Kent/Medway area. Up to 70% of the landings in Kent of this material is consumed in the Kent/Medway area. Only up to 10% is consumed by the neighbouring area of Surrey and up to 1% is consumed in the Brighton and Hove area.

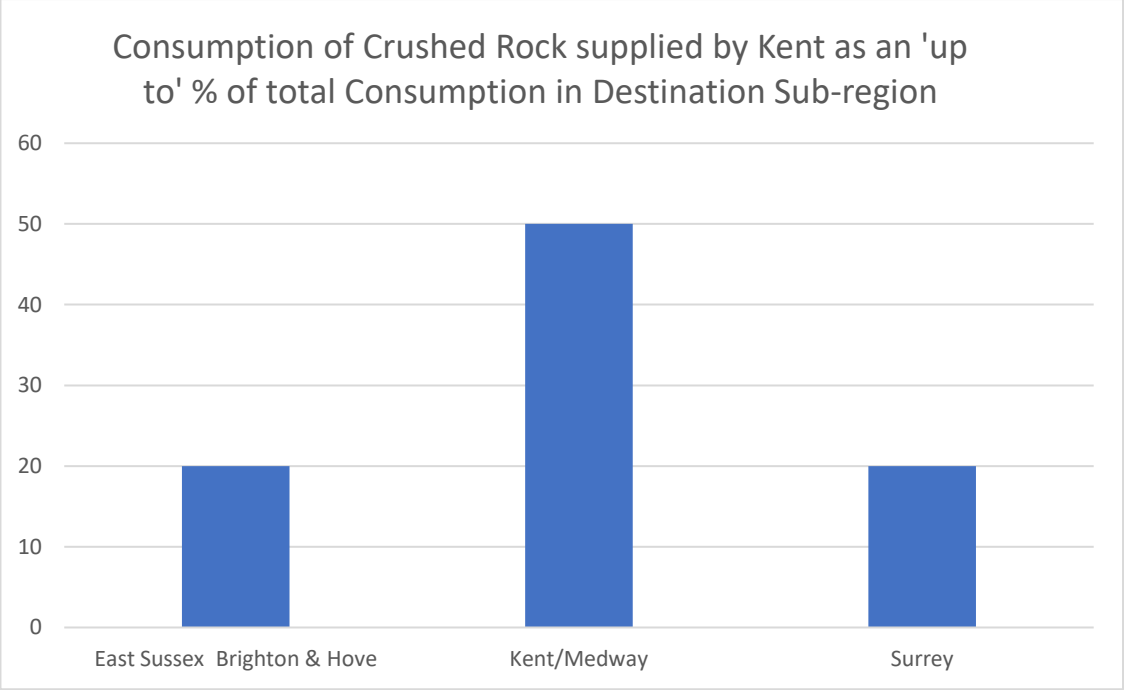
Figure 8: Graphical Representation of Consumption of Marine Sand and Gravel in SEEAWP Sub-Region Derived from Kent



3.4 Landwon Crushed Rock Consumption

3.4.1 Figure 9 overleaf shows the consumption of landwon crushed sourced from Kent mainly occurs in the Kent/Medway area. The BGS national aggregate monitoring survey undertaken in 2019 showed that, in that year, up to 50% of crushed rock produced in Kent was consumed in the Kent/Medway area. With up to 20% consumed by the neighbouring areas of Surrey and Brighton and Hove area.

Figure 9: Graphical Representation of Consumption of Landwon Crushed Rock in SEEAWP Sub-Region Derived from Kent in 2019



3.4.2 The findings of the BGS survey demonstrate that Kent largely meets its own aggregate needs in consumption and plays an important role in supplying crushed rock to Surrey and East Sussex Brighton and Hove.

4. Landwon Other (Non-Aggregate) Mineral Landbanks

4.0.1 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 2019/20 period.

4.0.2 Moreover, unlike the AM surveys 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, where possible.

4.1 Brick and Tile making from Clay or Brickearth

4.1.1 The NPPF requires MPAs to maintain landbanks of brickclay (therefore it is reasonable to include 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 adopted KMWLP.

4.1.2 As has been reported in previous AMR reports, 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 is a brickworks utilising brickearth, there are currently no operational brickworks in Kent which use clay as a raw material.

4.1.3 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 KMWLP requirements for supplies of brick clay (at least 25 years). The previous 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 to extend the life of the site for at least a further 25 years.

4.1.4 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, Wienerberger (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 (that has significant reserves) in the Sittingbourne area. The life of the permitted reserves has been reconsidered against anticipated extraction rates. This has revised the position reported in AMR2018/19, that stated the available reserves were potentially 21-22 years which is below the 25-year KMWLP requirement. Yearly production is highly variable and can significantly reduce in any one year that would commensurately increase the life of the reserves significantly and it is now considered that available reserves have increased to the 25–30-year range. Table 5 below illustrates the anticipated remaining lifespans of the permitted reserves left in Kent at this time.

Table 5: 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	Wienerberger Ltd	Brickearth	Limited remaining reserves in 2020 extraction anticipated to cease by 2022 and restoration required to be completed by mid-2023
Paradise Farm, Sittingbourne	Weinerberger Ltd	Brickearth	Between 25 -30 years
Pluckley Quarry, Ashford[13]	Pluckley Brick Company	Weald Clay	Over 25 years supply

[13] 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

4.2 Silica Sand

4.2.1 Both soft and silica sands are extracted from the Folkestone Formation, while the latter is in its particularly pure form, free of iron rich minerals (Hematite) that would give it the characteristic 'buff' colouration. Being free of 'contaminants' it can be used in a range of industrial applications where a pure source of silicon dioxide (quartz) is required.

4.2.2 National planning policy 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 new facility. This requirement is reflected in Policy CSM 2 of the adopted KMWLP.

4.2.3 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 produce silica sand in Kent. However, Nepicar Sand Pit is in all probability nearing the end of its productive life for silica sand. The estimated timespan of supply at these sites, as indicated in Table 6 below, was calculated from 2020 sales rates. One site meets the KMWLP required of a 10-year minimum permitted reserves for existing sites. Nepicar Sand Quarry has reserves below this requirement, however it is considered that this site is nearing the end of its productive life, and thus will fall away from having to be considered against the NPPF 'stock of permitted reserves' requirements.

4.2.4 Therefore, the situation remains essentially unchanged since reporting in previous AMRs. It should be noted that as Aylesford Quarry remains inactive and there is significant doubt that the below water table reserves of silica sand can be extracted, processed and brought to market economically in current market conditions, it is not considered as site where the NPPF requirement to maintain a certain quantum of permitted reserves applies. It should be noted that as the mineral comes from the same geological formation as building or soft sand sites producing building sand may also be capable of producing silica sand.

Table 6: Landbanks at Silica Sand Quarries in Kent

Site	Operator	Estimated Length of Supply
Addington (Wrotham) Quarry, Addington, West Malling	Fern Aggregates	Over 21 years
Nepicar Sand Quarry, Wrotham Heath, Nr Sevenoaks	J. Clubb Ltd	Less than 10 years (exact reserves of non-aggregate silica sands uncertain as of 2020)

4.3 Chalk and Clay

Chalk for Cement Production

4.3.1 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.

4.3.2 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 7 below.

Table 7: 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

Chalk for Agricultural and Engineering Uses

4.3.3 Chalk is used in agriculture and civil engineering in Kent, as well as being used in the production of bricks, tiles and cement and some other processes such as pharmaceutical production and pigmentation (paper, paints etc.). Chalk for civil engineering and agricultural use is not covered specifically in current national minerals policy guidance. However, the general advice on maintaining a sufficient supply of minerals, as set out in part 17, paragraph 209 of the NPPF (2021), remains pertinent to the planning of all mineral types. This requirement is reflected in Policy CSM 2 of the KMWLP: Supply of Land-won Minerals in Kent. The permitted reserves, that are required to enable an adequate supply to be maintained through the plan period, are monitored for AMR reporting purposes. However, this has not always resulted in comprehensive participation. 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 8 below.

Table 8: Agricultural and Engineering Chalk Landbank in Kent in 2020

Average sales (2020) per annum rate	Total Estimated Reserves at end of 2020	Landbank Life
6,324 tpa	0.657 million tonnes	103+ years

4.3.4 The indicative data above shows that Kent has potential agricultural and engineering chalk landbank equal to over 100 years, while this was reported as

16.6 years as of 2019. This is thought to not represent an accurate picture of extraction average. In 2020 the effects on demand due to the Covid-19 pandemic mitigation measures (lockdowns) no doubt had a significant impact on the overall extraction rate average. In the previous AMR2018/19 the average measured between 2011 and 2014 was 70,000tpa. This would give an overall landbank of chalk of 9.38 years. The Plan will last another 9 years (2021-30). Therefore, there is the *possibility* that there is an insufficient permitted landbank to maintain a supply of chalk for these purposes over the remainder of the Plan period if extraction rates again rose to more historic levels. However, sales are highly variable from year to year, as evidenced by those of 2020. It is considered that the risk of running out of permitted chalk landbank before the end of the Plan period is not considered high at this time.

4.4 Engineering Clay

4.4.1 Kent does have 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'[14] sites and therefore cannot be realistically included in the current landbank.

4.4.2 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. In 2020 sales activity data demonstrated a hiatus in extraction. 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 2019/20 and the lack of any meaningful sales, there is likely sufficient capacity to meet future needs.

5. Waste Indicators

5.1 Local Authority Collected Waste Arisings by Management Type

5.1.1 The Local Authority Collected Waste (LACW) arising in Kent in 2019/20 was reported by Defra as being 694,913 tonnes. This represents a decrease of 3.6% on the 2018-19 value. The 2019-20 tonnages, proportions by management type and the percentage change from the previous monitoring year (based on actual tonnage) are set out in Table 9 overleaf. The data shows that LACW sent to landfill remains below 2% of collected waste. Recycling and composting have fallen to 48.5%, with Energy from Waste standing at 50%.

[14] 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

Table 9: Fate of LACW Arising in Kent by Management Type, 2019/20

Management Type	Tonnes	Percentage of Total LACW	Change from 2018/19
Recycling / Composting	336,977	48.49%	362,878 (a decrease of 25,901 tonnes which equates to a fall of 7.1% on 2018/19 value)
Energy Recovery (EfW)	348,497	50.15%	345,985 (an increase of 2,512 tonnes which equates to an increase of 0.7% on 2018/19 value)
Landfill	10,066	1.45%	12,050 (a decrease of 1,984 tonnes which equates to a fall of 16.5% on 2018/19 value)
Total	**694,913**	100%	**721,188 tonnes** A decrease of 26,275 tonnes (3.6%) on 2018/19 value()

5.1.2 The Government's Resources and Waste Strategy for England sets out how material resources will be preserved by minimising waste, promoting resource efficiency and moving towards a circular economy. It combines actions to be taken now with firm commitments for the coming years and gives a clear longer-term policy direction in line with the 25 Year Environment Plan. The objectives include a target to recycle 65% of municipal waste by 2035, for zero avoidable waste by 2050 and a requirement for all food waste to be collected separately and eliminate food waste to landfill by 2030.

5.1.3 The Kent Joint Municipal Waste Management Strategy (KJMWMS) was adopted by the collection and disposal authorities of Kent (working together through the Kent Waste Partnership) in 2007. The Strategy was refreshed in 2018-19 and is due to be reviewed again in 2022. 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 at least 50% by 2020-21; and
- landfilling no more than 2% by 2020-21.

5.1.4 Table 9 demonstrates that Kent just fell short of the 2021-21 recycling/composting target in 2019/20. The landfill diversion target was surpassed some two years earlier than planned and this achievement has been maintained in 2019-20.

5.1.5 Figures 11 and 12 illustrate the trends in the management of the LACW between 2014-15 and 2019-20, both in tonnes (Figure 11) overleaf and percentages (Figure 12) overleaf.

Figure 10: Collected LACW by Management Method 20014-15 to 2019-20

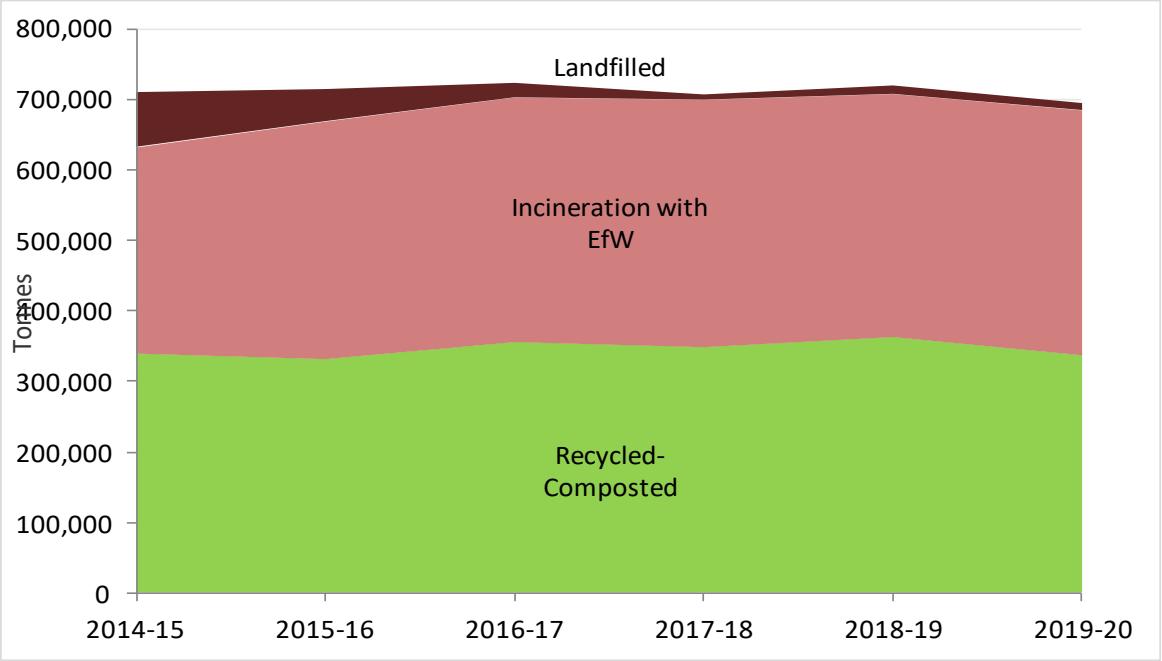
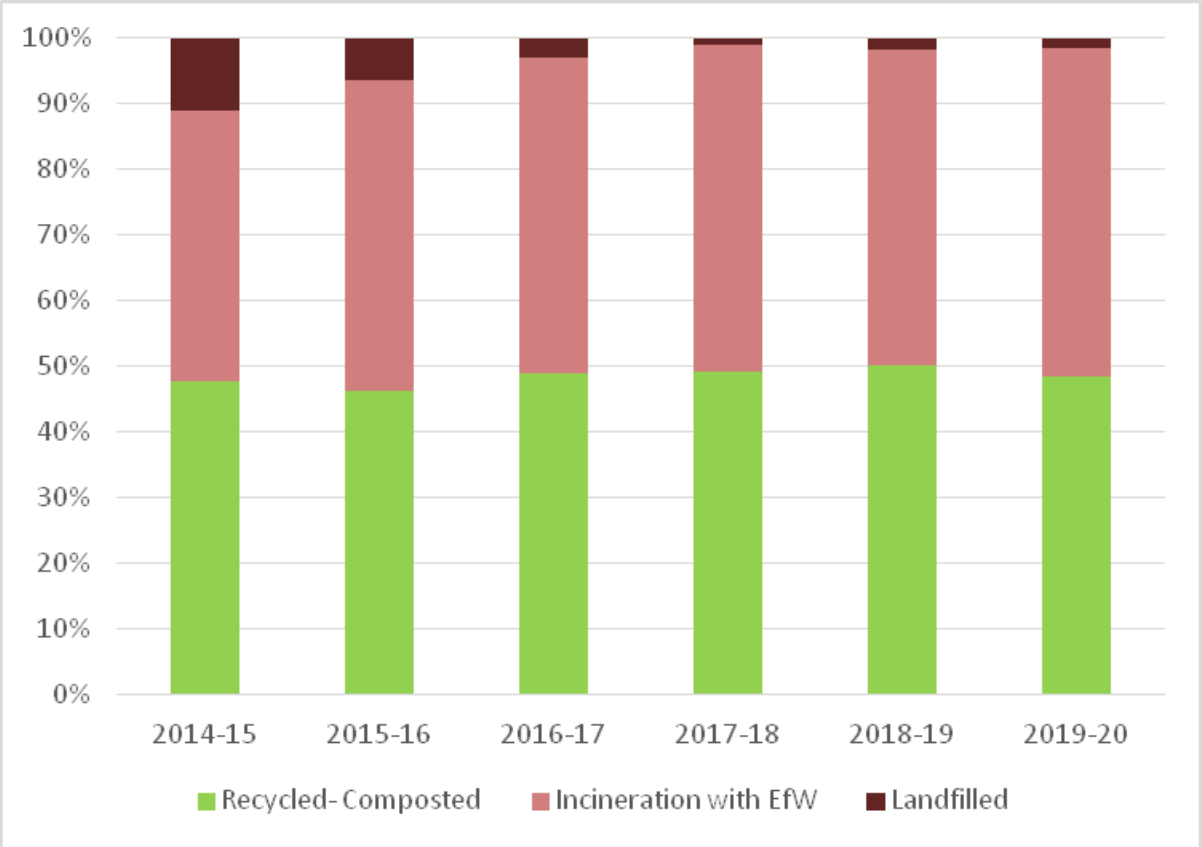


Figure 11: Collected LACW by Management Method 2014-15 to 2019-20 in Percentages



5.1.6 During the period between 2014-15 and 2018-19 overall LACW arisings have remained more or less static with a fall in 2019-20. There has been a continuing decline in the proportion sent to landfill (11% in 2014-15 to 1.45% in 2019-20). Recycling and composting being taken in combination increased from 47.7% in

2014- 15 to attain 48.49% in 2019-20, peaking at 50.32% in 2018-19. It should be noted that the combined recycling/composting rate can fluctuate annually due to variations in green waste production which in turn is heavily influenced by annual changes in climatic conditions.

5.2 Waste Generation Growth Rates

Local Authority Collected Waste (LACW)

5.2.1 As shown in Table 14 (page 39), the amount of LACW in 2019-20 decreased from 721,188 tonnes in 2018-19 to 694,913 tonnes, a decrease of 3.6%.

5.2.2 Housing growth in Kent is projected to continue to increase over the next 10 years and with that LACW tonnage is expected to rise even in the face of per household reductions that may be achieved due to minimisation measures and the anticipated decoupling of rising household expenditure and waste production.

5.2.3 Kent County Council as the WDA has undertaken an infrastructure review to determine where additional management capacity will be required. This covered both Waste Transfer Station (WTS) facilities as well as Household Waste Recycling Centers (HWRCs). The need for at least 5 new or improved WTS facilities across the County up to 2030 has been identified as shown in Table 10 below.

Table 10: WTS Projects

WTS Sites	Project Type	Serves (District)
Folkestone WTS	New (additional)	Folkestone
Ebbsfleet WTS	New (additional)	Gravesham, Dartford
Sevenoaks WTS	Replacement	Sevenoaks
Sittingbourne WTS	Extension	Swale
Tunbridge Wells WTS	Replacement	Tunbridge Wells, Tonbridge and Malling

5.2.4 In addition to WTS facilities, a number of existing HWRC sites have been identified for replacement or extension, as well as the need for one additional facility. These facilities are summarised in Table 11 below and overleaf.

Table 11: HWRC Projects

HWRC Projects	Type of project	Serves
Dover HWRC	Extension	Dover HWRC catchment
Ebbsfleet HWRC	New (additional)	Dartford and Pepperhill HWRC catchment
Sittingbourne HWRC	Replacement	Sittingbourne HWRC catchment
Faversham HWRC	Extension	Faversham HWRC catchment
Maidstone HWRC	Improvement (short term) Replacement (long	Maidstone HWRC catchment

	term)	
Margate HWRC	Extension	Margate HWRC catchment
Sheerness HWRC	Extension	Sheerness HWRC catchment
Swanley HWRC	Extension	Swanley HWRC catchment
Tunbridge Wells HWRC	Extension	Tunbridge Wells HWRC catchment
Folkestone HWRC	Extension	Folkestone HWRC catchment

5.2.5 KCC will seek Developer Contributions to help support these identified projects, as there is a direct link between demand on management facilities and housing growth.

5.2.6 Regular capacity assessments are undertaken to update the findings of the infrastructure review, with further projects identified as required.

Commercial and Industrial Waste (C&I)

5.2.7 Commercial waste is defined in the KMWLP as 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.

5.2.8 Annual data on the amount of C&I wastes produced in Kent is not routinely available. 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 was assumed that there will be positive growth.

5.2.9 Table 12 below and overleaf 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 12: 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

[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

Forecast C&I arisings with Updated Baseline	1,189,000	1,274,082	1,338,702	1,407,630

Construction Demolition & Excavation Waste (CD&E)

5.2.10 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, 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."

5.2.11 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 Department for Levelling Up, Housing and Communities. 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.

5.2.12 An updated estimate of the arisings of the CD&E wastes in Kent was produced applying a revised national methodology and this resulted in an estimate of 3mt. Projecting forward arisings, 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).

5.2.13 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 as set out in Table 13 below and overleaf.

Table 13: Kent CD&E Waste Management Requirements against Existing Capacity 2019

Management Route	Peak Annual or Cumulative (for permanent deposit /landfill) Requirement in KWMLP to 2031 (tonnes)	Capacity Assessed as available	Comment
Inert Recycled Aggregate	1.4M	>2.7Mt	KMWLP includes a commitment to maintain productive capacity of at least 2.7 million tonnes per annum throughout the Plan period via Policy CSM 8.

			No additional capacity required.
Non Inert Separated for recycling	352,554	1.7Mtpa	Data from WNA 2018 indicates overall non inert recycling capacity (referred to as MSE and C&I) as being 1.7million tpa. Peak projected recycling & composting capacity requirement is 1.4million tpa, indicating that there is sufficient capacity for the non inert CDEW fraction. **No additional capacity required.**
Composting	25,182	233,000	The assessment of organic waste treatment capacity presented in the *Non Hazardous Waste Recycling/Composting Capacity Requirement* report of the WNA 2018 identifies capacity of 233,000 tpa. **Additional capacity may be required.**
Permanent Deposit to Land (Inert CDEW)	11.8 million t = 7.38Mm3 at 1.6t/m3	Inert void of over 7.86Mm3 not including engineering operations permitted as recovery to land	The most recent capacity review suggests that void may not be as plentiful as previously assessed. Moreover, the current assessment of available void is highly dependent on minerals being worked at the rate required to create the void needed. **Additional capacity may be required, particularly if provision is to be made for waste from London (as was previously th case).**
Non Inert (EfW)	125,912	44ktpa (surplus)	MVV Biomass Plant at Ridham has capacity c 170,000 tpa. So, it suggests a capacity surplus of c44ktpa. **No additional capacity required.**

Non Inert Landfill	333,665 t - 333,665 m3 as 1:1 assumed with trommel fines	EA indicates 1.75Mm3 of non-haz void	The revised *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 line. Given the revised targets, the non inert residues from C,D & E waste could also be accommodated. **No additional capacity required.**

5.2.14 It is proposed that Policy CSW 11: Permanent Deposit of Inert Waste, be modified to make more explicit reference to the possible role that the deposit of inert waste for beneficial use including engineering operations can make to managing inert excavation waste providing it does not have an adverse effect on the availability of material for progressive restoration of Kent's mineral workings within the vicinity. This should encourage such schemes to come forward, ensuring that sufficient permanent deposit to land capacity remains for inert waste for the Plan period.

Hazardous Waste

5.2.15 Policy CSW 12 contained in the adopted plan seeks to ensure sufficient capacity is provided in Kent to maintain net self-sufficiency in the management of hazardous waste throughout the Plan period. It should be noted however that there is no national policy expectation for net self-sufficiency in this waste stream alone to be achieved at Plan area level.

5.2.16 In order to assess the level of compliance with the policy hazardous waste data from the Environment Agency's 'Hazardous Waste Interrogator' (HWI) has been examined along with that from the Agency Waste Data Interrogator (WDI). While the HWI is similar to the WDI, it uses data from the hazardous waste consignment note system where each sender reports movements. Whereas the WDI relies on permitted site operator reporting. While national Planning Practice Guidance advises reliance on the HWI it should also be noted that in some instances management may not involve a movement recorded through the HWI, for example in situations where waste is generated onsite and then managed onsite, such as where a hospital has an incinerator suitable to accept infectious waste. This is the case in Kent where an incinerator operates at the William Harvey Hospital in Ashford. Therefore, HWI data is cross checked with WDI data.

5.2.17 Hazardous waste arises from households, commercial and industrial, and from the incineration (with or without energy recovery) process of managing residual wastes from these waste streams. Also, this waste arises from the C, D & E waste stream, typically asbestos bearing construction wastes. In 2019 the total amount of hazardous waste consigned through the HWI as arising in Kent was c185,500 tonnes. This compares with c184,000 tonnes consigned into Kent facilities for management (including Kent waste). Given the potential for omission, the WDI has also been interrogated to find that c183,500 tonnes of hazardous waste arising from Kent was reported as managed through permitted sites reporting through the WDI. This compares with c197,000 tonnes managed at permitted sites

within Kent, giving a surplus of c13,500 tonnes. Given the data above it is reasonable to state that Kent achieved net self-sufficiency in hazardous waste management in 2019.

Air Pollution Control (APCr) Wastes

5.2.18 During the course of incinerating waste flue gases are generated that require treatment. This is achieved through the addition of catalysts such as ammonia. This generates a solid residue known as APCr which requires onward management as a hazardous waste.

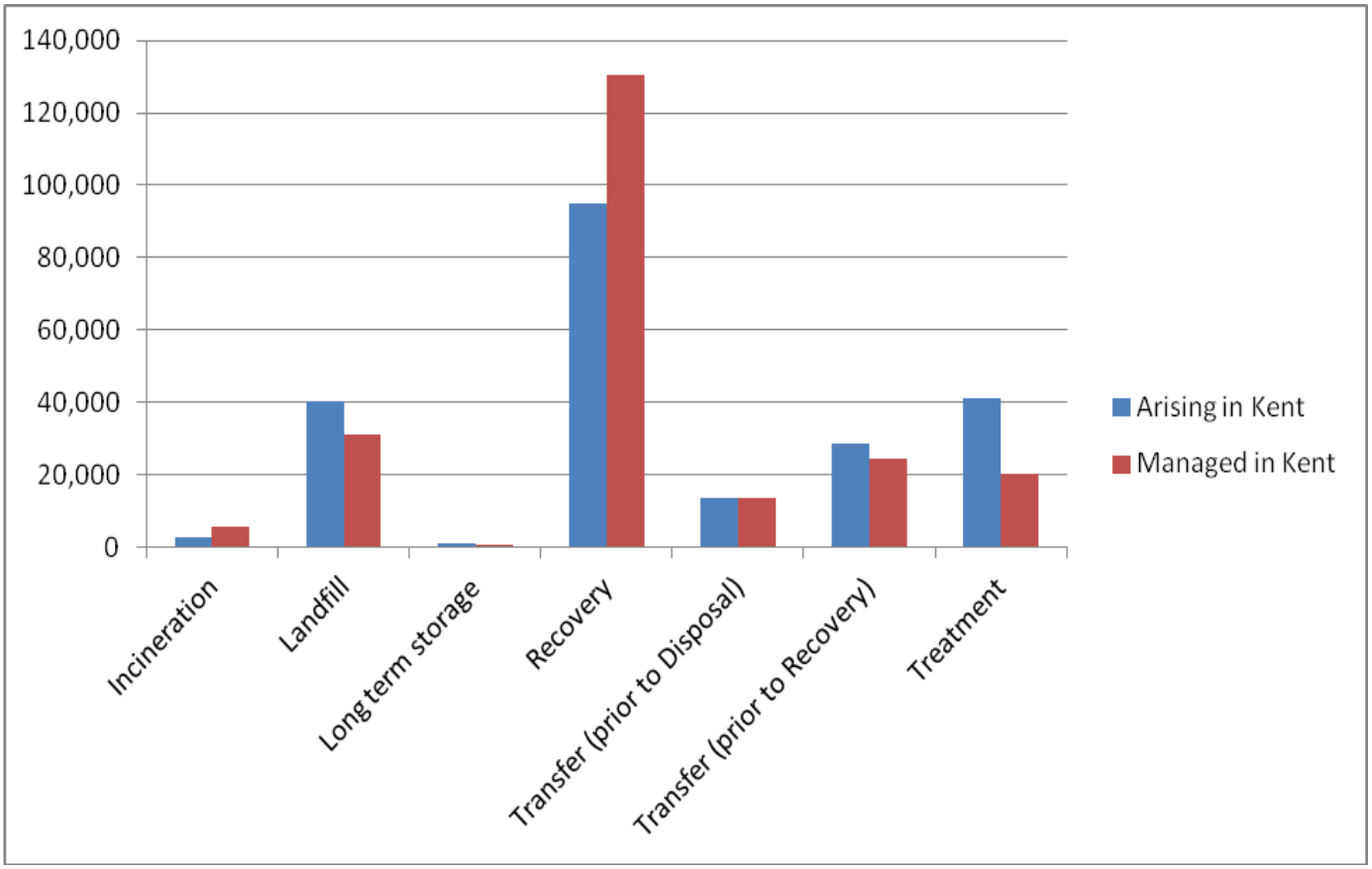
5.2.19 At the time the Allington EfW plant was consented (2000) a need for a sustainable management route for the resulting APCr was identified. This was met through the provision of dedicated hazardous waste landfill capacity at Norwood Quarry on the Isle of Sheppey. Given the ongoing production of APCr at Allington, the void at the landfill is forecast to be exhausted during the Plan period. In addition, further incineration capacity has been consented and is operational within Kent, generating more APCr requiring management. Hence Policy CSW5 makes provision for an extension to Norwood Quarry to ensure sufficient capacity is provided for Kent APCr over the Plan period. This is against the backdrop of the Kent MWLP objective of maintaining net self-sufficiency for hazardous waste management throughout the Plan period as set out in the current version of the Plan. It is proposed to amend this objective in the forthcoming Plan review.

5.2.20 Defra's strategy for the management of hazardous waste released (2010) seeks to ensure that hazardous waste moves up the waste hierarchy, while ensuring that the Best Overall Environmental Option (BOEO) is secured for hazardous waste. It specifically addressed the landfilling of waste such as APCr which required seeking a relaxation of waste acceptance criteria of hazardous waste landfill from the European Commission. It was stated that this arrangement would be phased out noting that continued landfilling of hazardous waste is contrary to proper application of the waste hierarchy and acts as a disincentive to alternative treatment The Government's commitment to moving hazardous waste up the hierarchy was reiterated in the Resources & Waste Strategy for England released in 2018.

5.2.21 In 2019/20, APCr arisings continued to be landfilled at Norwood Quarry albeit at a reduced rate as Allington APCr is managed through treatment methods as well. At the end of 2019 the remaining void at the consented landfill at Norwood Quarry stood at 139,809 m^3, with only 22,300 tonnes of the total c47,000 tonnes produced at Allington actually being landfilled there. It should be noted that a Section 73 application has been granted to allow residues from facilities other than Allington EfW to be accepted at Norwood Quarry. Given the above the necessity of the strategic allocation is being kept under review, and Policy CSW 5 was modified during the Early Partial Review of the KMWLP to ensure that in the event that the allocated extension was consented the site can be restored to the approved final landform should landfilling of APCr cease.

5.2.22 Figure 12 overleaf shows the overall management routes that hazardous waste arising in Kent in 2019 followed as compared with that managed within Kent using combined data from HWI and WDI given the variation in data between the sources.

Figure 12: Hazardous Waste Arisings and Management Fate in Kent 2019 in Tonnes



5.2.23 This shows that Kent is receiving a greater tonnage of hazardous waste for management through incineration and recovery while there is a marginal deficit in tonnage managed for landfill, transfer for recovery and disposal and treatment. The variation between management types will largely reflect the variability of hazardous waste arising and the specificity of management capacity. Given that a recovery is further up the hierarchy this can be seen as a positive as it suggests the Kent is playing its part in moving hazardous waste up the waste hierarchy in accordance with the national policy aspiration as well as providing strategically important final disposal capacity. Permitted capacity in Kent capable of managing hazardous waste in 2019 is summarised in Table 14 below and overleaf.

Table 14: Permitted Built Capacity in Kent in 2019 Capable of Managing Hazardous Waste

Permitted Management Capacity Type for Hazardous Waste in Kent	**Actual Inputs 2019 (tonnes)** HWI/WDI	**Per Annum Tonnage of Available Management Capacity** *Based on actual inputs or consented capacity (if known)*
Recovery -	91,821	120,000
Treatment	36,449	36,500
Incineration	5,431	21,640
Transfer for Recovery	36,262	42,000
Transfer for Disposal	5,798	

Intermediate Site Totals	175,761	205,000

5.2.24 In addition to the capacity above, Kent has two dedicated hazardous waste landfills, Pinden Quarry for asbestos, and Norwood Quarry for APCr.

5.2.25 Kent has sufficient capacity to manage the equivalent quantity of hazardous waste produced within it including capacity for final disposal of hazardous wastes by landfill and by incineration which may be of wider strategic importance.

5.3 Exports and Imports of Waste in Kent

5.3.1 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). Table 15 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.

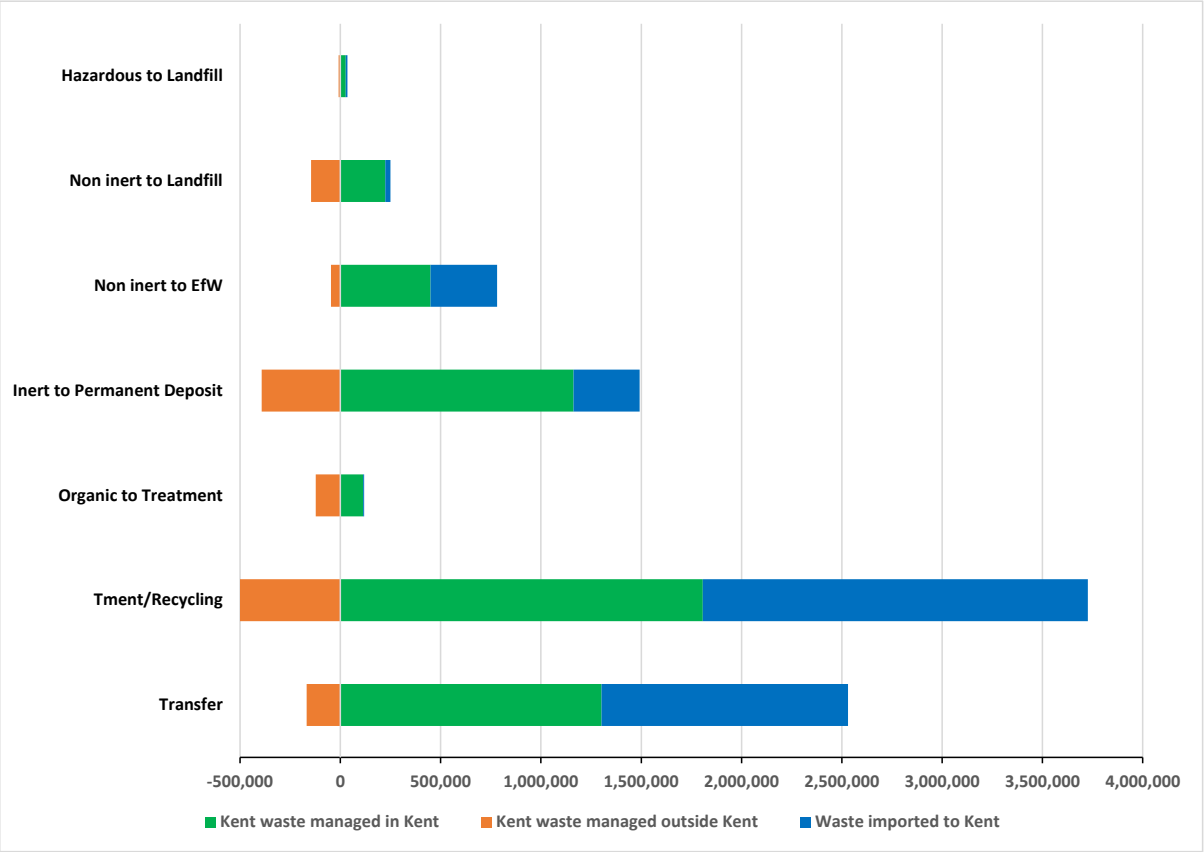
Table 13: Tonnages of Kent waste managed in permitted facilities within Kent and outside, and tonnages of other waste managed at Kent facilities 2019

Aspect	Component	Total
Kent waste managed	Kent waste exported for management	1,650,422
Managed in Kent	Kent waste managed in Kent	6,796,744
	Waste imported into Kent	3,905,710

5.3.2 The bottom two lines of Table 15 above show that some 10.7 million tonnes of waste were reported as being managed at Kent waste management facilities in 2019. This compares with around 1.65 million tonnes managed outside the county (top line of Table 15). 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[17]. 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 15 above.

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

Figure 13: Waste Import and Export Balance in Kent 2019 by management method and waste type where known (tonnes)



5.3.3 Of the imports, just under 800,000 tonnes came from London, of which 45,500 tonnes of non-hazardous residual waste went to EfW, and around 4,500 tonnes to non-inert landfill This movement is consistent with the Plan provision for management of a reducing amount of waste from London. It should be noted that the non-hazardous waste capacity assessment[18] underpinning the Early Partial Review of the KMWLP projected c55,000 tpa of residual non-hazardous waste from London which is close to the c50,000 tonnes reported for 2019.

5.3.4 In addition, circa 204,000 tonnes of inert waste went to permanent deposit to land via non-inert waste landfill, inert landfill and recovery to land projects. This compares with a predicted requirement of up to 300,000 tpa from London.

5.3.5 The HWI shows that of the 185,465 tonnes of hazardous waste that arose in Kent in 2019 82,895 tonnes were managed within Kent (44%), while the remainder was managed at various facilities across England, as shown on Table 16 overleaf:

[18] Kent Waste Needs Assessment 2018 Capacity Requirement for the Management of Residual Non Hazardous Waste September 2018 BPP Consulting

Table 16: Destination Regions for Management of Hazardous Waste Arising in Kent in 2019 ex that managed in Kent (HWI) in rank order by total tonnes

	Principal Management Routes						
Deposit Region	**Grand Total**	**Incineration with or without energy recovery**	**Landfill**	**Long term storage**	**Recovery**	**Transfer for Recovery or Disposal**	**Treatment**
East Midlands	21,628	0	864	0	5,750	11,046	3,968
South East	19,181	32	4,031	0	984	3,844	10,289
Yorks & Humber	17,191	323	1	0	1,346	715	14,797
North West	11,773	42	7,573	988	851	766	1,553
South West	6,639	312	521	0	5,012	768	26
London	6,600	132	0	0	3,727	2,344	348
West Midlands	5,576	13	207	0	2,062	2,788	506
North East	128	0	1	0	0	128	0

5.3.6 A list of permitted waste management facilities in Kent is set out in a separate list published alongside the AMR on the KCC website

6. Summary of Monitoring the Delivery of the adopted KMWLP Strategy

6.0.1 In order to ensure that the monitoring of the implementation of the adopted KMWLP (as Partially Reviewed in 2020) 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. 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).

6.0.2 The production of evidence to support the Minerals Sites Plan (adopted in 2020) demonstrated that the aggregate 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 Plan's preparation in 2014-16. 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"*.

6.0.3 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"*. 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 was reflected in the 2020 Early Partial Review changes to the KMWLP to remove the requirement of a sites plan to allocate any chalk and clay sites in a Minerals Sites Plan, as there was no evidential requirement for such allocations for the remainder of the Plan period. The position has not changed as a consequence of the Plan's Full Review work. This includes 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 remain effective.

6.0.4 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 earlier this was addressed by the Early Partial Review of several waste policies. The following waste management policies and/or the supporting text were modified:

- Policy CSW 4: Strategy for Waste management Capacity
- Policy CSW 5: Strategic Site for Waste
- Policy CSW 6: Location of Built Waste Management Facilities
- Policy CSW 7: Waste management for Non-hazardous Waste
- Policy CSW 8: Other Recovery Facilities for Non-hazardous Waste
- Policy CSW 12: Hazardous Waste
- Policy CSW 14: Disposal of Dredgings

6.0.5 Policy CSW 4 was modified to address changes to the targets for waste management to ensure there is sufficient capacity to manage at least the equivalent quantity of the waste to that arising in Kent plus some residual waste from London.

6.0.6 Policy CSW 5 was modified to ensure that the site (strategic site for waste management) can be restored to the approved final landform should landfilling of APCr cease.

6.0.7 Policy CSW 6 supporting text was modified so that provision of additional waste management capacity ensures any cumulative impacts of expanded facilities are acceptable and that additional capacity moves waste more rapidly up the waste hierarchy.

6.0.8 Policy CSW 7 supporting text was modified so that non-hazardous waste continues to be managed to achieve net self-sufficiency while providing for a reducing quantity of London's waste, and that any management capacity granted planning

permission moves waste up the waste hierarchy, amongst other matters.

6.0.9 Policy CSW 8 had the policy wording modified to remove the quantity of waste to be addressed via Other Recovery while retaining the need to ensure that any proposals qualify as recovery as defined by the revised Waste Framework Directive. The supporting text was modified to state that proposals for additional Other Recovery capacity harness the maximum practicable quantity of energy produced, and put it to use. Also meeting any emerging capacity identified in subsequent AMRs.

6.0.10 Policy CSW 12 the supporting text was modified to clarify how any possible shortfall in management capacity for APC residues and asbestos may be met through existing policy.

6.0.11 Policy CSW 14 the supporting text and policy had the need to identify a specific site in the text removed.

6.0.12 The need to maintain net self-sufficiency in waste management (plus a reducing amount of London's wastes) is part of the adopted Plan's overarching waste strategy. Import and export data (Table 16) demonstrates that in 2019/20 the balance is below the 10% of the indicator's trigger. Moreover, the data for LACW shows that none of the recycling/composting and landfill diversion indicator trigger points are reached in 2019/20.

6.0.13 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, this will be more fully addressed in the forthcoming forma Full Review of the KMWLP. The ambiguity in the safeguarding policy wording relating to when development proposals on land allocated for non-mineral and non-waste development in adopted local plans can be considered as exempt from the presumption to safeguard was addressed by the modification of these policies when the Early Partial Review of the KMWLP was adopted in 2020.

6.0.14 The available monitoring data indicates that most other policies of the Plan regarding minerals supply, waste management capacity requirements, waste and minerals safeguarding and development management that relate to the protection of the environment and communities are considered generally effective, though a degree of modification to increase their relevance with carbon neutrality and circular economy national policy should be done. The whole Plan was subjected to a formal review in 2021, as required by the relevant planning regulations. The Regulation 18 consultation of a modified KMWLP is anticipated late 2021 into early 2020.

7. Duty to Co-operate Activity

7.0.1 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

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

prepared and implemented.

7.0.2 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).

7.0.3 In 2019 and 2020 the County Council continued its co-operation duties with neighbouring minerals and waste planning authorities and the recognised technical advisory bodies. These included the South East Waste Planning Advisory Group (SEWPAG), the South East England Aggregates Working Party (SEEAWP) and the Planning Officer's Society Mineral and waste Planning Group (POS).

7.0.4 The SEWPAG meetings (held remotely) discussed waste planning issues such as the technical advisory group's responses to such governmental consultations as:

- Planning White Paper
- Revised National Policy Statement on Energy

7.0.5 Also, such meetings also facilitated the sharing of waste specific technical knowledge and experience from plan preparation on evidence gathering and interpretations. Ongoing work includes an assessment of the area's hazardous waste arisings and capacities, also Kent is a co-signatory to the SEWPAG Inert Waste Joint Position Statement, Statement of Common Ground between Waste Planning Authority members of the South East Waste Planning Advisory Group Concerning Strategic Policies for Waste Management and waste assessment methodologies.

7.0.6 POS meetings continued the practice of the County Council being an active participant in the Society's Mineral and Waste Planning Policy Group. Membership of the Group is made up of mineral and waste planning authorities from across the Country and is well represented by those authorities in the South East. This Group provides a forum where mineral and waste planning policy matters and considerations relevant to the Plan preparation and review. The meetings enable an exchange of experience and knowledge over issues relevant to a wider appreciation of cross boundary matters and collaborative solutions can be developed.

7.0.7 SEEAWP meetings in 2019 and 2020 mainly discussed the BGS national aggregates survey requirements, that were facilitated by the participatory south east mineral planning authorities. This led to a delay in having landwon aggregate sales data being available for discussion over the year for LAA monitoring reports. The result being the LAA2020 for Kent included a 'dashboard' only with the landwon aggregate sales being extrapolated from 2018 sales. The working party also considered various Statements of Common Ground (SoCG) between the working party and various mineral planning authorities that are members of the working party, though not any that directly included the County Council. The Soft Sand Statement of Common Ground specifically included Kent,

given the extensive occurrence of the Folkestone Formation as the base of the North Downs in Kent.

7.0.8 The County Council has also engaged with Essex and Surrey County Council's and Medway Council on the production of SoCG in relation to strategic cross border issues relating to both waste and mineral supply. These are ongoing. Moreover, the County Council continues to engage with the borough and district councils and the Ebbsfleet Development Corporation in Kent regarding mineral and waste safeguarding matters in both planning applications and in the formulation of local plan policy. Giving input into these processes by explaining how the safeguarding matters should be considered in the determination of applications and the identification and assessment of sustainable non-mineral or waste development allocations. To clarify this process, and how the Early Partial Review safeguarding exemption policies (DM 7 and DM 8) should be interpreted the County Council reviewed the Supplementary Planning Document (SPD) on Safeguarding in 2020. This included consultation and engagement with the borough and district councils and the Ebbsfleet Development Corporation in Kent. The SPD was formally adopted in March 2021[20].

8. Conclusion and Next Steps

8.1 Mineral Indicator Monitoring

8.1.1 The **total aggregate** mineral sales in Kent during 2020 from all sources amounted to some 5.32mt. This was a significant increase on the previous year (2019) that showed a marked contraction to 3.61mt compared to 2018 at 5.83mt. The reason for this may have been related to market uncertainty due to the impending exit from the European Union. Continued monitoring will demonstrate what sectors are declining and which are increasing to maintain the overall supply.

8.1.2 The shift away from landwon supply to imports, with particular reference to the **sharp sands and gravels**, has altered in as much as in 2019 and 2020 landwon **crushed rock** significantly increased, while imported hard **crushed rock** fell and then rebounded over this period. The **sharp sands and gravels importation** showed an even greater contraction in 2019 and a marked recovery in 2020. Uncertainties in demand in 2019 appear to have been an 'exceptional event' and historic demand levels quickly reestablished itself. However, this illustrates the necessity for the safeguarding of wharf capacity. This will be 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.

8.1.3 The situation with regard to **soft sand** supply remains less attenuated. The permitted landbank is now at 21+ years (based on a 10-year sales average drawdown figure, that has reduced since 2019 from 0.542mtpa to 0.441mtpa), this extraction rate coupled with the increase in available reserves on re-evaluation, means permitted reserves will be sufficient to supply soft sand over most of the Plan period, but possibly not its entirety. The landwon resource will remain the predominant supply of this aggregate mineral type over the plan period.

[20] See link: https://www.kent.gov.uk/__data/assets/pdf_file/0011/120530/supplementary-planning-document.pdf

Substitution with marine **soft sand** 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. Limited marine won supply does occur in other parts of the South East. The Mineral Sites Plan allocation of 3.2mt at Chapel Farm, Lenham in the now adopted and would address any **soft sand** shortfall that may occur towards the end of the Plan period, if needed. Indications are that Kent will have a surplus above need in the county for the wider sub-regional need.

8.1.4 Landwon sales of **crushed rock** that was historically assumed as 0.78mtpa, given needs of confidentiality that did not allow an actual sales figure to be reported. This has confidentiality has been waived by the operator allowing the sales and available reserves to be reported for the first time. The exact nature and quantity of the reserves (two sites Hermitage Quarry and Blaise Farm) is currently a matter of discussion with the operator. It appears that there may be a range of available reserves from 15.4mt to 18.5mt, that may be further refined in time.

8.1.5 The low range reserves, coupled with a need to plan for the 9 years of the remaining adopted Plan period and a 10-year landbank at the end of the Plan, would result in a degree of deficit. While applying the same approach to the high range reserves would result in a surplus at the end of the Plan period. The 10-year average sales based LAA Rate does average out the highs and the lows of market demand over the last decade, the very recent 'exceptional' growth in sales (2019 at almost 1.0mt and 2020 at 1.508mt) may not be representative of future sales rates. This and the extent of the remaining adopted Plan period being planned for indicates that the sources of supply are likely to secure the ability of Kent to maintain a 10-year landbank of crushed rock over the life of the Kent MWLP 2013-30. Therefore, 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 Landwon Minerals in Kent at this time. Further monitoring via the LAA process will indicate if this position is likely, or has, materially changed indicating if further allocation of resources is justified prior to 2030.

8.1.6 **Secondary and recycled aggregate** sales fell in 2019 to 0.42mt compared to that recorded in 2018 (0.76mt) though recovered in 2020 (0.91mt). The 10-year sales average has reduced from 0.816mt to 0.688mt and the more recent 3-year sales average fell from 0.90mt to 0.690mt. However, the role of **secondary and recycled aggregates** has a probable long-term trend around the 0.70-0.80mtpa level and may play an increasing role in overall supply terms into the future, given the 4.0mtpa available permitted capacity. Further monitoring will demonstrate whether the circa 1.0mtpa (in 2016, 2017and 2020) level of production represents the 'normal' level of sales and retraction in 2019 was an exceptional event. 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.

8.1.7 There are four permitted **clay** and **brickearth** sites with remaining reserves in Kent. These sites have a combined landbank of 25-30 years, given a re-estimation of the expected yearly drawdown sales rate. Therefore, is the formal review of the

KMWLP 2013-30 in 2021-22 that will consider this matter further to inform the review of any required changes to the adopted Policy CSM 2 regarding **brickearth** and brick/tile **clay** requirements. Current indications are that this will not be necessary.

8.1.8 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.

8.1.9 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).

8.1.10 Kent's **chalk** reserves for agriculture and engineering purposes are not required to meet any prescribed landbank level in the NPPF. The total reserves were estimated at over a million tonnes in 2019. More recent monitoring in 2020 has revealed this as an overestimate. In 2020 some 0.657 million tonnes constituted the permitted available reserves remaining in Kent.

8.1.11 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) it was found that by 2019 it was estimated that the permitted reserves have dropped to 1.16mt. This gave an indicative permitted landbank of 16.57 years of chalk reserves in 2019. However, though available reserves have fallen to just 0.657 million tonnes, extraction was recorded in 2020 to be a mere 6,324 tonnes, giving a 100-year landbank. These estimated and actual recorded data conclusions demonstrate that the sector is highly variable in its response to market needs. Also, past participation in AMR survey data requests have been incomplete. 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. However, it is not clear that this is a reliable conclusion at this time. Further monitoring will demonstrate what is occurring in terms of this mineral's market and if further provision is necessary before the end of the adopted Plan period.

8.2 Waste Indicator Monitoring

8.2.1 Arisings of **LACW** in 2019/20 fell by 3.6% to just under 695,000 tonnes. This is consistent with 2017/18 which showed a negative rate of growth of minus 3.15% but was contrary to a marginal increase seen in 2018/19. 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 was forecast that arisings will grow at a rate of 0.2% per annum to stand at around 740,000 tonnes

in 2030/31 in the most recent WNA (waste needs assessments). The fall of 3.6% in 2019/20 and 3.15% in 2017/18 might suggest the rate of growth applied ought to be less than that indicated. However, it should be noted that the varying distribution of arisings across the county brings increased pressure on existing infrastructure in particular parts, and it is these which the WDA is seeking to address.

8.2.2 The **LACW** management profile data for 2019/20 shows that the waste recycling targets included in the Early Partial Review for the first milestone year of 2020/21 were not quite met, having been met in the previous year. However, the landfilling target of no more than 2% in 2020/21 continued to be surpassed with landfill being the management option for only 1.45% of the **LACW.** The remainder managed through incineration with EfW being 50% was slightly higher than predicted.

8.2.3 Some 6.8 million tonnes of waste were reported as being managed at Kent waste management facilities in 2019. This compares with around 1.65 million tonnes of Kent waste 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 under 800,000 tonnes came from London, of which 45,500 tonnes went to EfW, and around 4,500 tonnes to non-inert landfill[21] and 204,000 tonnes to inert landfill/permanent deposit to land.

8.2.4 Over the monitoring period there were 3 planning applications that increased the overall available capacity to manage waste by a total of 37,800 tpa contributing towards the continued shift towards a more sustainable waste management profile.

9. Plan Review Monitoring

9.0.1 The KMWLP 2013-30 was adopted in 2016 after an Independent Examination in public, that included modification of policies and supporting text. In 2020 the Plan was changed as a result of an Early Partial Review. This did not include the Plan's Spatial Vision or Strategic Objectives for sustainable minerals and waste development in Kent until 2030.

9.0.2 The National Planning Policy Framework (2021) (NPPF) and subordinate legislation require that all Local Plans should be reviewed to assess whether they require to be updated to robustly reflect the monitoring of the Plan's effectiveness and legal compliance with national planning and relevant environmental legislation. This then initiated a full review of the KMWLP 2013-30 in 2020-21. The review considered whether the Vision, Strategic Objectives, Policies and their supporting text, of the Plan are still consistent with national planning and wider environmental policy, whether the policies have been effective in achieving the intended outcomes relating to the use of land for minerals and waste development in Kent. National Planning Practice Guidance (PPG) states that:

"The review process is a method to ensure that a plan and the policies within remains effective".

[21] It should be noted that the non hazardous waste capacity assessment underpinning the Early Partial Review of the KMWLP projected c55,000 tpa of residual non hazardous waste from London which is close to the c50,000 tonnes reported for 2019.

9.0.3 The PPG also sets out what authorities should consider when determining whether a Plan or policies should be updated. Information relevant to the KMWLP 2013-30 Review included:

- Conformity with national planning policy;
- changes to local circumstances;
- success of policies against indicators in the Kent Minerals and Waste Local Plan;
- significant economic changes that may impact on viability; and,
- whether any new social, environmental or economic priorities may have arisen.

9.0.4 To inform the process, a review of national policy changes was undertaken. This revealed that, amongst other things, there have been changes to the National Planning Policy Framework (NPPF 2021) which require updates to policies in the Kent Minerals and Waste Local Plan 2013-30 to ensure they remain consistent with national planning policy.

9.0.5 Locally, since adoption of the Plan, the County Council has adopted the Kent and Medway Energy and Low Emissions Strategy that provides local impetus for achieving net zero carbon emissions by 2050. Monitoring of the way in which planning applications have been determined has also been undertaken to assist the review of the policies. Other observations regarding the wording of the policies and supporting text have been made and some of these indicate that policies, and supporting text, should be updated to ensure the ongoing effectiveness of the Kent Minerals and Waste Local Plan 2013-30 over the remaining plan period. The review of the Local Plan's Vision and Strategic Objectives found that while much of the text is still relevant certain elements required updating to reflect recent Government policy and legislation concerning climate change, circular economy[22] and biodiversity.

9.0.6 A system of Red/Amber/Green (RAG) scoring was applied to the review of policies which helped identify and summarise whether a policy (and/or the supporting text) required updating. Red indicated the presence of an issue likely to mean that the policy should be updated. Amber indicated that the presence of an issue which, while an update would be useful, does not jeopardise the effective implementation of the KMWLP. This may include where an update to the supporting text, rather than a policy, is needed. Green indicated that no issues were identified and so change to effect an update were not required. A 'Neutral' score was applied where applications have not come forward requiring the use of a particular policy and so its effectiveness has not been tested. A summary of the outcome of the review is provided in Table 17 overleaf.

[22] A circular economy is an alternative to a traditional linear economy (make, use, dispose) in which resources are kept in use for as long as possible, extracting the maximum value from them whilst in use, then recover and regenerate products at the end of each service life

Table 17: Summary of the Kent Minerals and Waste Local Plan 2013-30 5 Year Review

Policy Number & Title	Monitoring	National & Local Policy	Other Observations	Update Required
Policy CSM 1: Sustainable development	Green	Red	Green	Yes
Policy CSM 2: Supply of Land-won Minerals in Kent	Green	Green	Red	Yes
Policy CSM 3: Strategic Site for Minerals	Green	Green	None	No
Policy CSM 4: Non-identified Land-won Mineral Sites	Green	Green	None	No
Policy CSM 5: Land-won Mineral Safeguarding	Green	Green	None	No
Policy CSM 6: Safeguarded Wharves and Rail Depots	Green	Green	Green	No
Policy CSM 7: Safeguarded Other Mineral Plant Infrastructure	Green	Green	None	No
Policy CSM 8: Secondary and Recycled Aggregates	Green	Green	Red	Yes
Policy CSM 9: Building Stone in Kent	Neutral	Red	Red	Yes
Policy CSM 10: Oil, Gas and Unconventional Hydrocarbons	Neutral	Amber	None	Yes
Policy CSM 11: Prospecting for Carboniferous Limestone	Neutral	Amber	None	Yes
Policy CSM 12: Sustainable Transport of Minerals	Neutral	Red	Red	Yes
Policy CSW 1: Sustainable Development	N/A	Red	Red	Yes
Policy CSW 2: Waste Hierarchy and Policy	Green	Red	Red	Yes
Policy CSW 3: Waste Reduction	Red	Red	Amber	Yes
Policy CSW 4: Strategy for Waste Management Capacity	Red	Amber	Amber	Yes

Policy CSW 5: Strategic Site forWaste	Green	Green	Green	No
Policy CSW 6: Location of BuiltWaste Management Facilities	N/A	Red	None	Yes
Policy CSW 7: Waste Management for Non-hazardous Waste	Green	Red	Red	Yes
Policy CSW 8: Recovery Facilitiesfor Non-Hazardous Waste	Green	Red	Red	Yes
Policy CSW 9: Non inert WasteLandfill in Kent	Neutral	Red	Red	Yes
Policy CSW 10: Development atClosed Landfill Sites	Neutral	Green	Red	Yes
Policy CSW 11: PermanentDeposit of Inert Waste	Green	Red	Red	Yes
Policy CSW 12: Identifying Sitesfor Hazardous Waste	Green	Red	Amber	Yes
Policy CSW 13: Remediation ofBrownfield Land	Neutral	Green	Green	No
Policy CSW 14: Disposal ofDredgings	Neutral	Green	Green	No
Policy CSW 15: Wastewater Development	Green	Green	Red	Yes
Policy CSW 16: Safeguarding ofExisting Waste Management Facilities	N/A	Green	Red	Yes
Policy CSW 17: Nuclear Waste Treatment and StorageDungeness	Neutral	Red	None	Yes
Policy CSW 18: Non-nuclear Radioactive Low-Level Waste (LLW) Management Facilities	Neutral	Red	None	Yes
Policy DM 1: Sustainable Design	Green	Red	Amber	Yes
Policy DM 2: Environmental and Landscape Sites of	Green	Red	Amber	Yes

InternationalNational and Local Importance				
Policy DM 3: Ecological ImpactAssessment	Green	Red	Amber	Yes
Policy DM 4: Green Belt	Green	Green	None	No
Policy DM 5: Heritage Assets	Green	Amber	Red	Yes
Policy DM 6: Historic EnvironmentAssessment	Green	Amber	Green	Yes
Policy DM 7: Safeguarding MineralResources	Green	Green	Green	No
Policy DM 8: Safeguarding Minerals Management, transportation Production & WasteManagement Facilities	Green	Green	Green	No
Policy DM 9: Prior Extraction ofMinerals in Advance of Surface Development	Neutral	Green	Red	Yes
Policy DM 10: Water Environment	Green	Green	Red	Yes
Policy DM 11: Health and Amenity	Green	Red	Red	Yes
Policy DM 12: Cumulative Impact	Green	Amber	None	Yes
Policy DM 13: Transportation ofMinerals and Waste	Green	Red	None	Yes
Policy DM 14: Public Rights ofWay	Green	Green	Green	No
Policy DM 15: Safeguarding of Transportation Infrastructure	Green	Green	None	No
Policy DM 16: InformationRequired in Support of an Application	Green	Amber	Red	Yes
Policy DM 17: Planning Obligations	Green	Red	Red	Yes
Policy DM 18: Land Stability	Green	Green	Red	Yes
Policy DM 19: Restoration,Aftercare and After-use	Green	Red	Red	Yes

Policy DM 20: Ancillary Development	Green	Green	Red	Yes
Policy DM 21: Incidental MineralExtraction	Green	Green	None	No
Policy DM 22: Enforcement	Green	Green	Red	Yes

9.0.7 Following this RAG process certain policy changes were recommended to the 3 November 2021 Environment and Transport Cabinet Committee of the County Council. These were approved to enable a Regulation 18 Public Consultation exercise to proceed. Table 18 below and overleaf summarises these policy changes.

Table 18: Summarised Review Policy Changes resulting from the Formal Full Review of the KMWLP 2013-30

Strategic Mineral Policies

Policy	Recommendation
Policy CSM 1: Sustainable development	Policy and supporting text require updating to ensure consistency with national policy and to ensure that the wording of the policy is effective. Reference to 'associated Planning Practice Guidance' should be deleted.
Policy CSM 2: Supply of Land-won Minerals in Kent	Specific reference to the 'Mineral Sites Plan' should be deleted in the sub-title and the first sentence of the policy prior to the criteria that will be used to screen sites for suitability for identification as future allocations. *N.B. Factual Updates will also be made to reflect most recent monitoring*
Policy CSM 8: Secondary and Recycled Aggregates	Policy remains effective, though modification is required to remove reference to sites being identified in a Mineral Sites Plan and a change to the minimum capacity of such facilities to be maintained over the remainder of the plan period.
Policy CSM 9: Building Stone in Kent	The policy is no longer consistent with national policy and needs to be updated due to a change in the NPPF involving deletion of the term 'small scale'. The policy should also be updated to reflect the fact that stone is extracted in Kent to main historic buildings beyond the County.
Policy CSM 10: Oil, Gas and Unconventional Hydrocarbons	Policy remains effective and is currently consistent with national policy. The supporting text should be updated to reflect the changes to the national planning policy on unconventional hydrocarbons.
Policy CSM 11: Prospecting for Carboniferous Limestone	Policy remains effective and consistent with national policy, though supporting text requires additional text to reflect the Environmental Impact Assessment process.

Policy CSM 12: Sustainable Transport of Minerals	Policy and supporting text require updating to ensure consistency with national policy and to ensure that the wording of the policy is effective.
Strategic Waste Policies	
Policy	**Recommendation**
Policy CSW 1: Sustainable Development	Policy and supporting text require updating to ensure consistency with national policy and to ensure that the wording in the policy is effective. Reference to 'associated Planning Practice Guidance' should be deleted.
Policy CSW 2: WasteHierarchy and Policy	An update to the policy is recommended to avoid confusion when assessing whether waste management proposals aresustainable and consistent with the waste hierarchy.
Policy CSW 3: WasteReduction	Updates to the policy and supporting text are necessary to ensure development comes forward in a way which is consistentwith circular economy principles. The supporting text should be updated to confirm how developers may be required to make financial contributions for the provision of capacity required to manage the additionalhousehold waste arising.
Policy CSW 4: Strategyfor Waste ManagementCapacity	Updates to the supporting text which set out issues concerning the management of waste in Kent are recommended to cover theneed for the development of additional LACW transfer capacity. An amendment to the target for non-inert Construction, Demolition and Excavation waste such that it is expressed as %of the non-inert fraction only.
Policy CSW 6: Locationof Built Waste Management Facilities	Updates to the policy are required to ensure consistency with other policies in the KMWLP and with national policy. Updates are recommended to ensure the Plan is effective with regard tohow the location of facilities takes account of the water environment and flood risk.
Policy CSW 7: WasteManagement for Non-hazardous Waste	Policy CSW7 should be updated to avoid duplication with policies CSW2 and CSW8. Other updates to Policy CSW7 are considered necessary to ensure it is effective.
Policy CSW 8: RecoveryFacilities for Non- Hazardous Waste	Policy CSW8 and supporting text should be updated to strengthen the need for energy recovery facilities to utilise heat and to ensure Carbon Capture Utilisation and Storage is includedin proposals. The supporting text should be updated to include a cross reference to CSW2, and the Policy title should be amended toensure consistent use of the term 'recovery'. The monitoring framework for Policy CSW8 includes a duplicate indicator and trigger and so updates are needed to address this matter.

Policy CSW 9: Non inertWaste Landfill in Kent	The policy should be strengthened to ensure proposals consider how methane will be captured and utilised while a non-inert landfill site is operational. The policy should be reworded to ensure it can be implemented effectively and its meaning is clear.
Policy CSW 10: Development at Closed Landfill Sites	A minor update to the text of criterion 1 is required to ensure it isclear and effective. Updates to criteria 2 and 3 are needed to avoid duplication and ensure the most effective use of methanegas is promoted.
Policy CSW 11: Permanent Deposit ofInert Waste	Changes to the supporting text and policy are needed to ensure that the policy provides more flexibility for deposit to land optionsfor inert waste, and to ensure disposal of inert waste by landfill isnot promoted. Some changes to the monitoring framework are needed to ensure that the implementation of this policy can be effectively monitored.
Policy CSW 12: Identifying Sites forHazardous Waste	It is considered that the assessment of proposals for the management of hazardous waste on the basis of achieving net self-sufficiency is not consistent with national policy and could lead to confused decisions on the acceptability of such proposals. In addition, the policy ought to allow consideration of provision of replacement hazardous waste landfill capacity. Inlight of these matters the policy should be updated.
Policy CSW 14: Disposalof Dredgings	Changes to supporting text to clarify how proposals would be considered.
Policy CSW 15: Wastewater Development	Policy CSW 15 requires updating to recognise that the general locational criteria for waste management facilities including in Policy CSW6 does not cover the specific locational requirementsof wastewater treatment facilities. The supporting text could also be updated to reflect Ofwat's current position on the sustainable management of sludge. Updating needed to ensure use of biogas as a fuel
Policy CSW 16: Safeguarding of ExistingWaste Management Facilities	The text of Policy CSW16 should be updated to remove the reference to the Waste Sites Plan and to expand the scope of safeguarded sites.
Policy CSW 17: NuclearWaste Treatment and Storage Dungeness	Updates are recommended to address the issue that Policy CSW17 is not, as currently worded, sufficiently flexible in overallradioactive waste management terms, as it does not allow for LLW derived from the Dungeness Nuclear Estate to be flexibly managed, in that it precludes disposal of this material within thenuclear facility site area.
Policy CSW 18: Non-nuclear Radioactive Low-Level Waste (LLW) Management	Updates are recommended to address the issue that Policy CSW18 is not, as currently worded, sufficiently flexible in overallwaste management terms, as it does not allow for LLW derived from locations other than Kent to be managed in Kent. This is inconsistent

Facilities	with national policy.
Development Management Policies	
Policy	**Recommendation**
Policy DM 1: Sustainable Design	Policy DM1 should be updated to reflect more stringent targets and policy relating to mitigation of and adaptation to climate change.
Policy DM 2: Environmental and Landscape Sites of International National and Local Importance	Policy DM2 should be updated to reflect changes to the NPPF which expect geodiversity to be enhanced as well as protected as well as changes concerning protection of AONB. The supporting text of Policy DM2 should be updated to refer to the County Council environment documents; Kent Environment Strategy 2016 and Kent State of the Environment Report 2015. Depending on when the Environment Bill receives Royal Assent the supporting text should be updated to reflect the requirements concerning biodiversity net gain. Depending on the timing and content of the Third Revision to the Kent Downs AONB Management Plan which replaces the current Management Plan, Policy DM2 and/or the supporting text, should be updated to ensure it is consistent with those changes.
Policy DM 3: Ecological Impact Assessment	Depending on when the Environment Bill receives Royal Assent, the policy wording and supporting text should be updated to reflect requirements concerning biodiversity net gain. Criterion 5 in particular may need to be strengthened to reflect the net-gain objective rather than making a 'positive contribution to the protection, enhancement, creation and management of biodiversity'. The policy and supporting text should be updated to reflect changes to the NPPF which refers to 'European Sites' as 'habitats sites', including the addition of a definition. Updates are also needed to reflect changes to the Conservation of Habitat and Species Regulations, specifically the language of 'European Sites' following the exit from the EU.
Policy DM 5: Heritage Assets	The supporting text should be updated to include reference to the Historic England (2015) Historic Environment Good Practice Advicein Planning Notes. The final sentence of Policy DM5 should be updated to add 'unacceptable adverse' before 'impact' to be consistent with theNPPF.
Policy DM 6: Historic Environment	The supporting text should be updated to include reference to the Historic England (2015) Historic Environment Good Practice Advicein Planning Notes.

Assessment	
Policy DM 9: Prior Extraction of Mineralsin Advance of Surface Development	Policy DM9 is consistent with national policy however the wording of criterion 1 is unclear and does not adequately express the intention of the policy, in light of this it is proposed that it be updated to ensure its effectiveness.
Policy DM10: Water Environment	The policy should be updated to accord with the NPPF on water resources and the need to include sustainable urban drainage in development proposals. Following consultation with the Environment Agency, updates are also recommended to strengthenthe requirement for risk assessments to consider impacts to groundwater from minerals and waste development.
Policy DM 11: Health and Amenity	Policy requires review with regard to referencing blasting, and possible strengthening of wording regarding health impacts through vehicle emissions to increase its effectiveness. The final sentence of the policy requires clarification.
Policy DM 12: Cumulative Impact	Supporting text to the policy should be updated to ensure that the policy is effective given the changes to air quality legislation since the Plan's adoption in 2016.
Policy DM 13: Transportation of Minerals and Waste	The policy and supporting text should be updated to ensure effectiveness and consistency with national policy, with regards to the connection between vehicle movements and climate changeand sustainable transport initiatives in the NPPF such as the provision of charging points for electric vehicles.
Policy DM 16: Information Requiredin Support of an Application	Policy should be removed as it is not justified. The text should be retained elsewhere in the Plan as information but updated to reflect the Habitat Regulations.
Policy DM 17: Planning Obligations	The policy not justified and so should be removed from the Plan, however the text provides useful information and should be retained elsewhere in the Plan.
Policy DM 18: Land Stability	The second sentence of Policy DM18 should be expanded upon to provide additional precision as well as more information in the supporting text as to why land stability might be an issue for waste and minerals development. Alternatively, the second sentence of the Policy could be deleted, and more information added into the supporting text to explain why land stability might be an issue for waste and minerals development e.g. quarries and landfill.
Policy DM 19: Restoration, Aftercare and After-use	Policy DM 19 requires rewording to make the text more precise and informative including the possible need to secure financialinstruments to secure restoration.
Policy DM 20: Ancillary Development	Policy DM20 is not consistent with national policy as it does not have regard to potential impacts on communities that may occur as a result of ancillary development. Policy DM20 should be updated to reference impacts on communities.

Policy DM 22: Enforcement	Policy is not considered fully effective and in any event should be deleted as it provides supporting information rather than land use planning policy. The text could be retained elsewhere in the Plan for information purposes.

9.0.8 The Regulation 18 public consultation on the above changes is anticipated to take place late 2021 into 2022.

9.1 Kent Minerals Sites Plan

9.1.1 Work on the Mineral Sites Plan was successfully progressed in 2019 following the Examination in Public and receipt of the Inspectors in April 2019. Following the consultation on the recommended Main Modifications in late 2019 into early 2020, where no substantive new issues were raised, the County Council formally adopted the Plan in September 2020. This confirmed the allocation of one soft sand site (Chapel Farm, Lenham) and two sharp sand and gravel sites (Moat Farm and Stonecastle Farm in the Tonbridge area).

9.2 Supplementary Planning Document Safeguarding

9.2.1 In addition to the adoption of the Mineral Sites Plan and partially reviewing the Kent Minerals and Waste Local Plan 2013-30 the County Council also revised (the document was adopted in March 2021) the safeguarding Supplementary Planning Document. This was done to fully explain how the reviewed policies (DM 7: Safeguarding Mineral Resources and DM 8: Safeguarding Minerals Management, Transportation, Production & Waste Management Facilities) should be interpreted. Including further elaboration on how the process should be applied at the planning application stage and when land for allocation in a borough or district local plan should be assessed when there are minerals and/or waste management safeguarding issues regarding that land. The process of both minerals assessment and infrastructure assessment should be that of applying objective data to the relevant exemption criteria of the safeguarding policies, as discussed in the document. A number of assessments of both types have been submitted to support planning applications and local plan allocations. A representative sample of this assessments can be found at the following link https://www.kent.gov.uk/about-the-council/strategies-and-policies/environment-waste-and-planning-policies/planning-policies/minerals-and-waste-planning-policy#tab-2 .

9.3 Statement of Community Involvement

9.3.1 As the county planning authority for Kent, the County Council, in addition to being required to prepare planning policy and determine planning applications concerning waste management and minerals supply in the County, it is also required to determine planning applications relating to its own development.

9.3.2 National planning policy and legislation recognises the importance of engaging with local communities to shape the places where they want to live, work and play and under the Planning and Compulsory Purchase Act 2004 the Council is required to produce a Statement of Community Involvement (SCI) which sets out how it will involve communities in its planning activities. The Council is expected to

tailor its SCI to the specific needs and characteristics of the county and allow the involvement of all interested parties.

9.3.3 The Council adopted its first SCI in 2006 and, following changes to the planning process, two separate Addendum documents were published in April 2013 and January 2014. The Town and Country Planning (Local Planning) Regulations were amended to require that the SCI is reviewed at least every five years and as a result the SCI was again reviewed, and text of a revised document was adopted in 2020.

9.3.4 The revised SCI sets out principles and approaches for involving the community (including local people – those who live in, work in or visit Kent, for borough, district, parish and town councils and for other organisations which represent key community interests) in:

- The plan making process such as Development Plan Documents (local plans), Supplementary Planning Documents and Neighbourhood Plans, and;
- the consideration of planning applications by the County Council.

9.3.5 The key changes over the 2014 SCI are as follows:

- Changes to the way information is presented in the document through the inclusion of tables describing the different consultation methods the council will employ in different circumstances;
- an explanation of how the Council will support District and Borough Councils in the preparation of Neighbourhood Plans in their areas (inclusion of such information in SCIs is now a statutory requirement[23]);
- increased emphasis on consultation by digital means;
- changes to neighbour notification as part of the determination of planning applications; and,
- changes to minimum consultation periods to streamline plan-making.

[23] Section 18 of the Planning and Compulsory Purchase Act 2004 as amended by Section 6 of the Neighbourhood Planning Act 2017

Appendix 1: Permitted Quarries in Kent 2020

Site	Operator	*Sand &Gravel*	*Soft Sand*	Hard Rock	Status
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[24]
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	-	-	Active[25]
Aylesford Quarry, Aylesford	Aylesford Heritage Ltd	-	Yes	-	Active [26]
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*[27]
Charing Quarry, Charring	*Brett Aggregates Ltd*	-	*Yes*	-	*Inactive*
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[28]	Tarmac Ltd	-	Yes	-	Active

[24] Extraction has moved into East Sussex, the processing of material and some reserves are within Kent in 2020
[25] 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, site is active as of 2020
[26] No off-site sales in 2018 of soft sand though actively extracting a sand and gravel-based material (Hoggin) for construction fill purposes
[27] Inactive in 2018, early 2019 became active
[28] The site also produces sharp sand and gravel, though predominantly soft sands from the Folkestone Formation

Appendix 2: Safeguarded Wharves and Rail Transportation Depots 2020

Site Name	Current Operator	Site Code in KMWLP 2013-30	Activity
Allington Rail Depot	Hanson UK	A	Inactive in 2020 for aggregate importation
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 for aggregate imports, PFA importation now occurring
Ridham Dock	Brett Aggregates (UK) Ltd & Tarmac	E	Active
Johnsons Wharf	Tarmac Ltd	F	Active
Robin's Wharf, Northfleet	Aggregate Industries (UK) &	G	Active

	Brett Aggregates (UK) Ltd		
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[29]	Brett Aggregates (UK) Ltd	M	Inactive-considered decommissioned ahead of Dover Western Docks re-development scheme
Wharf 42, Northfleet (including Northfleet Cement Works)	Lafarge UK	N	No active for aggregate importation in 2020
Sheerness	Aggregate Industries	O	Inactive for marine aggregate importation currently
Northfleet Wharf	Cemex UK	P	Active

[29] 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

Old Sun Wharf	Fleetmix Ltd	Q	Inactive for marine aggregate importation currently

Appendix 3: List of Mineral sites that are included in Landbank Calculations

The table below sets out the permitted land-won mineral working sites in Kent included in landbank calculations that inform the policy modifications of the Kent Minerals and Waste Local Plan following its full formal revision in 2021. Sites that have been inactive for more than 10 years are not included in the landbank calculations, though those that have been active during this period and are now being restored have been included; sites that were inactive in 2021 are shown in *italics.*

Sites	Predominant Aggregate Type	Operator Details
1. Aggregate Minerals		
Hard Rock Hythe Formation (Ragstone)		
Hermitage Quarry, Maidstone	Crushed Rock	Gallagher Aggregates Ltd, Gallagher Group
Blaise Farm, West Malling	Crushed Rock	Gallagher Aggregates Ltd, Gallagher Group
River Terrace Alluvial and Sub-Alluvial Sand and Gravel		
Stonecastle Farm, Whetsted	*Sand and Gravel ('Sandstone' or 'Siltstone' sand and gravel)*	*LaFarge Tarmac Ltd*
East Peckham Quarry, East Peckham	*Sand and Gravel ('Sandstone' or 'Siltstone' sand and gravel)*	*J.Clubb Ltd*
Faversham Quarries, Faversham	*Sharp sand and gravel*	*Brett Aggregates Ltd*
Conningbrook Quarry, Ashford	Sharp sand and gravel	Brett Aggregates Ltd
Highstead Quarry, Chislet	*Sharp sand and gravel*	*Brett Aggregates Ltd*
Darenth & Joyce Green Quarry, (Darenth Court) Dartford	Sharp (flint) sand and gravel	*J.Clubb Ltd*
Joyce Green Quarry, Dartford	Sharp (flint) sand and gravel	Ingerbourne Valley Ltd
Storm Beach Sand and Gravel		

Lydd Quarry (Scotney Court Farm), Lydd	Sharp (flint) sand and gravel	Brett Aggregates Ltd
Denge Quarry, Lydd	Sharp (flint) sand and gravel	Cemex UK
Allens Bank, Lydd	*Sharp (flint) sand and gravel*	*Brett Aggregates Ltd*
Folkstone Formation Soft Sand		
Aylesford Quarry, Aylesford	*Building Sand*	*Aylesford Heritage Ltd*
Borough Green Sandpit, Wrotham	Building Sand	Borough Green Sandpits Ltd
Charing Quarry-Burleigh Farm Extension, Charing	Building Sand	Brett Aggregates Ltd
Lenham Quarry, Lenham	Building Sand	Brett Aggregates Ltd
Ightham Sand Pit, Sevenoaks	*Building Sand*	*H&H (UK) Ltd*
Wrotham Quarry (Addington Sand Pit), Wrotham	Building Sand	Fern Aggregates, Ferns Group UK
Greatness Quarry, Sevenoaks	Building Sand	Tarmac Ltd
1. Industrial Minerals		
Silica (Industrial) Sand		
Nepicar Sand Pit, Wrotham	Silica Sand	J. Clubb Ltd
Wrotham Quarry (Addington Sand Pit), Wrotham	Silica Sand	Fern Aggregates, Ferns Group UK
Brickearth and Brickclay		
Babylon Tileworks, Tonbridge	Clay	Mr. M Gash
Orchard Farm, Sittingbourne	Brickearth	Wienerberger UK Ltd
Paradise Farm, Sittingbourne	Brickearth	Wienerberger UK Ltd
Clay (engineering)		

Norwood Quarry, Isle of Sheppey	Clay	FCC Environmental (UK) Ltd
Chalk (cement)		
Medway Works , Holborough	*High purity chalk for cement*	*LaFarge Cement UK*
Chalk (agricultural and use in other construction and industrial applications)		
Darenth road Quarry, Dartford	*chalk*	*J. Clubb Ltd*
Pinden Quarry, Dartford	chalk	Pinden Ltd
Beacon Hill Quarry, Ashford	chalk	JKS Group Ltd
Crundale Quarry, Ashford	chalk	Mr. C Peach
Hegdale Quarry, Ashford	chalk	R H Ovenden Ltd
Rowling Quarry, Dover	chalk	R H Ovenden Ltd