Medway Local Plan 2041
Regulation 18

# Minerals and Waste Topic Paper

July 2024

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This Topic Paper contains background information on mineral supply and waste management to support the Regulation 18 Draft Medway Local Plan (2024). The Topic Paper includes justification for the approach and policies relating to mineral supply and waste management, which is in addition to that included as supporting text in the Plan.

In addition to the Topic Paper, an updated standalone assessment of the waste management capacity needed to meet requirements over the Plan period (Waste Needs Assessment) has been completed. Furthermore, the supply and demand for aggregates is monitored on an annual basis in the Medway Local Aggregates Assessment (LAA). The latest LAA is based on survey data from 2022.

On minerals the Plan sets out policies addressing:

- Safeguarding of mineral resources
- Safeguarding of mineral supply infrastructure
- Supply of recycled and secondary aggregates
- Extraction of land-won minerals

On waste the Plan includes policies concerning the following:

- Waste prevention
- Safeguarding of existing waste management facilities
- Provision of new waste management capacity
- Location of new waste management facilities
- Other recovery
- Non-inert landfill
- Beneficial use of inert waste by permanent deposit
- Wastewater treatment

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## Abbreviations

| | |
|---|---|
| AD | Anaerobic Digestion |
| AWP | Aggregate Working Party |
| CD | Construction and Demolition Waste |
| CDE | Construction, Demolition and Excavation Waste |
| C&I | Commercial and Industrial Waste |
| DEFRA | Department for Environment Food and Rural Affairs |
| DLUHC | Department for Levelling Up, Housing and Communities |
| DMR | Dry Mixed Recyclate |
| EA | Environment Agency |
| EfW | Energy from Waste |
| EU | European Union |
| HWRC | Household Waste Recycling Centre |
| LACW | Local Authority Collected Waste |
| LAA | Local Aggregate Assessment |
| LCA | Life Cycle Assessment |
| MCA | Mineral Consultation Area |
| MDA | Marine Dredged Aggregates |
| MSA | Mineral Safeguarding Area |
| MSW | Municipal Solid Waste |
| NPPF | National Planning Policy Framework |
| NPPW | National Planning Policy for Waste |
| RDF | Refuse Derived Fuel |
| SEEAWP | South East England Aggregate Working Party |
| WCA | Waste Collection Authority |
| WFD | Waste Framework Directive |
| WNA | Waste Needs Assessment |
| WPA | Waste Planning Authority |

# 1.0 Minerals

## 1.1 Policy Context

1.1.2 The National Planning Policy Framework (the NPPF, December 2023) contains the Government's overarching policies on minerals planning in England.

1.1.3 The NPPF identifies that it is essential that a sufficient supply of minerals is available to support the economy and states that great weight should be given to the economic benefits of mineral extraction when determining applications, whilst also making clear that minerals should be used sustainably.

1.1.4 The NPPF requires Mineral Planning Authorities (MPAs) to aim to provide for extraction of minerals of local and national importance and so far as practicable take account of the contribution that substitute, or secondary and recycled materials and minerals waste would make to supply, before considering extraction of primary materials.

1.1.5 Mineral extraction may take place over a long time period but it is ultimately temporary development and national policy requires timely, high quality restoration and aftercare.

1.1.6 Construction aggregates (sand and gravel, crushed rock, and recycled and secondary aggregates) are of particular importance as they are required in the construction of the infrastructure essential to meet society's needs e.g. roads, housing and community infrastructure such as schools and hospitals. Nationally they represent the largest tonnage of minerals used in the economy.

1.1.7 The 'Managed Aggregates Supply System' (MASS)[1] aims to ensure that the country has a steady and adequate supply of aggregates sufficient to meet its needs taking account of the fact that aggregate minerals resources and demands for them are not evenly distributed. The movement of sand and gravel between areas in England and Wales is illustrated in Figure 1.

[1] The MASS system is explained in detail in Planning Practice Guidance - see Paragraph: 060 Reference ID: 27-060-20140306

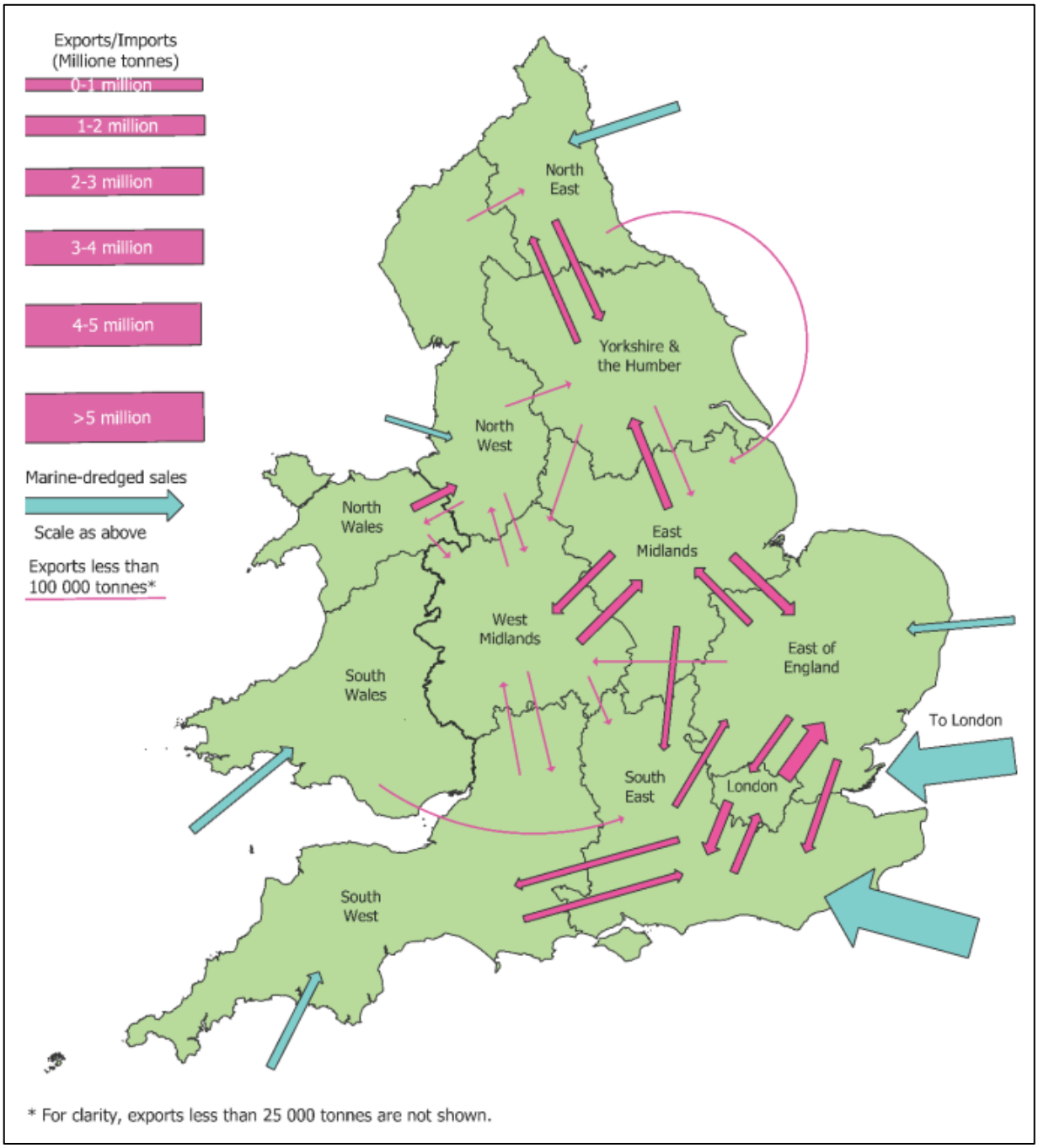



**Figure 1 Inter-regional flows of sand and gravel**
*Source: 2019 Aggregate Minerals Survey, BGS*

1.1.8 A key component of MASS is the annual preparation of Local Aggregates Assessment (LAA) produced by each MPA. LAAs should include a forecast of future demand, and consider all aggregate supply options, as well as the balance between supply and demand. This should include consideration of resources and constraints and take account of local factors such as the presence of wharves where marine won aggregate can be landed. Aggregate Working Parties provide a strategic overview and scrutiny of LAAs. Medway Council is a member of the South East England Aggregates Working Party (SEEAWP).

1.1.9 Landbanks of aggregate minerals reserves are used as the principal indicator of the security of aggregate minerals supply, and to indicate whether and when additional provision that needs to be made for additional aggregate extraction and alternative supplies in mineral plans. LAAs and Local Plans should show how a landbank of reserves equivalent to a minimum of seven years supply will be maintained or justify any deviation from this. The landbank should be calculated every year and is the sum of permitted reserves (with planning permission) divided by the 'annual rate' of future demand as calculated in the LAA (known as the 'Aggregate Provision Rate' (formerly known as the 'LAA rate').

1.1.10 The NPPF[2] requires MPAs to plan for a steady and adequate supply of aggregates by making provision in Local Plans for land-won aggregates and other critical infrastructure such as wharves, batching plant, railheads and recycled aggregate production facilities, identified in their LAAs. This should be through, in priority order, by identifying specific sites, preferred areas and/or areas of search and locational criteria.

1.1.11 The NPPF also requires MPAs to safeguard mineral resources in a manner which ensures surface development avoids the sterilisation of economic mineral resources. Minerals supply infrastructure, such as wharves and rail depots, should also be safeguarded from impacts caused by other forms of development which may replace, or encroach on, such operations.

***Local Policy***

1.1.12 Current planning policy concerning minerals development in Medway is set out in the saved policies of the following plans:

- Kent Minerals Local Plan: Brickearth (1986)
- Kent Minerals Local Plan Construction Aggregates (1993)
- Kent Minerals Local Plan Chalk and Clay (1997)
- Kent Minerals Local Plan Oil and Gas (1997)

1.1.13 It is Medway Council's intention to replace all the previously adopted minerals planning policies with policies in the Medway Local Plan. All of these plans were prepared by Kent County Council (KCC) prior to the formation of Medway Council and these plans therefore cover areas which are now within Medway.

1.1.14 The Secretary of State for the Government Office for the South East wrote separately to both KCC and Medway Council on 21 September 2007 providing a direction on the policies in the previously adopted minerals and waste plans[3][4][5][6][7]. Any polices not listed by the Secretary of State expired and those listed in the Direction

[2] Paragraph 219, NPPF, December 2023
[3] https://www.medway.gov.uk/downloads/file/614/kent_minerals_local_plan_-_construction_aggregates_december_1993_medway
[4] https://www.medway.gov.uk/downloads/file/620/kent_minerals_local_plan_-_chalk_and_clay_december_1997
[5] https://www.medway.gov.uk/downloads/file/621/kent_minerals_local_plan_-_chalk_and_clay_december_1997_-_medway
[6] https://www.medway.gov.uk/downloads/file/615/kent_minerals_local_plan_-_oil_and_gas_december_1997
[7] https://www.medway.gov.uk/downloads/file/618/brickearth_may_1986_local_plans_and_maps

are known as the 'saved policies'. It is the saved policies that will be deleted by the Medway Local Plan once adopted.

1.1.15 KCC and Medway Council received separate letters of direction from the Secretary of State and therefore the deletion of saved policies by KCC resulting from its adoption of replacement policies in 2016 and 2020 had no effect on Medway Council's saved policies.

**1.2 Minerals in Medway**

1.2.1 Minerals of 'local and national importance' that exist within Medway are sharp sand and gravel (aggregates), chalk and brickearth[8]. As shown on Figure 2, much of the sand and gravel and brickearth resource is located on the Hoo Peninsula.

1.2.2 In the past chalk has been worked for the manufacture of cement. The Medway Valley used to have several cement works all of which ceased operations some time ago. The Kent Minerals and Waste Local Plan still includes a strategic allocation of land at Holborough for both development of a cement works and associated chalk quarry on the border with Medway. For some time, requirements for cement have been met from elsewhere including imports from overseas.

1.2.3 Brickearth deposits exist on the Hoo Peninsula and in sections of the Medway River Valley. Brickearth is used in the manufacture of London Stock Bricks and brickmaking used to take place on the Hoo Peninsula until the middle of the 20th century. There has been no brickearth extraction in Medway for some time and allocations for brickearth working included in the 1986 Kent Minerals 'Subject Plan' were all in the Sittingbourne/Faversham area. This suggests the deposits in Medway may not be viable for working. However, it should be noted that Stock Bricks are a specialist product with specific characteristics which cannot be met from clays other than brickearth. There is a brickworks located nearby at Sittingbourne in Kent that utilises brickearth and sufficient reserves currently exist in Kent to satisfy the demand for this brickworks at least in the medium term.

1.2.4 In recent times sand and gravel has been the only mineral actively extracted in Medway. Sand and gravel are essential aggregate materials used primarily in concrete, with substantial quantities being used for construction fill. 'Soft' sand is particular sub-category of sand and gravel used in mortars and asphalt.

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

[8] Brickearth is a clayey silty loam used in the manufacture of bricks and tiles. The term derives from the brick-making industry to describe deposits which require little or no admixture of other material to make them suitable for brick manufacture.

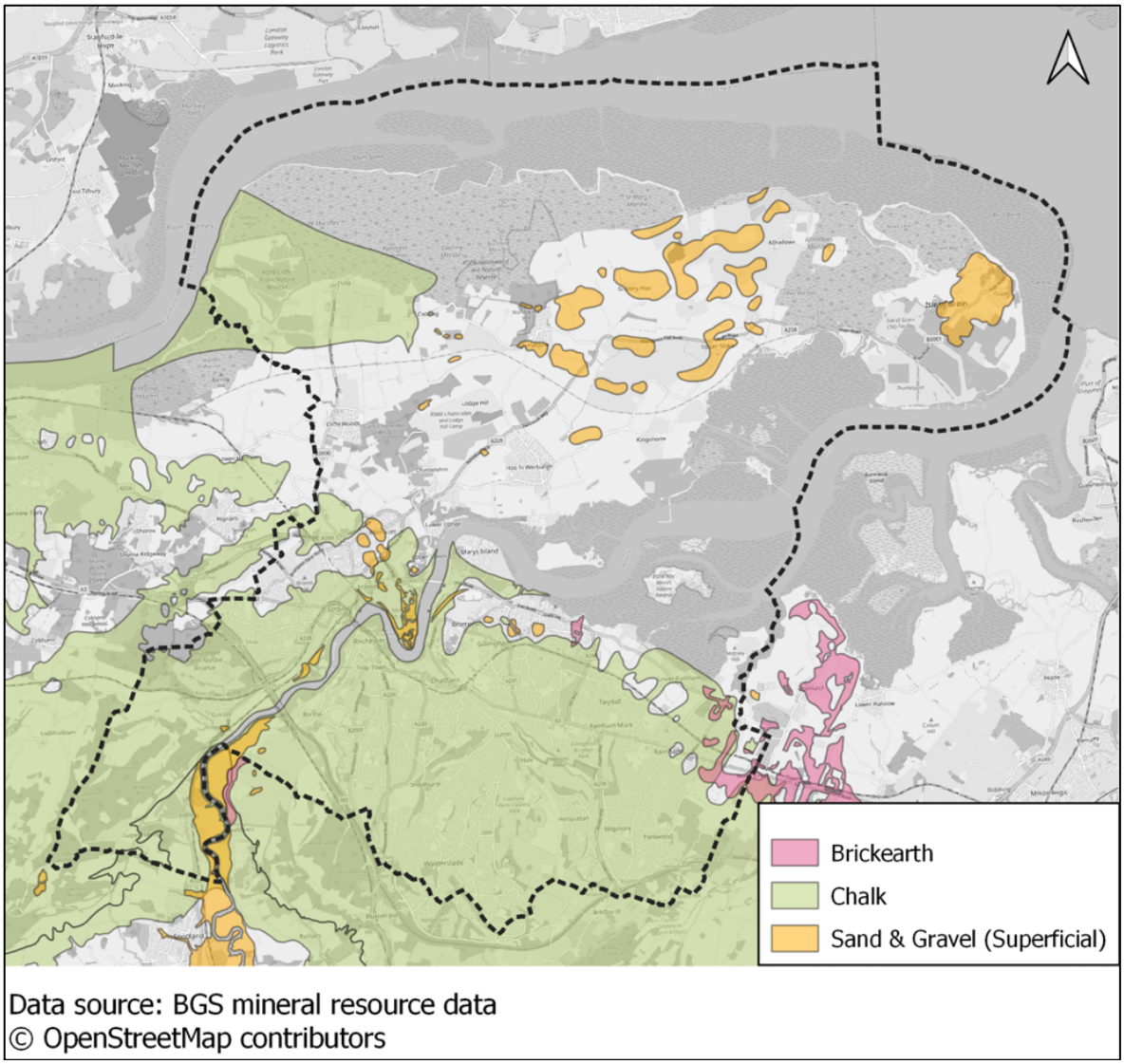



**Figure 2- Economic Geology of Medway**

1.2.6 The supply of, and demand for, aggregate in Medway is monitored on an annual basis and the results are reported in the Medway 'Local Aggregates Assessment' (LAA). Currently, there are only two permitted quarries for the extraction of sharp sand and gravel in Medway, one inactive and the other commencing extraction in 2017:

- Kingsnorth Quarry, and
- Perry's Farm (currently inactive).

1.2.7 The current permission for extraction at Kingsnorth Quarry expires on 1 May 2027. The Kingsnorth Quarry site is proximate to the Medway Estuary and Marshes SPA/Ramsar site which would require consideration under the Habitats Regulations if there were any proposals to extend the site.

1.2.8 At the end of 2022, the permitted reserve of sand and gravel in Medway was 0.372Mt and the landbank was 5.2 years. Due to production at the Kingsnorth

Quarry site only commencing in 2017 the 3-year average of sales has been used to calculate the landbank rather than 10-year average sales[9].

1.2.9 The sand and gravel deposits in the Medway area are primarily concentrated on the Hoo Peninsula where river terrace sands and gravels proven resources may be in excess of 1.6 million tonnes, with between 0.9 million tonnes and 3.6 million tonnes of unproven resources, plus buried channel sand and gravel potential resources of 35.6 million tonnes.

1.2.10 There is no significant soft sand resource in Medway. The Folkestone Formation, which is an important source of soft sand in the south east, runs northwest-southeast through Kent. Historically soft sand requirements in Medway (for use in mortar and asphalt) have been met by resources in Kent and so Medway's unmet requirements for soft sand are captured within Kent's LAA and its needs are planned for in the Kent Minerals and Waste Local Plan.

1.2.11 Crushed rock is a construction aggregate generally comprising harder minerals (granite and limestone). There are no crushed rock mineral resources in Medway although there are local ragstone resources in Kent. Substantial, and strategically significant, quantities of crushed rock are imported to wharves in Medway from other countries including Northern Ireland, Scotland and Norway.

1.2.12 Other detailed information on minerals in Medway is included in the following documents:

- 'State of Medway Report, Minerals', January 2009, Medway Council
- Mineral Resource Information in Support of National, Regional and Local Planning, Kent (comprising Kent, Medway and London Boroughs of Bexley and Bromley), British Geological Survey, 2002[10]
- The Gravel Resources of North Kent, November 1987, Kent County Council [11]

### 1.3 Wharves and Rail Depots

1.3.1 Medway currently has four wharves that are used for the importation of aggregates:

- Grain Terminal, Isle of Grain (wharf and rail depot)
- London Thamesport, Isle of Grain
- North Sea Terminal, Cliffe, Rochester (wharf and rail depot)
- Euro Wharf, Frindsbury, Rochester

[9] Information regarding aggregate in Medway is taken from the Local Aggregates Assessment (LAA) 2022. An updated LAA taking account of sales in 2022 was published in December 2023. The landbank calculation is the permitted reserves divided by the LAA rate (average annual demand).
[10] https://www2.bgs.ac.uk/mineralsuk/download/england/kent.pdf
[11] https://www.medway.gov.uk/downloads/file/373/the_gravel_resources_of_north_kent_november_1987

**Figure 3 Aggregates Depot at Cliffe**

1.3.2 Marine dredged sand and gravel is landed along with crushed rock. Together these wharves are operating well within their combined capacity of 4.30 Mtpa and so there may be potential to increase throughput in response to market demand.

1.3.3 Two of the wharves, at Cliffe and the Isle of Grain, have associated rail depots which allow for export, and import, of aggregate by rail. The rail depot serving Cliffe is located just outside of the Medway area in Gravesham borough and is safeguarded by the Kent Minerals and Waste Local Plan. Medway's wharves are amongst the largest in Kent and Medway and have the greatest capacity.

1.3.4 Approximately 25% of all imports of Marine Dredged Sand and Gravel to wharves in the South East are landed via the wharves in Medway. A significant (strategically important) quantity of crushed rock is also imported to Medway wharves. The imported sand and gravel and crushed rock is largely distributed to London and other areas of the south east by road and rail. The scale of the importation makes Medway's wharves of regional and national significance.

1.3.5 Some marine won soft sand has been landed at wharves in Medway though this has been sporadic and in relatively small quantities. It is possible that the demand for soft sand in the south east will increasingly need to be met by imports from marine won sources due to its scarcity and moreover by constraints on its extraction.

## 1.4 Recycled and Secondary Aggregates

1.4.1 Recycled or secondary aggregates are derived from the hard fraction of construction and demolition waste, and industrial by-products such as power station ash, colliery spoil, blast furnace slag and slate. Recycled and secondary aggregates are an important component of overall mineral supply and for some uses can substitute for primary aggregates such as in some concrete production, and as fill material.

1.4.2 Facilities exist within Medway for the recycling of construction, demolition and excavation (C,D&E) waste at fixed sites to produce recycled aggregate. There is also additional capacity arising from the management of significant amounts of material dealt with on site by mobile plant as part of demolition and construction processes. Secondary aggregate may also be supplied from a stock of coal derived fly ash that was produced during the operation of the, now demolished, Kingsnorth Power Station.

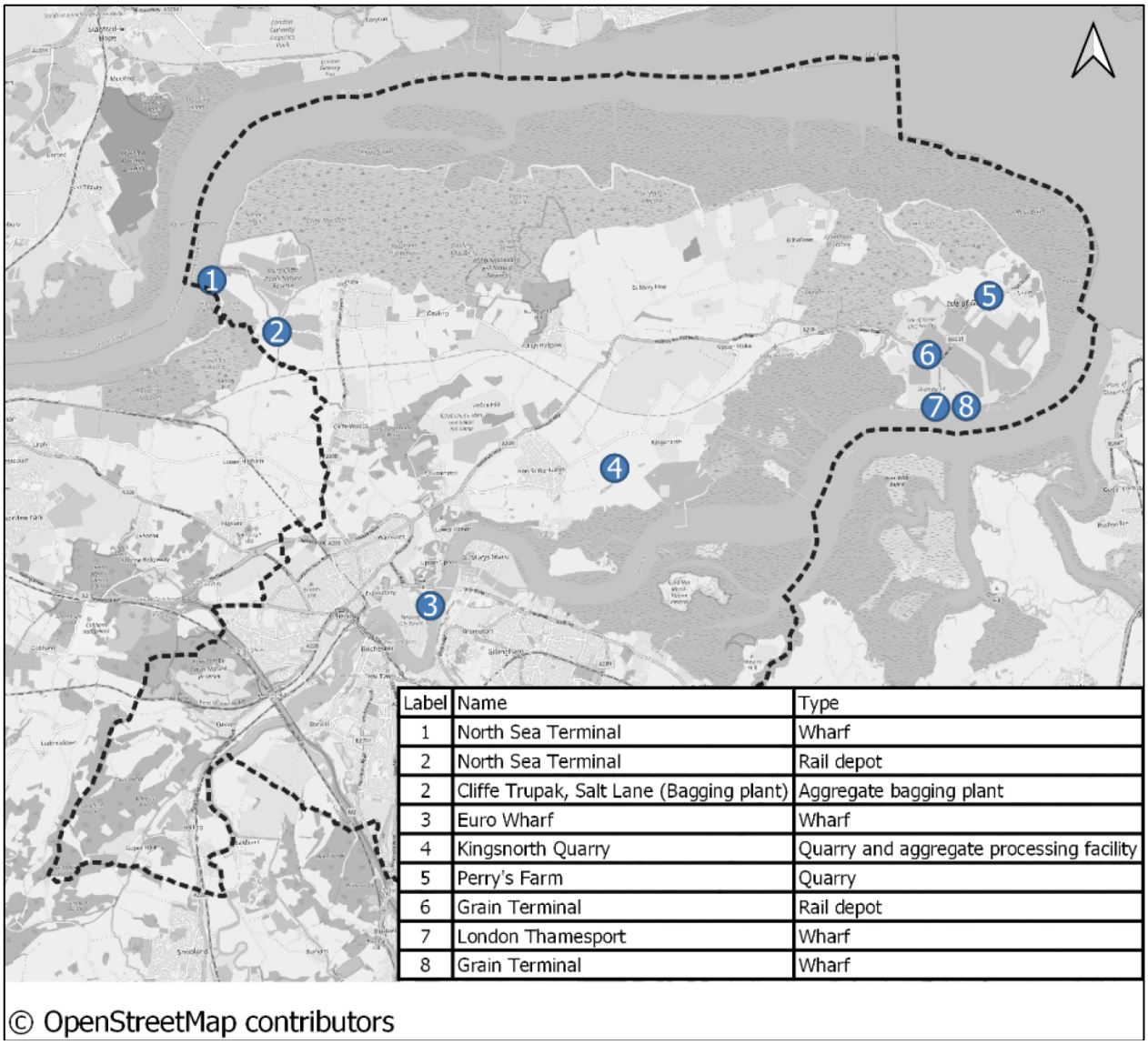
1.4.3 A change to the National Planning Policy Framework in July 2021 added Coal-derived fly ash in single use deposits as a mineral resource of local and national importance. The UK Quality Ash Association has identified the disused Kingsnorth Power Station as a location where such a deposit exists[12]. Coal-derived fly ash is a material that may be used as a secondary aggregate in various construction related applications.

## 1.5 Other Minerals Supply Infrastructure

1.5.1 Other minerals supply infrastructure in Medway includes a bagging plant at Cliffe. Appendix 1 includes a list of all minerals supply infrastructure in Medway.

1.5.2 Figure 4 shows the location of all currently permitted mineral supply facilities in Medway.

[12] http://www.ukqaa.org.uk/wp-content/uploads/UKQAA_SECONDARY_MATERIAL.pdf




| Label | Name | Type |
|---|---|---|
| 1 | North Sea Terminal | Wharf |
| 2 | North Sea Terminal | Rail depot |
| 2 | Cliffe Trupak, Salt Lane (Bagging plant) | Aggregate bagging plant |
| 3 | Euro Wharf | Wharf |
| 4 | Kingsnorth Quarry | Quarry and aggregate processing facility |
| 5 | Perry's Farm | Quarry |
| 6 | Grain Terminal | Rail depot |
| 7 | London Thamesport | Wharf |
| 8 | Grain Terminal | Wharf |

**Figure 4 – Minerals Supply Facilities in Medway**

## 1.6 Future Mineral Supply in Medway

1.6.1 Previous studies[13] of river terrace sands and gravels on the Hoo Peninsula have identified around 1.6 million tonnes of proven resources (which is in addition to the existing permitted reserves) within the Areas of Search identified in the Construction Aggregates Local Plan 1993, with between 0.86 million tonnes and 3.6 million tonnes of possible but unproven resources.

1.6.2 Further studies of buried channel sand and gravel have also been previously undertaken within two specific areas on the Hoo Peninsula, providing reasonably robust evidence to indicate potential resources of 35.6 million tonnes[14]. The thickness of the resource and extent of overburden materials are important factors in determining whether extraction of the buried channel sand and gravel is viable.

[13] See 'State of Medway Report, Minerals', January 2009, Medway Council

[14] See Section 6 'State of Medway Report, Minerals', January 2009, Medway Council

1.6.3 The assessment of the Areas of Search included in the Plan of their potential for providing sand and gravel was as follows:

1. Turkey Hall Farm 37.6 ha, 1,237,500 tonnes (proven)
2. West of Beluncle Farm east of Tile Barn 20.6 ha, 681,654 tonnes (unproven)
3. Kingsnorth House 6.7 ha, 165,978 tonnes (possible, unproven)
4. Kingsnorth 15.2 ha, 401,185 tonnes (proven)
5. Land east of Hoo St. Werburgh close to sewage works, 52 ha, 2,061,623 tonnes (possible maximum figure, borehole data is inconclusive and reserves may range down to 859,009 tonnes)
6. Grain, North of B2001 15.3 ha, 660,000 tonnes (possible, unproven)
7. Grain, South of B2001 20.7 ha, 886,609 tonnes (possible, unproven)

1.6.4 Although there are existing sand and gravel quarries in Medway, the industry has shown no interest in further working of the resource for some time (evidenced by the lack of nominations for allocations in this Plan and planning applications).

1.6.5 In any event, due to their limited extent, sand and gravel resources in the peninsula are not expected to offer a long term source of supply and so aggregate requirements will likely continue to be met from landings of crushed rock and marine dredged material at Medway's wharves.

1.6.6 While economic minerals other than sand and gravel exist within Medway, it seems there is little likelihood of them being exploited over the plan period. The demand for chalk and brickearth will therefore likely continue to be met from other plan areas.

1.6.7 Despite the likelihood of land-won mineral development occurring over the plan period being low, it is important that the Plan recognises that future generations are able to access mineral resources and therefore ensure that economic mineral resources are not un-necessarily sterilised by non-mineral development. In addition, the majority of the Areas of Search for sand and gravel included in the saved policies of the Construction Aggregates Local Plan have also been included in the Medway Local Plan as these continue to offer the best opportunities for identifying sites for future working.

### 1.7 Safeguarding mineral resources

1.7.1 Safeguarding mineral resources involves identifying the economic mineral resources of an area and then preventing new surface development from happening in those areas that would prejudice or prevent their future extraction. The ways in which a mineral resource may be affected by surface development are illustrated in Figure 5.

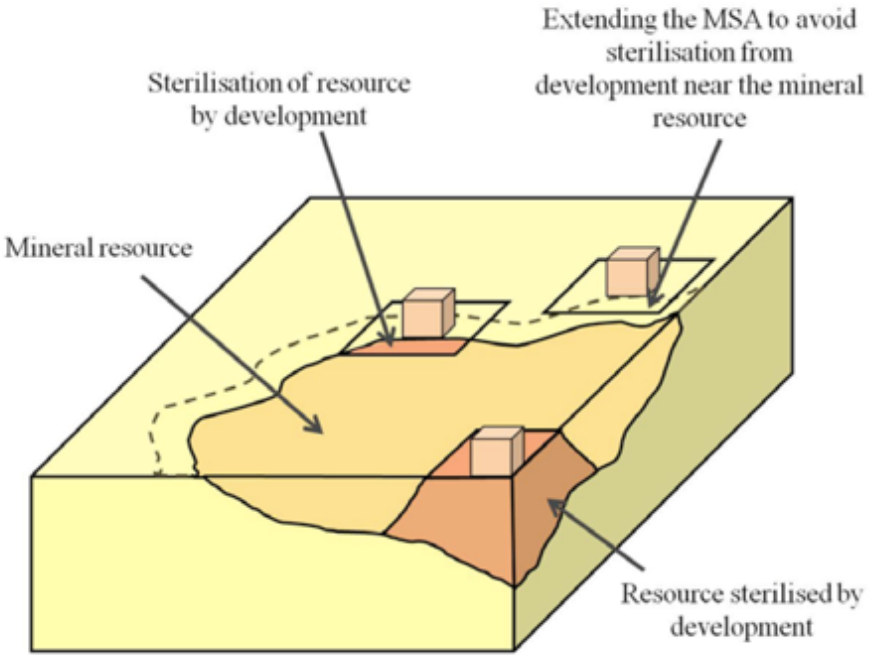



**Figure 5 – The sterilisation of near surface mineral resource by surface development[15]**

1.7.2 The areas subject to safeguarding are known as 'Minerals Safeguarding Areas' (MSA). MSA's cover areas of land where there are known geological deposits of minerals which it is considered should be safeguarded from unnecessary sterilisation by surface development. Identification of the MSA has included consideration of the following:

- Areas where the mineral of economic importance is known to exist;
- existence of surface development which has caused the minerals to be sterilised; and,
- allocations for other forms of development in this Plan

1.7.3 The economic viability of exploiting the buried channel sand and gravel is unknown and the likely impact of the extraction methods could be substantial, therefore only the river terrace sand and gravel resources are proposed to be safeguarded by the new Medway Local Plan.

1.7.3 The brickearth and chalk resources have not been safeguarded as it is unlikely that working this resource will ever be viable.

1.7.4 A 'Minerals Consultation Area' (MCA) is applied to the MSA which includes the MSA itself and extends 250 metres from its boundary. Planning applications for development not exempt from minerals safeguarding within the MCA will need to be accompanied by a 'Mineral Assessment' (MA)[16] which shows how safeguarding of the mineral resource has been considered including:

- Potential extent of sterilisation which could occur as a result of the development
- Extent or distribution of survey through boreholes/pits;

15 Source: Mineral safeguarding in England good practice advice, British Geological Survey, 2011
[16] Requirement for MAs to be included with planning applications in the local validation list

- site specific considerations including constraints on extraction and viability;
- options for prior extraction; and,
- economic viability of the mineral, i.e. the local market interest.

1.7.5 The Policies Map shows the extent of the MSA and Minerals Consultation Areas in Medway.

1.7.6 Safeguarding does not prohibit non minerals development coming forward within an MSA and the certain circumstances in which proposals will be acceptable will be stipulated in Policy within the Medway Local Plan.

**1.8 Identification of Sharp Sand and Gravel Areas of Search**

1.8.1 Areas of Search which may have potential of future extraction of sharp sand and gravel will be identified in the Plan. These areas largely reflect those in the adopted Construction Aggregates Local Plan that was adopted in 1993. These areas identify where minerals are believed to exist and are free of major development constraints.

1.8.2 The identification of the Areas of Search is described in the Construction Aggregates Local Plan 1993. This notes that the Areas of Search were initially derived from an assessment of strategic or 'primary' planning constraints in relation to the potential mineral resources. These constraints were based on national policy considerations which required the following matters to be taken into account:

- Best and Most Versatile Agricultural land;
- AONBs and other Special Landscape Areas (as defined by the Structure Plan);
- SSSIs;
- Nature conservation issues including Ramsar, SPAs, SACs, national nature reserves;
- Green Belt;
- Water environment;
- Impact on environment and amenity; and,
- Archaeology and ancient monuments

In addition, strategic countryside conservation policies of the Structure Plan at that time were also considered.

1.8.3 The Areas of Search were identified by a process of constraints mapping as follows:

**First Stage Filter:** Strategic planning constraints were used as a first stage 'filter' to identify those general areas where future workings would not normally be permitted.

**Second Stage Filter:** A second filter was then used to narrow down land which passed the first stage filter to specific areas of search by excluding the following:

- Land sterilised by, or committed to development in such terms that prior working may frustrate other important planning objectives;
- mineral resources already existing, permitted or worked out;

- resources which are considered to be too small to justify being worked. In the case of gravels, where processing plant is required, this was applied to freestanding deposits which were expected to yield less than 500,000 tonnes of aggregate: and,
- locations where a local land use planning constraint is considered to constitute an overriding prima facie case against the successful outcome of an application to work aggregate minerals. In most cases the constraint derived either from previous planning decisions relating to the area (for example poor road access), or from policies and proposals in a District Local Plan.

# 2.0 Waste Management

## 2.1 Policy Context

2.1.1 The key objective of national policy for managing waste[17] is to protect the environment and human health by:

- Preventing or reducing the generation of waste;
- where its production is unavoidable, reducing the adverse impacts of its generation and management; and
- reducing the overall impacts of the use of resources from which waste may arise and improving the efficiency of such use.

2.1.2 The National Planning Policy for Waste 2014 (NPPW))[18], associated Planning Practice Guidance[19] and the Resources and Waste Strategy for England 2018 (RWS)[20] currently set the planning policy context for waste management in England. Whilst the NPPF does not contain policies specific to waste, its principles remain relevant. The Waste Management Plan for England[21] was updated in 2021 and signposts policies concerning waste management in England, in particular those included in the RWS and NPPW.

2.1.3 Both NPPW and RWS require application of the Waste Hierarchy in priority order as one of the key principles of sustainable waste management. The 'Waste Hierarchy' identifies different ways of dealing with waste as set out in Figure 5 below. This shows that 'Prevention' is the most preferred option with 'Disposal' at the bottom being the option of last resort.

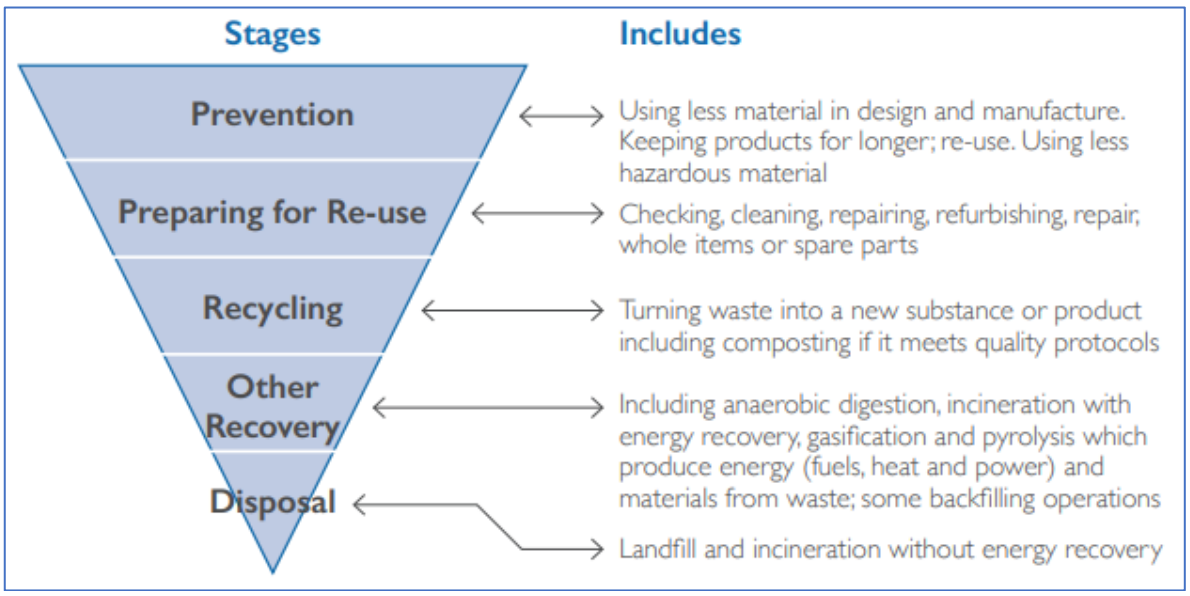



**Figure 5 The Waste Hierarchy**

[17] See The Waste (England and Wales) Regulations 2011 and the Waste (Circular Economy) (Amendment) Regulations 2020

[18] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/364759/141015_National_Planning_Policy_for_Waste.pdf

[19] https://www.gov.uk/guidance/waste

[20] https://www.gov.uk/government/publications/resources-and-waste-strategy-for-england

[21] https://www.gov.uk/government/publications/waste-management-plan-for-england-2021

2.1.4 The RWS sets out key Government objectives on waste management in England, including how the country is to minimise waste and manage it more effectively through maximising opportunities to generate value from material that is both prevented from entering, and extracted from, the waste stream.

2.1.5 The RWS identifies five strategic ambitions:

- To work towards all plastic packaging placed on the market being recyclable, reusable or compostable by 2025;
- To work towards eliminating food waste to landfill by 2030;
- To eliminate avoidable plastic waste over the lifetime of the 25 Year Environment Plan;
- To double resource productivity by 2050; and
- To eliminate avoidable waste of all kinds by 2050.

2.1.6 The RWS is also concerned with ensuring that society's approach to waste aligns with the following circular economy principles:

- Design out waste and pollution;
- keep products and materials in use; and
- regenerate natural systems

2.1.7 The role waste management plays in the material cycle that is central to creating a more circular economy is illustrated in Figure 6 below.

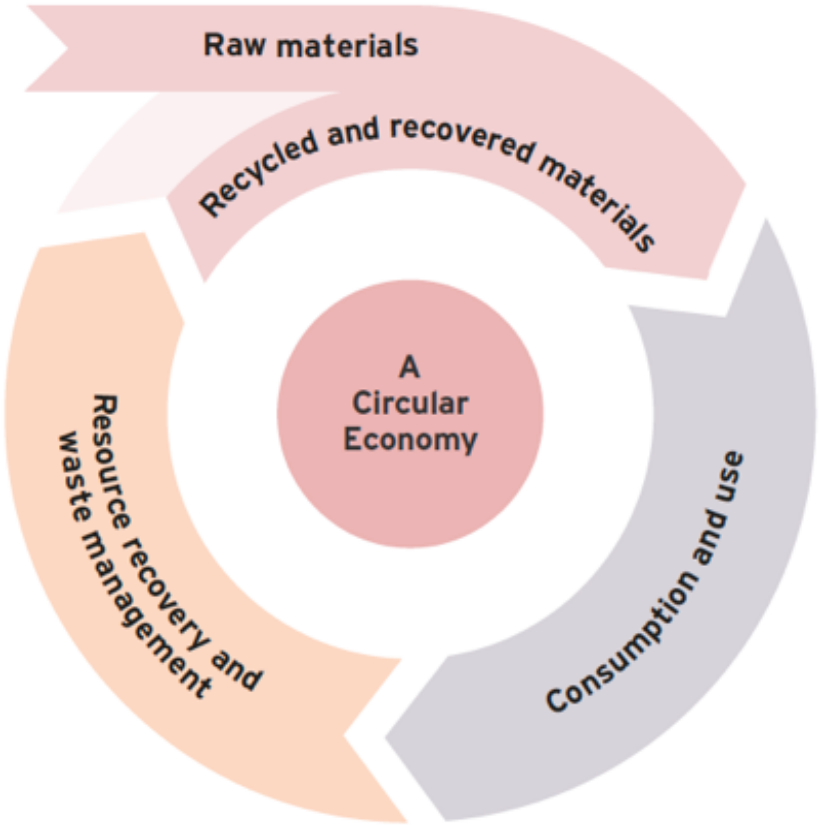



**Figure 6 Circular Economy**[22]

[22] Source: Resources and Waste Strategy, DEFRA, 2018

2.1.8 The Circular Economy serves as an important strategy in addressing the climate crisis. When implemented within the construction sector, circular economy principles markedly decrease carbon emissions by avoiding the extraction of raw materials, reducing production of construction materials, retaining embodied carbon and preventing waste.

2.1.9 The Environment Act 2021 requires Government to set long-term, legally-binding environmental targets[23], including those for resource efficiency and waste reduction. In response to this requirement the Government has set the following targets in its Environmental Improvement Plan 2023 (EIP), which build on existing recycling and landfill diversion targets:

- Eliminate avoidable waste by 2050 and double resource productivity by 2050;
- explore options for the near elimination of biodegradable municipal waste to landfill from 2028;
- eliminate avoidable plastic waste by 2042;
- seek to eliminate waste crime by 2042; and,
- halve 'residual' waste (excluding major mineral waste) produced per person by 2042. For the purposes of this target, 'residual' waste is defined as waste that is sent to landfill, put through incineration or used in energy recovery in the UK, or that is sent overseas to be used in energy recovery.

2.1.10 The EIP states that the targets will be achieved by the following actions:

- Implementation of packaging extended producer responsibility from 2024;
- introduction of a deposit return scheme for plastic and metal drinks containers from October 2025[24];
- implementation of consistent recycling collections between different councils;
- mandate recycling labelling for packaged products by 31 March 2026 except for plastic films which will be mandated by 31 March 2027;
- banning the supply of single-use plastics (e.g. plastic plates and cutlery) from October 2023;
- introduction of a mandatory digital waste tracking service to modernise existing waste record keeping;
- implementation of reforms to the waste carriers, brokers and dealers regime and bringing forward legislation to tackle abuse of certain types of waste exemptions; and,
- launching a call for evidence to support development of a plan to achieve the near elimination of biodegradable municipal waste going to landfill from 2028.

2.1.11 The target for the reduction in residual waste is enshrined in The Environmental Targets (Residual Waste) (England) Regulations 2023 which came into force on 30 January 2023. The waste target is for the reduction of residual waste (excluding major mineral wastes) on a kg per capita[25] basis by 50% by 2042 from 2019 levels (574 kg per capita). Accordingly, the residual waste long-term target is

[23] https://www.gov.uk/government/publications/environment-bill-2020/august-2020-environment-bill-environmental-targets
[24] This date has now been changed to October 2027
[25] Per head of population in England

that by the end of 31 December 2042 the total mass of residual waste for the calendar year 2042 does not exceed 287 kg per capita. Waste routes which will count as residual are:

- Sent to landfill in the United Kingdom;
- put through incineration in the United Kingdom;
- used in energy recovery in the United Kingdom; or
- sent outside the United Kingdom for energy recovery.

2.1.12 In July 2023 the Government published its waste prevention plan titled 'Waste prevention programme for England: Maximising Resources, Minimising Waste'. The document…

'….*sets out how we will achieve strategic principle 2 of the Resources and Waste Strategy – to prevent waste from occurring in the first place and manage it better when it does.'*

The Plan also notes that:

- the Government intends to prepare a 'Waste Sector Decarbonisation Plan' that will set out how the waste sector will; contribute to the targets in the 6th Carbon Budget (see below);
- the National Model Design Code published in 2021[26] provides tools and guidance for planning authorities to embed circular economy principles in new development;
- NPPW expects planning authorities to ensure that new development includes proposals for handling waste arising from the construction and operation of development maximise reuse and recovery opportunities, and minimises off-site disposal; and,
- chapter 2 of the NPPF recognises the need for the planning system to consider the prudent use of natural resources and waste minimisation in the pursuit of sustainable development.

***Climate change***

2.1.13 To achieve 'net zero' in carbon emissions by 2050 the Government has acknowledged that, overall, CO2 emissions need to fall by around two thirds by 2035[27].

The RWS includes plans to:

- reduce the generation of greenhouse gas (GHG) emissions associated with breakdown of biodegradable waste by diverting it from landfill (with a focus on food waste), and
- to increase recycling, which typically results in lower carbon emissions in comparison to manufacturing products from virgin materials.

2.1.14 In December 2020, the Climate Change Committee (CCC) published its Sixth Carbon Budget[28] that considered measures required to achieve the UK Government target net zero carbon emissions by 2050. The UK Government accepted the report's key recommendation of a 78% reduction in UK territorial emissions between

[26] https://www.gov.uk/government/publications/national-modeldesign-code
[27] UK Industrial Decarbonisation Strategy, April 2021
[28] The Sixth Carbon Budget The UK's path to Net Zero Committee on Climate Change December 2020 Presented to the Secretary of State pursuant to section 34 of the Climate Change Act 2008

1990 and 2035 which essentially brought the UK's previous target of 80% reduction by 2050 forward by 15 years[29].

2.1.15 The CCC's Sixth Carbon Budget noted that emissions associated with waste management accounted for 6% of UK GHG emissions in 2018. While they have fallen to 63% of 1990 levels, due to a reduction in biodegradable waste being landfilled, in recent years emissions have stopped falling due to a plateau in recycling and significant growth in carbon emissions from the fossil sourced component (i.e. oil based plastics) of Energy from Waste plant feedstock.

2.1.16 Broadly, the Sixth Carbon Budget concludes that the management of waste in accordance with the waste hierarchy is consistent with the achievement of reductions in carbon emissions and includes the following specific recommendations:

- A ban on landfilling biodegradable waste by 2025;
- recycling increasing to 70% by 2030;
- additional focus through the chain from manufacturing to the consumer to reduce the amount of waste; and,
- All energy from waste facilities plants to be fitted with Carbon Capture and Storage (CCS) by 2040.

2.1.17 In 2021 the Environmental Services Association[30] published a Net Zero Strategy[31] that includes the following targets:

- Start fitting Carbon Capture, Utilisation and Storage (CCUS) technologies to EfW facilities from 2025, with all plants fitted with CCUS where feasible by 2040 to contribute to the achievements of net zero carbon emissions by 2050.
- Ensure that all new plants are built with CCUS fitted or are CCUS-ready from 2025 onwards.

2.1.18 In March 2023, the Government consulted on updates to its '2009 Carbon Capture Readiness' requirements. The consultation considered the need for carbon capture relating to Energy from Waste facilities and noted that:

*'…Whilst the EfW sector is relatively small, we expect that it will represent a significant proportion of residual emissions from the power sector in the 2030s, as other forms of generation are rapidly decarbonised. It is therefore important that it is targeted with emissions reduction policies'*

2.1.19 As part of this consultation, the Government proposed that Energy from Waste plants, which are of a size which require a Development Consent Order, should be included in 'decarbonisation ready' requirements and that this would be administered by the Environment Agency as part of the Environmental Permitting, rather than the planning consent, process.

[29] UK enshrines new target in law to slash emissions by 78% by 2035, Government Press Release, April 2021

[30] The Environmental Services Association (ESA) is the trade association for the waste management industry in the UK.

[31] http://www.esauk.org/application/files/7316/2496/7294/ESA-Net-Zero-Exec-Summary.pdf

2.1.20 In its June 2023 report, 'Progress in reducing emissions 2023 Report to Parliament', the CCC summarised the progress made within the waste management sector to reducing emissions as follows:

*'….Greater strategic coordination of plans to decarbonise the waste sector is needed including: much greater emphasis on waste prevention, clarity on future residual waste capacity needs, and the suitability of incentives and interactions with other sectors such as waste as a feedstock for Sustainable Aviation Fuels. Energy from Waste (EfW) emissions are already higher than the Government's CBDP[32] anticipates and EfW capacity is set to increase in the coming years. A comprehensive systems-approach to control and reduce EfW emissions is urgently needed, including clarity on carbon pricing. We recommend a moratorium on additional EfW capacity until a review of capacity requirements has been completed and an updated assessment of residual waste treatment capacity requirements published.'*

2.1.21 In May 2024, the National Infrastructure Commission published its latest review of infrastructure in England[33]. The review summarises the position on waste management as follows:

*'…Significant delays to key reforms have created uncertainty and prevented the necessary investment in new and improved recycling capacity. Recent initiatives have provided more clarity, and the government should now sustain this momentum as it moves to implement its collection and packaging reforms. It should also create stronger incentives to invest in recycling infrastructure by sending a clear signal on the future of energy from waste in a circular economy.'*

The following is included amongst the reports recommended priority for actions for government:

*'…bans future energy from waste capacity that does not include carbon capture and storage…'*

*'…delivers on its commitment to bring energy from waste into the Emissions Trading Scheme from 2028'*

2.1.22 In relation to the latter recommendation, the government is currently (June 2024) consulting on how it should expand the UK Emissions Trading Scheme (ETS) to include energy from waste (EfW)[34]. The following four objectives are proposed in relation to the implementation of ETS for EfW:

a) Give greater certainty on the delivery of emissions reductions in line with the UK and devolved nation carbon budget and net zero targets.
b) Support wider waste policies and drive decarbonisation of waste management, particularly:
    - The extended producer responsibility scheme;
    - increasing higher levels of high-quality recycling; and,
    - investment in technology such as CCS.
c) Maintain a level playing field by covering a broad range of thermal treatment technologies (including advanced conversion technologies).

[32] CBDP = Carbon Budget Delivery Plan
[33] Infrastructure Progress Review 2024
[34] UK Emissions Trading Scheme scope expansion: waste

d) Reduce the risk of any perverse incentives, particularly related to increases in landfill and waste exports.

***Waste movement and the proximity principle***

2.1.23 The 'proximity principle' is set out in paragraph 4 of Part 1 of Schedule 1 to the Waste (England and Wales) Regulations 2011. This is within the context of the requirement for mixed municipal waste collected from private households to be disposed of, or recovered, in one of the nearest appropriate installations, by means of the most appropriate methods and technologies, in order to ensure a high level of protection for the environment and public health.

2.1.24 This is to be achieved by establishing an integrated and adequate network of installations (facilities) for disposal and recovery of mixed municipal waste collected from private households. The requirement also extends to where the collection includes similar types of waste collected from non-household sources (e.g. waste from offices and retail).

2.1.25 The network is to be designed in such a way as to enable movement towards the aim of self-sufficiency in the disposal and recovery of waste at a national[35] level. While giving consideration to geographical circumstances and/or the need for specialised installations for certain types of waste.

2.1.26 This principle is to be applied when decisions are taken on the location of facilities for the management of mixed municipal waste collected from private households and similar waste (see above) by disposal or recovery. This is recognised in NPPW that expects waste planning authorities to:

*'plan for the disposal of waste and the recovery of mixed municipal waste in line with the proximity principle, recognising that new facilities will need to serve catchment areas large enough to secure the economic viability of the plant;'.*

2.1.27 The NPPW requires local planning authorities, with responsibility as Waste Planning Authority for their area, to include strategic policies in their development plans which set out an overall strategy for the pattern and scale of waste development, ensuring sufficient provision is made for infrastructure for waste management, and energy that may be produced (including heat).

2.1.28 The updated Medway Waste Needs Assessment[36] shows that varying quantities of waste are routinely transported between Medway and other Waste Planning Authority (WPA) areas. Medway Council and these other Waste Planning Authorities recognise that cross-boundary movement is typical of the way in which waste is managed in general, as it has little regard for administrative boundaries.

***Strategic Waste Planning and Net Self-sufficiency***

2.1.29 Under the Duty to Co-operate, strategic policy-making authorities are required to cooperate with each other, and other bodies, when policies addressing strategic

[35] England and Wales

[36] Medway Waste Needs Assessment 2024 Update – Medway Management Requirements, BPP Consulting, June 2024

matters, including policies contained in Local Plans relating to waste are being prepared. In particular, joint working should help to determine where additional infrastructure is necessary, and whether development needs that cannot be met wholly within a particular plan area could be met elsewhere. As waste travels across administrative borders, planning for its management is considered to be a strategic issue that is governed by the Duty to Cooperate.

2.1.30 Medway Council is a member of the South East Waste Planning Advisory Group (SEWPAG) which is an advisory group comprising WPAs from south east England along with other stakeholders, such as the Environmental Services Association and the Environment Agency. SEWPAG considers waste planning issues across south east England and develops approaches on waste management issues common to WPA members.

2.1.31 WPA members of SEWPAG have agreed a Statement of Common Ground (SCG) to demonstrate joint working and set out a consistent approach to planning for the management of waste within and between their respective areas. Among other things, the SCG includes an agreement to plan for the management of waste on the basis of '**net self sufficiency**'.

2.1.32 When applied to waste planning, net self-sufficiency is a principle that means each WPA plans to provide facilities with sufficient capacity to manage an amount of waste equivalent to that which is predicted to arise within its area on an annual basis over the period of its plan. The use of the term 'net' means that the quantity of waste planned for is irrespective of imports and exports. This approach is intended to ensure that sufficient waste management capacity is provided across a collective area (region or sub-region) consistent with NPPW[37].

2.1.33 The approach of net self-sufficiency in the South East was originally set out in the now revoked South East Plan. Importantly the SEWPAG SCG allows for individual authorities to deviate from adhering to the net self sufficiency principle on the following basis:

- *"**The Parties agree** that provision for unmet requirements from other authority areas may be included in a waste local plan but any provision for facilities to accommodate waste from other authorities that cannot or do not intend to achieve net self-sufficiency will be a matter for discussion and agreement between authorities and is outside the terms of this SCG."; and,*

- *"Although the Parties agree to the principle of net self-sufficiency, **the Parties also recognise** that particular constraints within a WPA area may mean that planning to achieve net self-sufficiency would not be consistent with the principles of sustainable development as set out in the NPPF and NPPW. **The Parties agree** that any WPA which seeks the management of waste on the basis of net export would need to provide robust evidence that clearly demonstrated that plans to meet*

[37] NPPW states: "Waste planning authorities should prepare Local Plans which identify sufficient opportunities to meet **the identified needs of their area** for the management of waste streams." (para 3)

*needs within its area would not be consistent with the NPPF and NPPW.'*

2.1.34 The SCG also recognises that the principle of net self sufficiency does not apply to hazardous waste because the quantities of different hazardous waste types produced within each WPA area are unlikely to make the local provision of the full range of specialist hazardous waste management facilities viable. Indeed, it is quite normal for relatively small quantities of hazardous waste to be transported across the country for specialist treatment.

2.1.35 The key movements of hazardous waste[38] from Medway in the calendar year 2018 are illustrated in Figure 7.

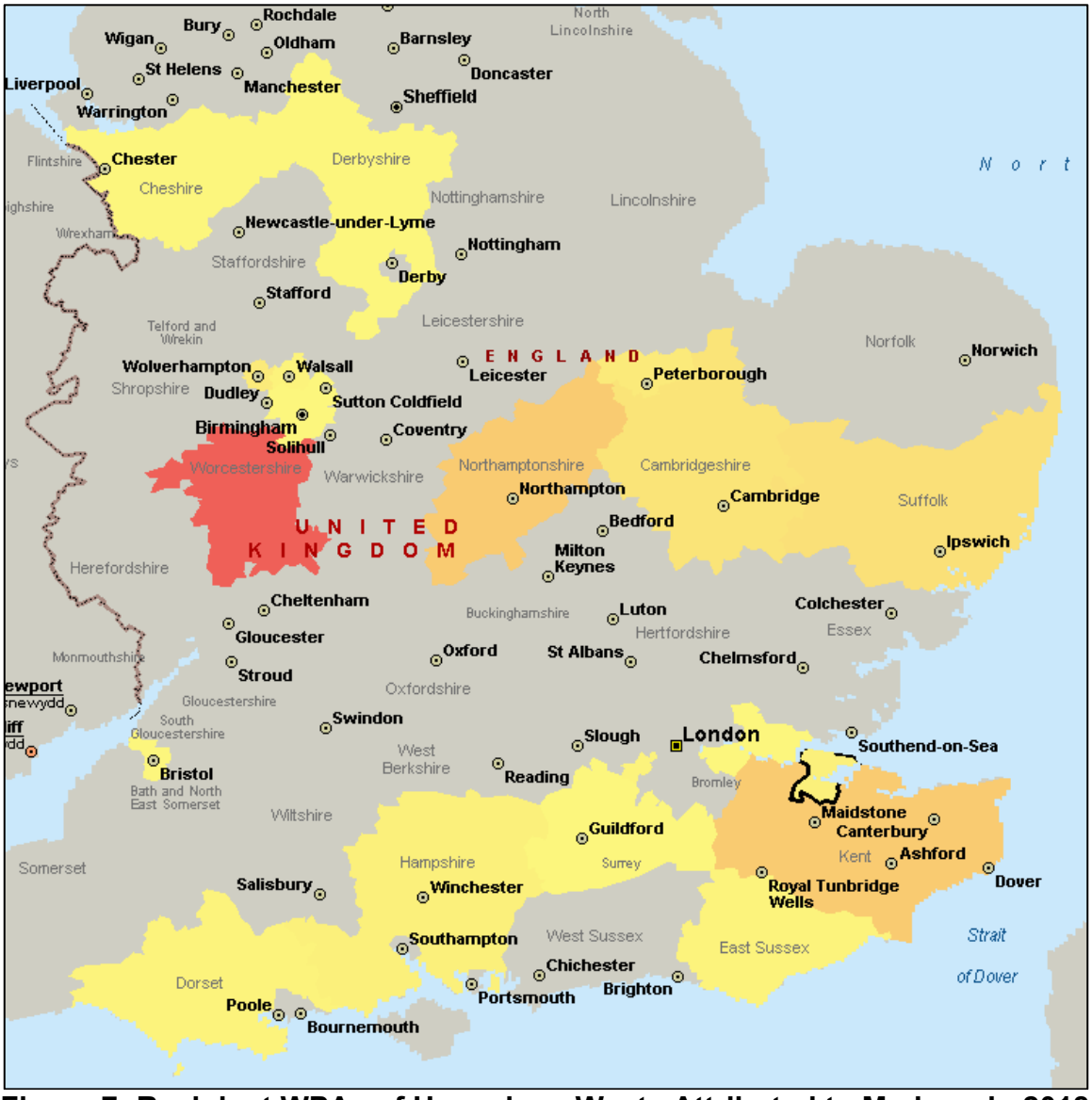



**Figure 7: Recipient WPAs of Hazardous Waste Attributed to Medway in 2018**

2.1.36 In accordance with paragraph 2.11 of the SEWPAG SCG, in 2020, Medway Council previously contacted the WPAs known to manage hazardous waste arising

[38] Source: Environment Agency Waste Data Interrogator, 2019 (data for 2018)

in Medway in quantities at or above those set out in paragraph 2.11 to establish whether such management can continue over the period of the Medway Local Plan. Some of the authorities contacted are not within the south east and so the SCG does not apply, however other regional groupings similar to SEWPAG (including London, South West and East of England) have adopted similar guidelines for establishing strategic waste movements for Duty to Co-operate purposes. The majority of WPAs responded and confirmed that there are no planning reasons why the movement of hazardous waste to facilities in their areas could not continue during the Plan period. Work is now underway to confirm the position with recipient WPAs.

***Medway Municipal Waste Management Strategy***

2.1.37 The Medway Municipal Waste Management Strategy (MWMS) focuses on the management of Local Authority Collected Waste[39] (LACW) (formerly known as municipal waste). LACW includes: Household waste from kerbside collections; waste delivered to household waste recycling sites; and other waste that may be collected under the same arrangements such as waste from public sector schools, street cleansing waste, and an amount of waste produced by businesses, collected where commercial collections are not offered.

2.1.38 The current MWMS for Medway was adopted in 2006. Implementation of the MWMS is the responsibility of Medway Council in its combined role as the waste disposal and collection authority for Medway. Key aims of the MWMS are:

- 55% recycling of LACW by 2020
- 35% (or less) of LACW to landfill by 2020

2.1.39 While these targets relate to past dates they define a baseline from which future targets may be established. The Medway Local Plan takes account of the MWMS by ensuring that development can come forward to help facilitate its aims.

***Pollution Control***

2.1.40 To ensure the management of waste does not cause harm to human health or pollution of the environment, it is regulated by a comprehensive system of permits and authorisations that controls it at every step from production through to final fate within an overarching obligation called the Duty of Care[40]. The system within which the movement and management of waste is regulated is known as the environmental permitting regime.

2.1.41 The permitting regime and waste carrier authorisation system is largely administered and monitored by the Environment Agency. Environmental Permits for smaller waste operations may be granted by Medway Council as the environmental health authority. The environmental permitting regime provides exemptions from permitting for smaller scale, lower risk waste management operations. The

[39] The term Municipal Solid Waste (MSW) has been replaced by the term Local Authority Collected Waste (LACW) when it comes to considering household waste because the term municipal waste (MSW) now includes waste of a similar nature to LACW produced by businesses including offices and retail premises. Local Authority Collected Waste is therefore a subset of MSW and includes mainly waste collected at the kerbside from households. Any future update to the Medway MWMS is expected to relate to LACW only as that is the waste under Medway Council's control as a WDA and WCA.

[40] The Duty of Care creates a legal chain of custody for waste.

registration system for waste carriers, brokers and dealers is intended to provide a level of assurance that those involved in transporting and dealing in waste, including brokering waste for onward management, are authorised to do so. When determining planning applications NPPW advises that planning authorities should assume that the pollution control authorities are undertaking their functions effectively and not create duplicate controls.

**2.2 Current Waste Management in Medway**

2.2.1 This section looks at the different types of waste being generated in Medway and how it is currently managed.

2.2.2 The legal definition of waste, set out in section 75(2) of the Environmental Protection Act 1990, is “any substance or object which the holder discards, or intends or is required to, discard”. The key concept relates to the producer or holder's intention regardless of whether the waste may have a value to the recipient.

2.2.3 The main types of waste produced are:

- Local Authority Collected Waste (mainly household waste) (LACW);
- Commercial and Industrial Waste (waste from businesses and industry) (C&I waste);
- Construction, Demolition and Excavation Waste (CDEW);
- Hazardous Waste from various sources; and,
- Wastewater and Sewage Sludge

2.2.4 Planning Practice Guidance also expects Waste Planning Authorities to plan for the management of Agricultural Waste and Low Level Radioactive Waste.

2.2.5 The Waste Needs Assessment (WNA[41]) completed in June 2024 found that just under 0.5 million tonnes of wastes was produced in Medway in 2022[42]. Each waste type is considered in more detail below.

2.2.6 Medway has a range of waste transfer and processing facilities that handle waste both from within Medway and beyond Medway. In 2022, there were 23 operational permitted waste transfer and processing facilities in Medway, managing around 710,000 tonnes of waste which was produced both from within and beyond Medway. Figure 8 shows the location of the permitted waste management facilities in Medway in 2018.

[41] Medway Waste Needs Assessment 2024 Update – Medway Management Requirements, BPP Consulting, June 2024

[42] This value was confirmed in the update to the WNA reported in the Medway AMR 2022.

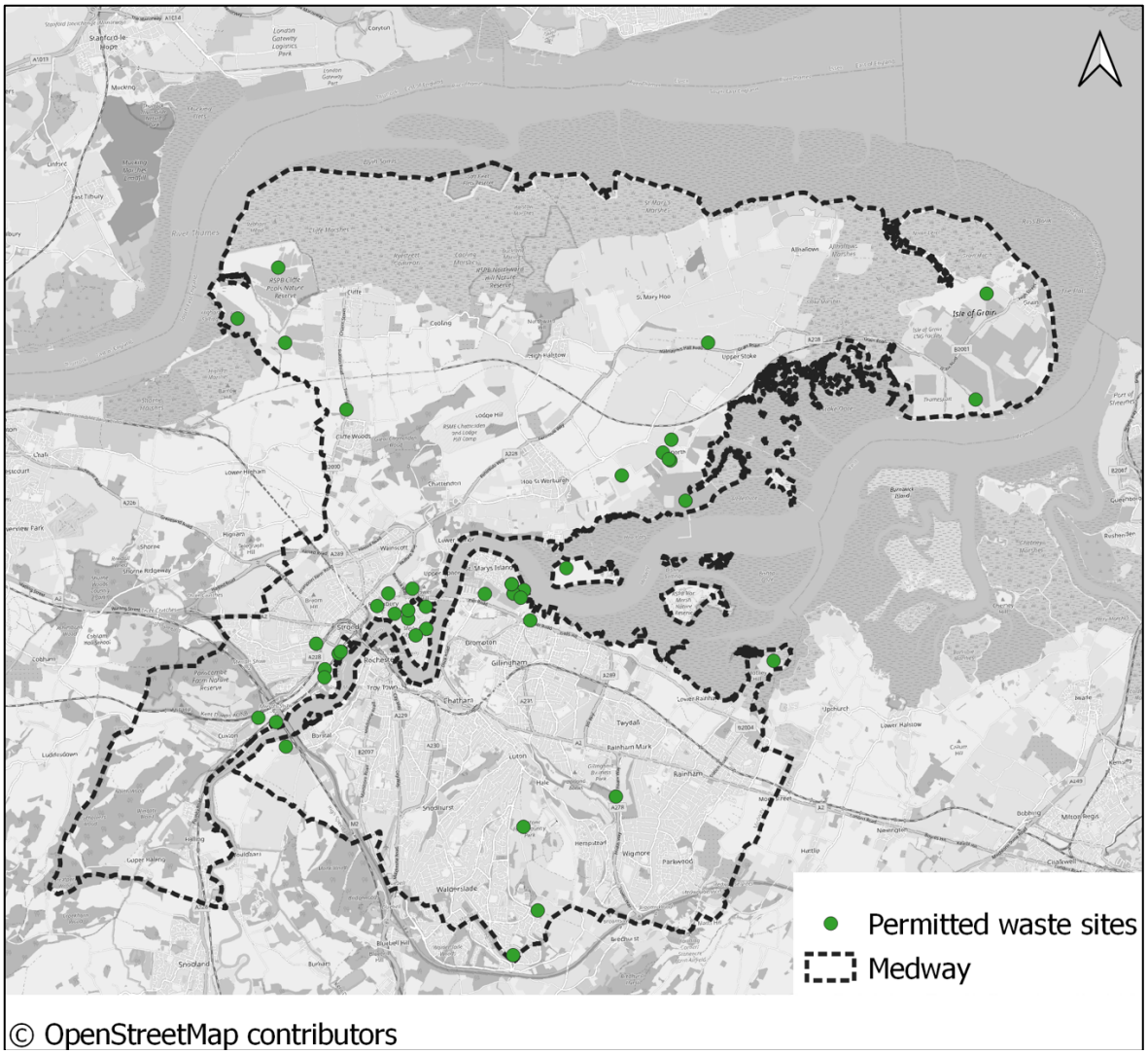



**Figure 8 – Waste Management Facilities in Medway (2018)**

### *Local Authority Collected Waste*

2.2.7 Since the last time local planning policy for waste was adopted for Medway (in 1998), the way in which Medway's LACW is managed has aligned more closely with the waste hierarchy. Table 1 shows how the management of LACW arising in Medway has changed between 2014/5 and 2018/19. Figure 9 illustrates the change over a longer period of time (2008/09 to 2022/23) with a particularly notable reduction in waste sent to landfill.

2.2.8 Diversion of LACW away from landfill has been achieved both by increasing recycling from c25% to c47% and by energy recovery which increased from 0% to c43%. However, as shown in Table 1 both recycling and landfill has plateaued in recent years, with energy recovery varying according to annual quantities of waste produced[43].

[43] Production of LACW increased from c125,000 to c135,000 tonnes in 2018 (i.e. 8% over 20 years) but fell to 128,000 tonnes in 2021/22 and was 131,650 tonnes in 2022/23

**Table 1 – Management of LACW arising in Medway 2014/15 to 2022/23 (tonnes)**

| | 2014/15 | 2015/16 | 2016/17 | 2017/18 | 2018/19 | 2019/20 | 2020/201 | 2021/22 | 2022/23 |
|---|---|---|---|---|---|---|---|---|---|
| Waste arising | 130,280 | 131,297 | 133,264 | 131,702 | 134,215 | 126,091 | 125,161 | 128,104 | 131,650 |
| Recycling | 65,701 | 60,094 | 61,678 | 62,155 | 61,739 | 63,183 | 55,576 | 54,370 | 60,681 |
| Recycling rate[44]% | 50% | 47% | 47% | 48% | 46% | 50% | 45% | 42% | 46% |
| Other recovery via incineration with EfW | 38,588 | 50,494 | 54,425 | 51,531 | 58,066 | 57,687 | 67,153 | 71,811 | 69,284 |
| Landfill | 17,937 | 14,621 | 13,793 | 12,546 | 14,465 | 5,211 | 2,262 | 1,923 | 1,685 |
| Landfill rate % | 14% | 11% | 10% | 9.5% | 11% | 4% | 2% | 1% | 1% |

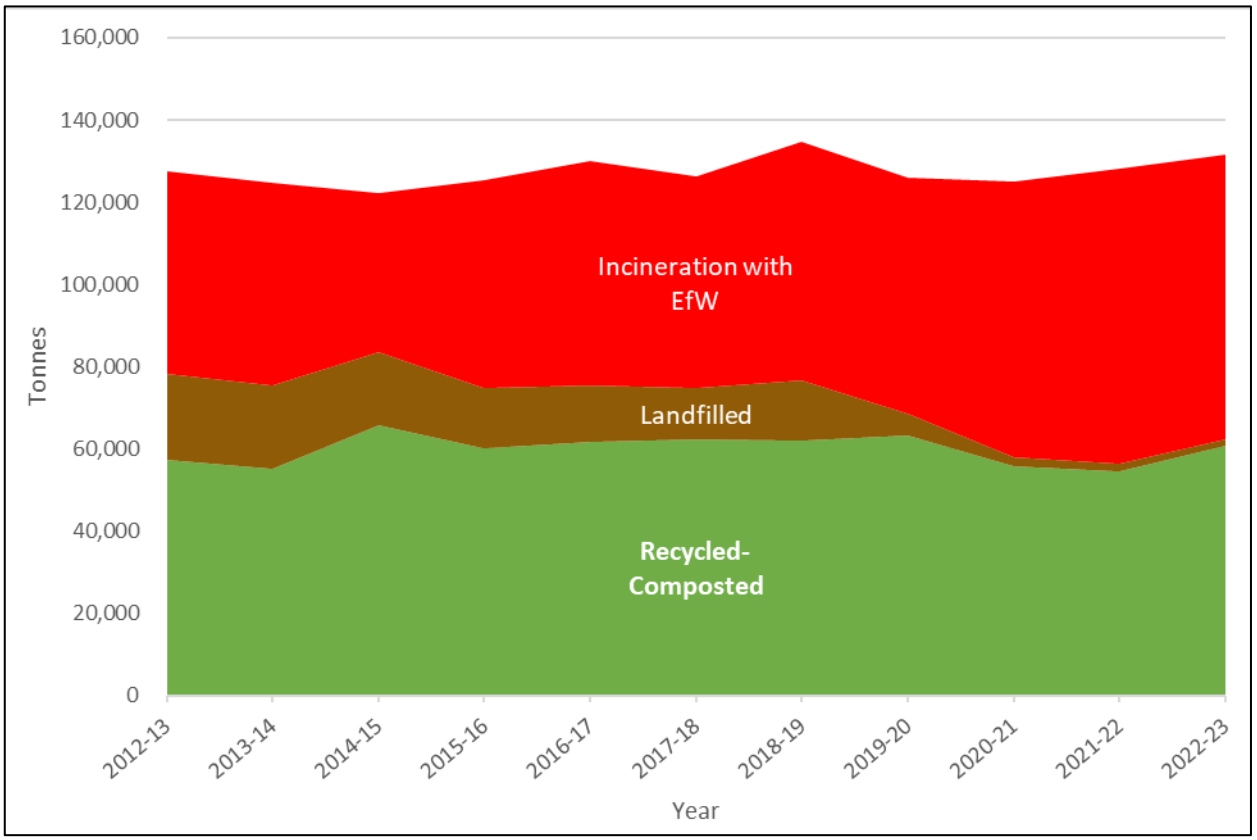



**Figure 9 - Management Profile for Medway LACW 2012/13 - 2022/23**

2.2.9 Management arrangements change from year to year according to the availability of management capacity and Table 2 sets out the final point of management of the LACW that was produced in Medway in 2022.

[44] This relates to LACW which extends beyond household waste. Hence the recycling rate shown does not correspond to that reported to DEFRA under NI192.

2.2.10 Recyclable materials from LACW collected separately at the kerbside are taken to a waste transfer station within Medway for bulking and then onto a Materials Recycling Facility (MRF) located in the London Borough of Southwark operated by the main contractor Veolia.

2.2.11In 2022 around 18,500 tonnes of recyclate was managed via the Medway bulking facility, with c14,000 tonnes going on to be managed at the Southwark MRF. Also, c21,000 tonnes of mixed green and food waste collected from households or delivered to the three Household Waste Recycling Sites provided by Medway Council, was managed at composting facilities located outside Medway. All residual waste also ended up being managed at locations beyond Medway.

**Table 2: Final Fate Destinations of Medway LACW Arisings 2022 (500+ tpa)**

| | **Final Fate Destination Site** | **Note** |
|---|---|---|
| **Residual Waste** | SELHP Lewisham | Energy from Waste |
| | Kemsley EfW facility (Sittingbourne, Kent) | |
| | Cory Environmental (Belvedere, London Borough of Bexley) | |
| | Street Fuel Refuse Derived Fuel (RDF) and Waste Transfer Station (WTS) (Chatham, Medway) | RDF for export |
| | Kings Cliffe Landfill (Northamptonshire) | Landfill |
| | Rainham landfill (London Borough of Havering) | |
| **Dry Mixed Recyclables** | Veolia WTS, Rochester | WTS/MRF |
| | Veolia LB Southwark | |
| **Mixed Green & Food Waste** | Envar Composting Cambs | IVC |
| | West London Composting, Middx | |
| **Rubble** | Gallagher Aggregate Hermitage Quarry Kent | Aggregate Recycling |
| **Wood** | Countrystyle Recycling Ridham Kent | Wood Shredding |
| **WEEE**[45] | Sweeep Kuusakoski Sittingbourne, Kent | WEEE Recycling |

2.2.12 The existing three Household Waste Recycling Centres and Waste Transfer Station are expected to come under increased pressure with the forecast growth in population of Medway over the Local Plan period, creating demand for additional management capacity. This need could be met by upgrades to the existing facilities, but consideration may also be given to other options such as creating a single purpose-built facility in an accessible and appropriate location within Medway.

2.2.13 The current waste disposal contract is due to expire in 2035. The replacement contract may result in changes to where LACW arising in Medway is managed and the suitability of any related proposals in Medway which require planning permission would be considered against the policies in the new Medway Local Plan. If future management options for Medway's waste are to include a residual waste management facility located within Medway (such as energy from waste (EfW)),

[45] Waste Electronic and Electrical Equipment

planning for this would need to commence up to 10 years prior to it being required. Planning permission has been granted for an Energy Centre as part of the 'Medway One' redevelopment of the old Kingsnorth power station site which could accept up to c200,000tpa of refuse derived fuel (RDF) or solid recovered fuel (SRF).

2.2.14 The WNA found that the requirement for management of all residual waste (not just residual LACW) by 'other recovery' (EfW) initially increases over time, peaking at c94,500 tpa in 2028, and then declines to c83,600 tpa in 2041.

2.2.15 Residual LACW may continue to be exported from Medway for 'other recovery' (e.g. to Kent). The existence of consented capacity does not necessarily mean that the capacity will be made available commercially or that it is necessarily located in the optimal location to manage Medway's LACW waste arisings in accordance with the proximity principle. The Medway Council Waste Disposal Authority may therefore identify a need for additional facilities to serve the LACW contract over and above that identified. Such a need would be expected to be set out in any update to the MWMS.

***Commercial and Industrial Waste***

2.2.16 The WNA found that 141,000 tonnes of C&I waste was produced in Medway in 2022[46]. The WNA found that around 68% of C&I waste arising in Medway was recycled/composted or recovered in some way in 2022. The Waste Management Plan for England suggests that for the country as a whole, the recycling rate of non-household municipal waste[47], that is materials similar in nature to household waste but arising in the C&I waste stream, was approximately 43% indicating the level achieved in Medway may be exceeding national performance.

2.2.17 Much of the LACW and C&I waste is of a similar composition and so may be managed at the same facilities. The WNA found that the following capacity types exist within Medway which are capable of managing LACW and C&I waste[48] exist within Medway:

- Waste Recycling:[49]
    - In vessel composting – 32,000tpa[50]
    - CDEW Recycling Capacity - 147,500 tpa
    - LACW/C&I Recycling Capacity inc metals – c553,000tpa[51]

- Waste Recovery (other than recycling/composting):
    - RDF Production Capacity (from LACW and C&I)[52] - c 400,000tpa

[46] Production of C&I waste increased from c237,500t in 2018 to c251,000t in 2019 but then fell to c189,000t in 2020, in 2022 it decreased to c141,000t.
[47] Note that this does not include the industrial element of C&I waste.
[48] See Table 6 Medway Waste Needs Assessment 2022 – Main Report, BPP Consulting, June 2024
[49] Kerbside collected LACW recyclate sent to Veolia MRF in Southwark. This is a c85,000tpa capacity MRF and receives waste from across the wider South East.
[50] Single IVC at Kingsnorth Industrial Estate, Hoo; currently managing c 30,000 t of sewage screening & sludge. This is a specialist facility which may not be suitable to process other waste for which IVC may be sought such as food waste.
[51] Including HWRC Capacity for LACW plus c89,000 tpa at P&D Material Recovery at Berth 6 Chatham Docks which may be lost if Chatham Docks are redeveloped.
[52] Berth 6, Chatham Docks (Streetfuel).

**Table 4 – Existing Waste Management Capacity in Medway**

| Capacity Type | Assessed capacity | | | | |
|---|---|---|---|---|---|
| | Non-inert waste | | | Inert waste | |
| | Recycling | Transfer (without recycling) | 'Other Recovery' | Recycling | Recovery (restoration) |
| Other Recycling | 512,732 | - | - | - | - |
| Organic Waste Treatment[53] | 31,987 | - | - | - | - |
| HWRC Recycling | 40,344 | - | - | - | - |
| Recycled Aggregate | - | - | - | 99,282 | - |
| Waste Transfer | - | 24,000 | - | - | - |
| 'Other Recovery' | - | - | 392,000 | - | - |
| Inert Waste Landfill | - | - | - | - | 2,881,200 |
| Total | 585,000 | 24,000 | 392,000 | 99,000 | 2,881,000 |
| | 3,981,000 | | | | |

***Construction, Demolition and Excavation Waste***

2.2.18 The WNA found that approximately 152,500 tonnes[54] of CDEW was produced in Medway in 2022 however, the data shows CDEW arisings to be highly variable which to some extent reflects construction activity in Medway[55]. Different types of CDEW require different forms of management. For example, hard inert[56] materials (such as concrete, brick and road planings arising from demolition and road maintenance) can be recycled for use as an aggregate, while soft materials such as soils and sub-soils can be used in the restoration of minerals workings and in other engineering projects. The non-inert component includes timber, plasterboard and plastics may be recycled if separated. Ultimately there is very little CDEW that cannot be recycled or recovered in some other way.

2.2.19 An estimated breakdown of the overall CDEW waste stream into the main different types of waste is included in the WNA 2024 update report on CDEW Waste.

2.2.20 The WNA estimates that around 86% of CDEW arising in Medway is recycled or recovered which is well above the national target of 70% by 2020[57].
Existing consented CDEW management facilities in Medway offer the following capacity:

[53] Site classed as intermediate because of the c11,000 tonnes of waste that went to the site in 2022, c9,500 tonnes left the site for further management.
[54] Breakdown of CDEW set out in Table 16 of Medway Waste Needs Assessment, CDEW Waste Report, BPP Consulting, June 2024
[55] Production of C, D & E waste increased from c180,000t in 2018 to c227,000t in 2019 but then fell to c130,000t in 2020.
[56] Inert waste is defined as "waste that does not undergo any significant physical, chemical or biological transformations".
[57] Backfilling operations using waste to substitute other fill materials may be counted towards the target. i.e. backfilling of mineral workings may be classed as recovery; Naturally occurring material categorised under EWC 17 05 04 (soil & stones) is excluded from the target. i.e. its use is unconstrained by targets.

- Inert Waste Landfill – just under 2.0 million cubic metres (2.9 million tonnes (at 1.5t/$m^3$))
    - Alpha Lake, North Sea Terminal, Cliffe - 1,000,000 m3[58];
    - Chalk Lake, North Sea Terminal, Cliffe - 400,000 m3[59]
    - Manor Farm Barn Landfill Frindsbury - 520,800 m3
- Inert Waste Recycling - three sites capable of producing recycled aggregate with a combined production capacity of 157,000 tpa.
- Non-inert Recycling/composting – 16,000 tpa.

2.2.21 Given the estimated peak capacity requirement for managing CDEW is estimated to be around 184,500 tpa for the Plan period, there appears to be sufficient capacity to manage virtually all Medway's CDEW arisings through recycling providing its composition makes it amenable to that form of management.

2.2.22 Soft inert excavation material may be deposited on land for beneficial purposes which may be consented as non waste development and, either subject to an Environmental Permit as a recovery to land operation or managed under the CL:AIRE definition of waste protocol. If the latter case applies, the material managed through this route is not classed as waste and so is not reported through the WDI, and hence a fall in arisings may be indicated.

***Hazardous Waste[60]***

2.2.23 Hazardous wastes are categorised as those that are harmful to human health, or the environment, either immediately or over an extended period of time. In Medway, hazardous waste arises mainly from: construction and demolition activity, vehicle maintenance and/or dismantling activity and healthcare. Approximately 41,500 tonnes of hazardous waste was produced in Medway in 2022 and Table 5 shows the principal types of hazardous waste produced (as identified by the WNA):

**Table 5: Principal Hazardous Waste Types Arising in Medway in 2018 and 2022**
*Source: HWI, Environment Agency*

[58] Part of this capacity falls within Kent, but Medway Council determined the planning application.
[59] See footnote above
[60] See Medway Waste Needs Assessment, 'Hazardous Waste' Report, BPP Consulting, June 2024

| Hazardous Waste Type/Source | WNA 2020 | WNA 2024 update | Growth p.a. |
|---|---|---|---|
| | 2018 | 2022 | |
| Vehicle Maintenance inc ELV components[61] | 12,938 | 13,040 | 0.20% |
| Construction, Demolition & Excavation | 4,540 | 18,183 | +75.13% |
| Oil & Liquid Fuel Waste | 2,069 | 1,602 | -5.64% |
| Clinical Waste | 1,667 | 1,854 | +2.80% |
| WEEE | 894 | 645 | -6.86% |
| *Subtotal* | 22,108 | 35,324 | +14.94% |
| Other wastes | 2,387 | 6,261[62] | +40.57% |
| **Total Projected Arisings** | **24,495** | **41,586** | **17.44%** |

2.2.24 The total assessed management capacity for hazardous waste in Medway is approximately 52,500tpa[63] hence this indicates that Medway has sufficient capacity to manage the equivalent tonnage of hazardous waste[64]. The majority of hazardous waste produced in Medway in 2022 was managed outside the Plan area. The destinations of the main hazardous waste are shown in Table 6 below:

**Table 6: Fates of Medway Principal Hazardous Waste Types (by waste type)**
*In order of receiving region (largest to smallest); Source: HWI 2022*

| WPA | Waste Description |
|---|---|
| Cambridgeshire | Hazardous C, D & E waste |
| | Oil filters |
| | Antifreeze fluids |
| | Hazardous packaging |
| | Absorbents, filter materials, wiping cloths, PPE |
| | Hazardous soil and stones |
| | Bilge oils |
| Suffolk | Mineral-based non-chlorinated engine, gear and lubricating oils |
| | Oily water from oil/water separators |
| | Bilge oils |
| Thurrock | Bituminous waste |
| Peterborough | Asbestos |
| Essex | Various wastes sub 100 tonnes |
| Surrey | Hazardous soil and stones |
| Kent | Wastes from grit chambers and oil/water separators |
| | Infectious waste |

[61] Substantial tonnage c10,000 tonnes arise from the Kingsnorth Waste Oil Treatment Facility whose inputs originate from outside Medway. Therefore, it could be said this waste does not actually arise in Medway itself.
[62] Includes c4,000 tonnes of hazardous process residues.
[63] See Medway Waste Needs Assessment, 'Hazardous Waste' Report, BPP Consulting, June 2024
[64] N.B. National Policy does not expect individual WPAs to achieve self sufficiency in hazardous waste management capacity, due to the specialist nature of facilities required for its management.

| WPA | Waste Description |
|---|---|
| | Oily water from oil/water separators |
| | Mineral-based non-chlorinated insulating and heat transmission oils |
| | Asbestos |
| | WEEE |
| Hampshire | Cytotoxic and cytostatic medicines |
| | Hazardous chemicals |
| East Sussex | Discarded equipment containing CFCs |
| Wolverhampton | Hazardous soil and stones |
| Worcestershire | Infectious waste |
| Walsall | Various wastes sub 100 tonnes |
| Sandwell | |
| Northamptonshire | Hazardous soil and stones |
| Derbyshire | Lead batteries |
| Leicestershire | Various wastes sub 100 tonnes |
| Stockton-on-Tees | Mineral-based non-chlorinated engine, gear and lubricating oils |
| | Oily water from oil/water separators |
| Dorset | Various wastes sub 100 tonnes |
| Bristol City | |
| Kingston Upon Hull City | Mineral-based non-chlorinated engine, gear and lubricating oils |
| Sefton | |
| Bexley | Various wastes sub 100 tonnes |

***Wastewater and Sewage Sludge***

2.2.25 Wastewater generally comprises surface water runoff and effluent discharged to the foul sewer system from homes and industrial and commercial premises from where it is channelled to wastewater treatment works for treatment[65]. Output of this treatment is sewage sludge that may, if it meets certain parameters, be applied to land as a fertiliser in accordance with the Sludge (Use in Agriculture) Regulations 1989 and associated best practice guidance. Sludge applied in this manner falls outside the normal regulatory regime for waste. The cleaner effluent may be discharged to a watercourse or the sea in accordance with a discharge consent granted by the Environment Agency.

2.2.26 In Medway wastewater and sewage sludge are managed by Southern Water and the principal wastewater treatment works is at Motney Hill, Rainham, Gillingham, which lies to the extreme north west of the Plan area. The works include an anaerobic digestion plant where sludges from other wastewater treatment works may be taken to produce biogas, a renewable energy source.

[65] These works can provide a valuable function in managing wastes, other than wastewater, that arise in liquid and sludge form such as septic tank emptyings

### *Agricultural Waste*

2.2.27 Given the relatively small amount of agricultural land in Medway the WNA concludes that arisings of agricultural waste are small, with quantities requiring offsite management particularly low.[66]

### *Low level radioactive waste*

2.2.28 Very little if any LLW is produced within Medway, and the small quantities of Very Low level radioactive waste (VLLW) will be managed through existing arrangements[67].

### *Non-hazardous Residual Waste*

2.2.29 Residual waste is the non-hazardous non-inert waste left over after reuse and recycling. Residual waste is principally derived from the LACW and C&I waste streams. This waste is generally managed either as a fuel by incineration with energy recovery (referred to as energy from waste) and is categorised as a form of 'other recovery' providing it meets minimum standards for energy efficiency, or landfill.

2.2.30 A facility in Medway converts residual waste to refuse derived fuel (RDF) which is sent to EfW facilities located within the UK or elsewhere in Europe. Conversion to RDF makes the waste easier to transport and creates a more homogenous feedstock with a consistent calorific value. Export of RDF is controlled by the Environment Agency, and for material to be regarded as such it must be compliant with the definition adopted by DEFRA for the UK.

2.2.31 Exports of RDF from England have been decreasing since a peak in 2018 of 3.2 million tonnes. 1,159,000 tonnes of RDF were exported from England in January-September 2023, compared with 1,059,000 during the same period in 2022. Current RDF production capacity in Medway allows production of up to 400,000 tonnes of RDF each year which represents significantly more residual waste than is forecast to require management arising in Medway itself in any of the Local Plan period years (max being c126,000 tonnes).

2.2.32 With regard to the provision of EfW capacity within Medway, it should be noted in that outline planning consent was granted by Medway Council for the Medway One development in August 2023. This included provision for an Energy Centre, which might be an EfW plant with a capacity of around 200,000tpa[68]. Proximate EfW capacity also exists in the adjoining Plan area of Kent.

### *Landfill*

2.2.33 Disposal of non-inert waste to landfill can give rise to liquid pollutants (known as leachate) arising from the breakdown of waste which present a risk to surface or ground waters if not properly contained. Hence the ability of an area to

[66] See para 3.12 Medway Waste Needs Assessment, 'Other Waste' Report, BPP Consulting, July 2020

[67] See para 4.9 Medway Waste Needs Assessment, 'Other Waste' Report, BPP Consulting, July 2020

[68] It should be noted that the throughput capacity of energy from waste plants is determined by a combination of the heat load, and the mass of the waste. Although plants are designed to have some degree of tolerance, this means that if the calorific value of feedstock increases beyond the plant design limitations then the actual throughput capacity will be reduced.

accommodate non-inert waste landfill capacity largely depends on the underlying geology and associated hydrology and hydrogeology.

2.2.34 Much of Medway sits on chalk, a highly permeable rock that often forms aquifers. This means facilities involving the permanent deposit of non-inert waste should not normally be located on it. However, chalk quarries can, and have been, restored using inert materials where appropriate pollution controls have been put in place. Unlike other areas of Medway, the geology of the Hoo Peninsula includes London Clay which is a low-permeability material on which the permanent deposit of non-inert waste that cannot be managed in any other way might take place.

2.2.35 Strict controls relating to groundwater protection and landfill design and operation, combined with increasing landfill tax, make the prospect of a new non-inert waste landfill being developed in Medway remote. In addition, the quantity of waste requiring disposal is expected to continue to decline rapidly with diversion to EfW facilities, meaning that non-inert waste landfill development in Medway is unlikely to be viable. This is reflected by the fact that, in response to the Call for Sites, no sites were promoted for the development of such a facility in Medway.

2.2.36 The Medway WNA estimates that only c358,000 tonnes of residual non-inert waste will require landfill over the entire Plan period with only c7,500 tonnes requiring landfill in the final year. Environment Agency data confirms the availability of non-inert waste landfill capacity in the Medway sub-region and wider catchment as set out in Table 7 below.

**Table 7: Permitted Non-Inert Landfill Void, Medway sub-region and wider catchment, 2022 (in million cubic metres)[69]**

| Location | Plan Area | Permitted Void at end of 2022 (Mm3) |
|---|---|---|
| Medway sub region | Kent | 1.24 |
| | Essex | 4.07 |
| | Thurrock | 0.73 |
| | ***Sub Total*** | ***6.04*** |
| Wider catchment | Cambridgeshire | 14.0 |
| | East London | 1.34 |
| | South London | 0.50 |
| | Suffolk | 2.87 |
| | Surrey | 1.92 |
| | ***Sub Total*** | ***20.63*** |
| | **Grand Total** | **26.67** |

2.2.37 The majority of non-inert residual waste arising in Medway is currently managed at Pitsea landfill site in Kent and Ockendon landfill site in Thurrock.

[69] The Environment Agency data only accounts for capacity that has received an environmental permit. It may be that void has been consented by planning authorities that has yet to be permitted by the Agency, for example void to be created as a result of mineral extraction. Therefore, the above values may represent an underestimate of non-inert waste landfill capacity available in the sub region.

## Appendix 1 - List of Safeguarded Minerals Supply Infrastructure

The following is a list of the permitted minerals supply infrastructure in Medway which was correct at the time the Plan was adopted. The latest list of permitted minerals supply infrastructure can be found in the latest Annual Monitoring Report.

| **Site Name** | **Operator** |
|---|---|
| Frindsbury Wharf (Euro Wharf) | Hanson |
| Grain Terminal (Wharf and Rail Depot) | Aggregate Industries |
| North Sea Terminal, Cliffe (Wharf and Rail Depot) | Brett Aggregates |
| London Thamesport (Wharf) | Medway Aggregates |
| Cliffe Trupak, Salt Lane (Bagging plant) | Brett Aggregates |
| Kingsnorth Sand and Gravel Quarry – Aggregate Processing Plant (Temporary permission) | Tarmac |