South Yorkshire Waste Planning Authorities
(Barnsley Metropolitan Borough Council, Doncaster Metropolitan Borough Council, Rotherham Metropolitan Borough Council, and Sheffield City Council)

Waste Needs Assessment (2021-2041)

April 2022

Prepared by the Minerals and Waste Planning Services for Northamptonshire (North Northamptonshire Council)

Contents

Executive summary

The South Yorkshire Waste Planning Authorities of Barnsley Metropolitan Borough Council, Doncaster Metropolitan Borough Council, Rotherham Metropolitan Borough Council, and Sheffield City Council have produced a joint Waste Needs Assessment that covers the whole of the South Yorkshire sub-region.

Jointly, the Waste Planning Authorities of South Yorkshire currently[1] produce just under 3 million tonnes per annum (Mtpa) of various types of waste, this includes around 0.590 million tonnes (Mt) of municipal waste (20%); 0.877 Mt of commercial and industrial waste (30%); 1.319 Mt of construction, demolition, and excavation waste[2] (45%); and 0.161 Mt of hazardous waste (5%). Forecasts indicate that waste arisings could increase to just over 3.5 Mtpa by 2041.

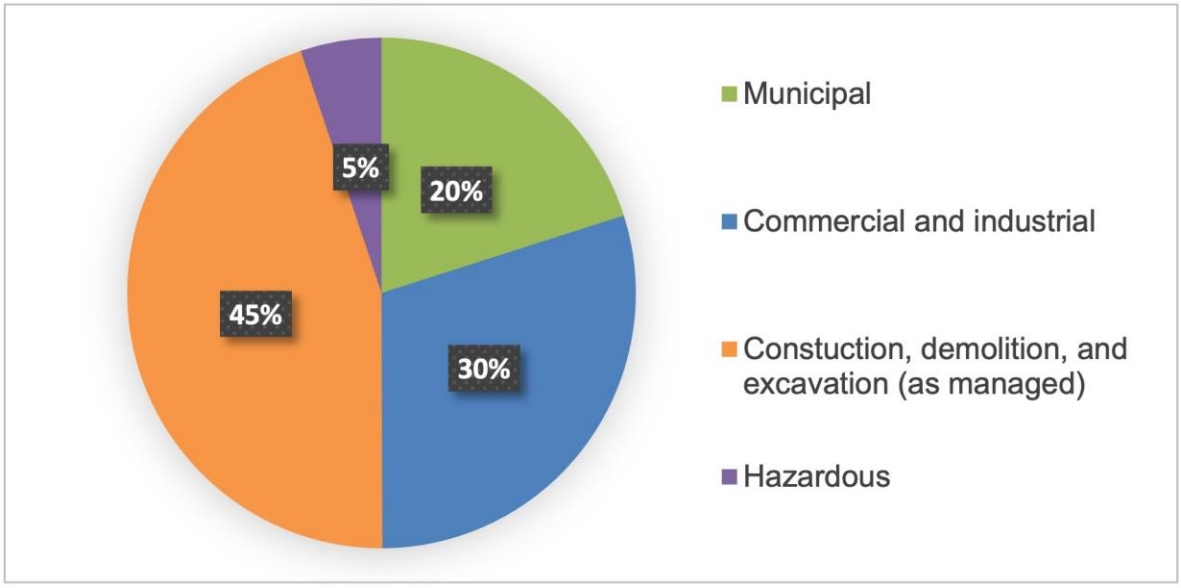


Figure ES1: Estimated waste arisings for South Yorkshire 2021 (million tonnes)

Non-hazardous waste produced in South Yorkshire is currently managed via a range of management methods, achieving a total recovery rate of around 93%. Management methods and approximate rates include: processing of waste in preparation for reuse or recycling (including inert recycling) 37%; treatment (including energy recovery, chemical/physical treatment, etc.) 26%; soil treatment 3%; inert recovery 23%; non-hazardous landfill (including stable non-reactive hazardous waste) 6%; and hazardous recycling and recovery 5%. Inert landfill, incineration with no energy recovery, and hazardous landfill were all less than 1%.

1 Refers to estimates for 2021 arisings – based on data 2016 to 2020.
2 CD&E waste shown are as managed. A significant proportion of total arisings managed on-site or at exempt sites.

Forecasts indicate that South Yorkshire could achieve a total recovery rate of over 95% by 2030.

A significant amount of residues from treatment processes are also produced from facilities located within South Yorkshire, from treatment of waste arising from both South Yorkshire and from waste imported into South Yorkshire (estimated at just over 0.300 Mt and 0.400 Mt respectively for 2020).

South Yorkshire does not produce low-level radioactive waste from the nuclear industry[3]. A very small amount of low-level radioactive waste is produced from the non-nuclear industry from South Yorkshire[4]. In addition, agricultural waste and wastewater are also produced.

Of total waste arising[5] attributed to South Yorkshire, around a third was exported to other Waste Planning Authorities. The majority of which was received at facilities for treatment and recovery, disposal (mainly non-hazardous (including stable non-reactive hazardous waste landfill), and processing in preparation for reuse and recycling (including composting and inert recycling).

Waste management facilities within South Yorkshire reported receiving a significant amount of waste imported from other Waste Planning Authorities; around three times that exported from South Yorkshire, meaning that the South Yorkshire Waste Planning Authorities are a net importer of waste. The main management methods of waste imported into South Yorkshire included materials recycling, physical treatment, energy recovery, and inert recovery. Not all waste can be managed within the boundary of the Waste Planning Authority from within which it arises due to contractual arrangements and other factors such as the need for specific treatment processes (e.g. hazardous wastes). There will normally be some movement of waste into and out of Waste Planning Authorities; this is reflected by the position of seeking net self-sufficiency. With a broader movement of Waste Planning Authorities also seeking to increase their waste management capacity in line with net self-sufficiency movements are expected to reduce in the future, although some movements will still occur.

Waste arisings forecast up to 2041 and future needs (incorporating relevant targets) are summarised in Table ES1 and Figure ES2. In addition, some residual waste will be produced as an output from waste treatment processes. This means that there may be a need for additional capacity to push these residual wastes up the waste management hierarchy, but also a need for some disposal to landfill

3 UK Radioactive Waste Inventory 2019 https://ukinventory.nda.gov.uk/the-2019-inventory/2019-site-data/

4 A survey undertaken by the Department of Energy and Climate Change (DECC) in 2008, Data Collection on Solid Low Level Radioactive Waste from the Non-nuclear Sector, indicated that South Yorkshire produced 31.33m^3 of low activity low level radioactive waste from the non-nuclear industry.

5 Total waste arisings = waste received to facilities within South Yorkshire (i.e. arising from South Yorkshire and managed within South Yorkshire) + waste removed from South Yorkshire (i.e. arising from South Yorkshire exported to other Waste Planning Authorities for management).

(albeit the least preferred option) where further recovery of such residues is not possible.

Overall, South Yorkshire is making good progress towards achieving net self-sufficiency for waste management. Existing facilities provide for more than sufficient capacity with regards to net self-sufficiency for preparation for reuse and recycling, treatment and energy recovery, and soil treatment over the reporting period, and inert recycling up to 2025. When viewed in terms of total arisings and existing capacity South Yorkshire currently provides waste management capacity that exceeds total arisings; the majority of this capacity is associated with facilities for preparation for reuse and recycling, and treatment and energy recovery.

Capacity gaps have been identified for composting, inert recycling, inert recovery, and non-hazardous (including stable non-reactive hazardous wastes) landfill, as well as hazardous recovery and treatment and hazardous landfill.

There is potential, dependant on the scale of the individual facilities and processes employed, for the following facilities to be provided within the South Yorkshire area: composting (or other biological treatment processes), inert recycling, and inert recovery associated with restoration (e.g. colliery or mineral extraction sites). In addition, given the significant amounts of residues arising from treatment processes (from facilities located within South Yorkshire), facilities for further recovery and treatment of residues (arising as outputs from treatment processes) may support the waste management hierarchy and further diversion of waste from landfill.

The appropriateness of South Yorkshire to accommodate extensions to existing non-hazardous landfill or additional capacity for hazardous recovery and treatment would need to be determined on a site by site basis and in compliance with adopted development management policies. Given current trends within the waste management sector (rationalisation of assets and market responses to demand for disposal) some of the future needs for such capacity is likely to continue to be met at facilities outside of the South Yorkshire area, i.e. through the continued export of waste to other Waste Planning Authority areas. No strategic or Duty to Co-operate matters have been identified in relation to the principle or continuation of such movements. Ongoing monitoring of waste movements particularly for disposal to non-hazardous landfill (including residues) and continued working with relevant Waste Planning Authorities regarding strategic waste planning matters will be necessary to ensure that wastes are managed, and that any necessary capacity planned for, appropriately.

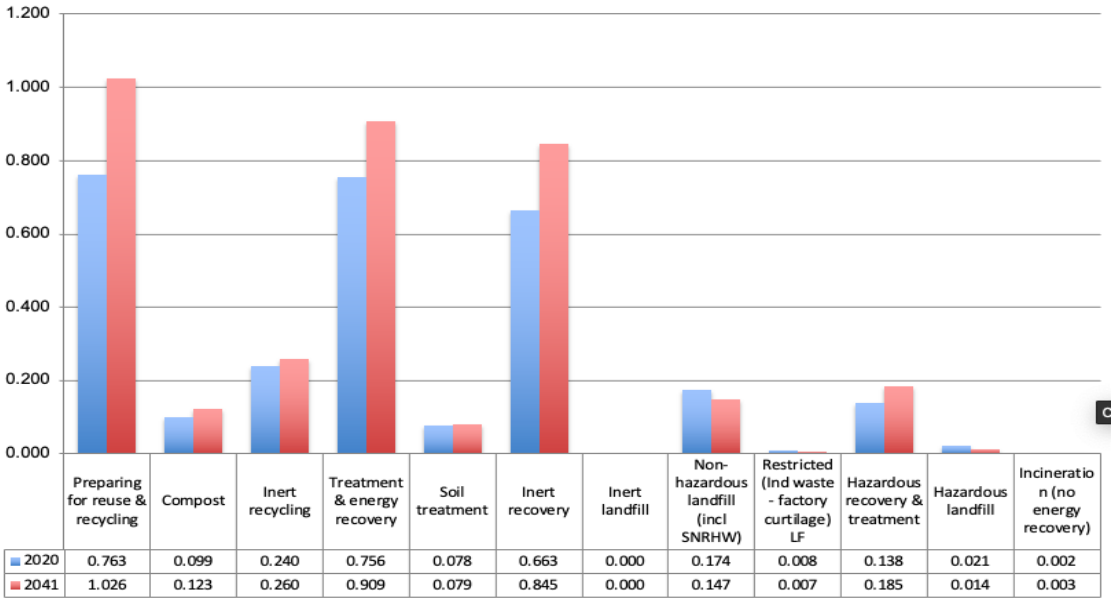
Table ES1: Summary of waste arisings and future needs up to 2041 (million tonnes per annum)

			Indicative total waste management capacity needs				
			2021	2026	2031	2036	2041
Total waste arisings			2.890	3.230	3.375	3.481	3.592
Non-hazardous waste management							
Preparing for reuse and recycling	Materials recycling	Forecast arisings	0.785	0.876	0.933	0.984	1.026
		Existing capacity	1.784	1.784	1.784	1.784	1.784
		Capacity gap	0.999	0.908	0.851	0.800	0.758
	Composting	Forecast arisings	0.105	0.109	0.114	0.119	0.123
		Existing capacity	0.086	0.086	0.086	0.086	0.086
		Capacity gap	-0.019	-0.023	-0.028	-0.033	-0.037
	Inert recycling	Forecast arisings	0.204	0.247	0.259	0.260	0.260
		Existing capacity	0.312	0.188	0.188	0.158	0.158
		Capacity gap	0.108	-0.060	-0.072	-0.102	-0.102
Treatment and other forms of recovery	Treatment and energy recovery[A]	Forecast arisings	0.736	0.775	0.816	0.862	0.909
		Existing capacity	1.702	1.702	1.702	1.702	1.702
		Capacity gap	0.966	0.927	0.886	0.840	0.793
	Soil treatment	Forecast arisings	0.062	0.075	0.079	0.079	0.079
		Existing capacity	0.210	0.210	0.210	0.128	0.128
		Capacity gap	0.147	0.134	0.130	0.048	0.048
Other recovery	Inert recovery[B]	Forecast arisings	0.643	0.797	0.845	0.845	0.845
		Existing capacity	0.800	0.285	0.045	0.045	0.045
		Capacity gap	0.157	-0.512	-0.800	-0.800	-0.800
Non-hazardous waste disposal							
Disposal - Non-hazardous landfill		Forecast arisings	0.192	0.177	0.150	0.143	0.147
		Existing capacity	0.300	0.200	0.200	0.000	0.000
		Capacity gap	0.108	0.023	0.050	-0.143	-0.147
Hazardous waste management							
Recovery and treatment		Forecast arisings	0.140	0.152	0.161	0.172	0.185
		Existing capacity	0.154	0.154	0.154	0.154	0.154
		Capacity gap	0.014	0.002	-0.007	-0.018	-0.031
Disposal - Hazardous landfill		Forecast arisings	0.015	0.011	0.012	0.013	0.014
		Existing capacity	0.000	0.000	0.000	0.000	0.000
		Capacity gap	-0.015	-0.011	-0.012	-0.013	-0.014

A - Treatment and energy recovery refer to Anaerobic Digestion, Energy from Waste, and other physical/chemical treatment processes.

B - Available data indicates that, within South Yorkshire, inert waste that may elsewhere be disposed of to inert landfill is recovered through deposit of inert waste to land for beneficial purposes such as restoration of mineral extraction sites with extant planning permission. Updated data was not available for one inert recovery site and so the existing capacity may be slightly more than in the table above. Work is ongoing to address this data gap. In addition, inert materials will be required for engineering and restoration of non-hazardous landfill sites (estimated at 0.070 Mtpa up to 2025, 0.110 Mtpa 2025-2027, and 0.030 Mtpa 2028-2033); further reducing inert recovery capacity gaps.

A small amount of waste (<1%) is disposed of through incineration without energy recovery and at restricted landfill (associated with a specific industrial process and not receiving other waste types, located within the factory curtilage).



	Preparing for reuse & recycling	Compost	Inert recycling	Treatment & energy recovery	Soil treatment	Inert recovery	Inert landfill	Non-hazardous landfill (incl SNRHW)	Restricted (Ind waste - factory curtilage) LF	Hazardous recovery & treatment	Hazardous landfill	Incineration (no energy recovery)
2020	0.763	0.099	0.240	0.756	0.078	0.663	0.000	0.174	0.008	0.138	0.021	0.002
2041	1.026	0.123	0.260	0.909	0.079	0.845	0.000	0.147	0.007	0.185	0.014	0.003

Figure ES2: Comparison of management methods for waste arisings from within South Yorkshire 2020 and 2041 (million tonnes)

Waste planning context

National and European policy

1. The National Planning Policy Framework (NPPF) was published July 2021 and although it does not specifically address waste matters, it does influence waste planning and related matters. Detailed waste planning policies are set out in the National Planning Policy for Waste (NPPW), published in October 2014. The NPPW is to be read in conjunction with the NPPF, the National Waste Management Plan for England, and National Policy Statements (NPS) for wastewater and hazardous waste. Our Waste, Our Resources: A Strategy For England was published in December 2019 and sets out the national strategy for continuing to make step-changes towards achieving sustainable waste management by preserving material resources through the minimisation of waste, promoting resource efficiency and moving towards a circular economy.

2. The Environment Act 2021[6] received Royal Assent on 9 November 2021, and addresses waste and resource efficiency (Part 3). The Act empowers the Secretary of State (SoS) to set long-term targets in respect of any matter which relates to the natural environment or people's enjoyment of the natural environment. Within this general power, the SoS must set legally binding 'long-term' (15 year +) targets on at least one matter within each 'priority area'. Four priority areas are identified, including resource efficiency and waste reduction. Previously, the Government had stated that the Environment Bill would support achievement of a 65% recycling target for municipal waste by 2035. The Act also introduces extended producer responsibility (EPR) in particular for packaging waste, but with potential to include other products, that will see producers being made to account for the cost of managing products at the end of their life, and incentivising product durability, repairability, and recyclability.

3. In relation to the preparation of plans the NPPW requires Waste Planning Authorities (WPAs) to ensure that the planned provision of new capacity and its spatial distribution is based on robust analysis of best available data and information, and an appraisal of options. Spurious precision should be avoided. In addition, Local Plans should identify sufficient opportunities to meet the identified needs of their area for the management of waste streams and in doing so:

    - drive waste management up the waste hierarchy;
    - recognise the need for a mix of types and scale of facilities, and that adequate provision must be made for waste disposal (including for residues from treated wastes);
    - identify tonnages and percentages of waste requiring different types of management over the reporting period;

6 Environment Act 2021

- consider the extent to which existing operational facilities would satisfy any identified need;
- consider wider waste management needs; and
- work collaboratively (with other WPA's through the Duty to Cooperate) to provide a suitable network of facilities to deliver sustainable waste management.
- Local Plans, should also identify sites and/or areas for waste management facilities and in doing so:
  - identify the broad type(s) of facility that would be appropriate;
  - take account of the proximity principle (particularly regarding disposal and the recovery of municipal waste) and recognise the role of catchment areas in securing economic viability;
  - consider opportunities for on-site waste management;
  - consider a broad range of locations including industrial sites, and consider opportunities to co-locate waste management facilities together and with complementary activities; and
  - give priority to the reuse of previously-developed land, sites identified for employment uses, and redundant agricultural and forestry buildings and their curtilages.

4. The NPPW[7] also sets out criteria against which the identification of sites/areas for waste management facilities should be assessed.

5. In relation to the wider policy context the Waste Framework Directive (WFD) (2008/98/EC) sets out the concept of the waste hierarchy (prevention, preparation for reuse, recycling, other recovery e.g. energy recovery, and disposal), proximity principle and self-sufficiency. It also requires that waste is recovered or disposed of without endangering human health or causing harm to the environment. Article 28 of the WFD, concerning Waste Management Plans, requires an assessment of how the current waste management (including treatment and disposal) capacities will shift over time in response to the closure of existing waste management facilities and the need for additional waste installation infrastructure. The UK Waste Regulations 2011 transposes the WFD to UK law.

6. The Landfill Directive (99/31/EEC) aims to prevent or reduce as far as possible negative effects on the environment from the landfilling of waste, and setting targets for the reduction of biodegradable municipal waste going to landfill.

South Yorkshire Waste Planning Context

7. Barnsley Metropolitan Borough Council, Doncaster Metropolitan Borough Council, Rotherham Metropolitan Borough Council, and Sheffield City Council are the WPA

7 NPPW, refer to Appendix B: Locational Criteria

for the administrative areas that make up the sub-region of South Yorkshire[8]. The existing Barnsley, Doncaster, and Rotherham (BDR) Joint Waste Plan was adopted in 2012 and covers the period up to 2026. The Sheffield Core Strategy addresses waste planning matters within Sheffield and prepared separately to the BDR Joint Waste Plan. The Sheffield Core Strategy was adopted 2009 and covers the period up to 2026.

8. The NPPF requires Local Plans to be kept up-to-date, the National Planning Policy Guidance (NPPG) states that most Local Plans are likely to require updating in whole or in part at least every five years.

9. The waste arisings and future capacity needs identified through the existing WLP were based on the best available data and methodology, policy requirements, and targets relevant at the time of production. Rolling the adopted waste forecasts forward would be unlikely to be found sound as these do not capture recently released data and other information, may not comply with current policy requirements (including targets), and do not reflect changes in local circumstance and emerging trends.

10. Preparation or review of any Waste Local Plan (WLP) will require an updated evidence base to inform and support the plan-making process, including a Waste Needs Assessment (WNA). The WNA will form one of the key evidence documents to support such a review and will be updated as necessary through the plan-making process in order to reflect any updated or new data/information (as relevant). Other evidence base documents will, where necessary be produced, reviewed, and updated to reflect local circumstance and emerging trends, and to more closely align with national policy, guidance, and strategies.

11. South Yorkshire has a Joint Municipal Waste Management Strategy (MWMS)[9], however this document only covered the period up to 2021. The Joint MWMS includes targets of increasing recycling by 10kg per household by 2021, and reducing household waste by 2kg per household each year, year-on-year until 2021. Given that the baseline reporting year for this WNA is 2020 and that the date of preparation of the model and report is 2021/22 these targets were not able to be incorporated. Preparation of an updated Joint MWMS is likely to commence in the near future. The aims (and existing contracts underpinning these) and targets of the Joint MWMS, will be incorporated into this WNA as appropriate.

Waste Needs Assessment

12. The purpose of this WNA is to:

- provide an up-to-date picture for South Yorkshire of – the amount of waste currently generated (arisings), the amount of waste anticipated to arise over the reporting period (up to 2041) and existing waste management capacity;

8 Herein referred to as South Yorkshire or the WPA area.
9 South Yorkshire Joint MWMS http://www.bdronline.co.uk/what-are-we-doing/south-yorkshire-municipal-waste-management-strategy-1/1

- identify South Yorkshire's future management needs (and the extent to which existing capacity satisfy identified future needs) and identify the broad type(s) of facility(ies) that may be required to manage waste appropriately and facilitate delivery of net self-sufficiency;
- give consideration to wider waste management needs (where relevant); and
- identify and discussing strategic waste movements and any potential Duty-to-Cooperate matters that should be addressed throughout plan-preparation.

13. WPAs should plan for the sustainable management of waste produced within their administrative area including: municipal waste (also referred to as Local Authority Collected Waste, LACW); commercial and industrial (C&I) waste; construction, demolition, and excavation (CD&E) waste; hazardous waste; radioactive wastes; agricultural waste; and wastewater.

14. The format and broad matters addressed through this report are outlined below:

- Current waste arisings – Identifies current waste arisings for waste streams, including methodology and data sources.
- Forecasting waste arisings over the reporting period – Identifies waste forecasts for waste streams by management method over the reporting period (up to 2041) incorporating relevant targets. Methodology and data sources used will also be identified.
- Waste management capacity – Identifies the existing waste management capacity and the capacity required to manage waste appropriately to achieve relevant targets and deliver net self-sufficiency (including future needs). Methodology and data sources used will also be identified.
- Waste movements – Identifies waste movements into and out of the WPA area as well as those considered strategic in nature and the identification of any Duty to Co-operate (DtC) matters. Consideration of wider waste management needs. Methodology and data sources used will also be identified.
- Conclusion – Overview of the assessment outcomes and summary tables for waste arisings, forecasts and capacity needs.

15. This WNA was prepared for the WPAs of South Yorkshire by the Minerals and Waste Planning Services for Northamptonshire (North Northamptonshire Council).

Regional Waste Technical Advisory Board and South Yorkshire Mayoral Combined Authority

16. South Yorkshire is located within the Yorkshire and the Humber region[10], the regional Waste Technical Advisory Body (WTAB) is not currently active. Sheffield, which is part of the South Yorkshire sub-region, is one of the largest settlements in the Yorkshire & Humber region. The Barnsley, Doncaster, Rotherham, and Sheffield WPAs that make up South Yorkshire account for around a quarter of the Yorkshire & Humber population.

10 Herein referred to as Yorks & Humber.

17. The South Yorkshire Mayoral Combined Authority's 20-year Strategic Economic Plan 2021-2041 (SEP), sets out an ambitious blueprint to drive the region's recovery from COVID-19 and transform South Yorkshire's economy and society for people, businesses and places; delivering a stronger, greener, and fairer economy.

18. Growing the local economy and alongside this providing the necessary new housing, infrastructure, and supporting services and facilities will bring challenges, including the generation and management of waste. In this context, the SEP aims to help deliver high-quality built and natural environments that will contribute to an improved quality of life and wellbeing, intrinsic to which is building a zero-carbon future.

19. Whilst this will be delivered across the region, the SEP also identifies a number of key growth areas where infrastructure investment packages will be developed, including: Advanced Manufacturing Innovation District; Town Centres of Barnsley, Rotherham, Doncaster, and Sheffield city Centre; Doncaster Unity; Goldthorpe in the Dearne Valley; and Doncaster Sheffield Airport.

20. In line with national policy and guidance[11], and current practice of WTABs and WPAs throughout England, this WNA will seek to identify the indicative future capacity needs based on the principle of net self-sufficiency. Wider waste management needs and strategic movements will also be taken into consideration as appropriate.

Methodology

21. This WNA has been prepared in line with the requirements set out in the NPPW and national guidance. The NPPG sets out guidance regarding how WPAs should identify the need for new waste management facilities, assess existing waste management capacity, forecast waste arisings over the reporting period, data sources, and monitoring and planning for London's waste (refer NPPG, Waste, paragraphs 022 to 044 www.gov.uk/guidance/waste).

22. Detail regarding the methodology applied to this WNA and how national guidance has been taken into account is set out under relevant sections of this report.

23. This WNA examines waste arisings, forecasts, and future waste management needs for the major waste streams of municipal, C&I, CD&E, and hazardous wastes. Consideration will also be given (to the extent possible) to residues arising from treatment of wastes, radioactive waste, agricultural waste, and wastewater.

Reporting period, data sources, and reporting

24. The reporting period for this WNA is from 01 January 2020 to 31 December 2041.

11 NPPG, Waste: Do the self-sufficiency and proximity principles require each waste planning authority to manage all of its own waste? Though this should be the aim, there is no expectation that each local planning authority should deal solely with its own waste to meet the requirements of the self-sufficiency and proximity principles. Paragraph: 007 Reference ID: 28-007-20141016
What should Local Plans deliver? The Local Plan relating to waste should identify sufficient opportunities to meet the identified needs of an area for the management of waste. Paragraph: 011 Reference ID: 28-011-20141016

25. Data sources for each waste stream are set out under relevant sections of this report with a reference list in Appendix 4.

26. The common baseline used for the municipal, C&I, CD&E, and hazardous waste streams is 2020. It should be noted that where data for 2020 was not available (e.g. national waste statistics) the most recent data was used and where possible extrapolated forward to provide an estimate of arising's as at 2020. This was not possible for some waste streams, in particular radioactive and agricultural waste. Data sources and reporting years are detailed for each waste stream under the relevant section(s) in this report.

27. Periods for data reported through this WNA are based on calendar years. Data for municipal waste is reported for financial years, whereas data reported through industry returns and surveys for other waste streams are generally for calendar years. For the purpose of this WNA the data will be taken to be on calendar year basis, that is data for the year 2020/21 will be taken as 2020; doing so will not significantly alter the results as three-quarters of the 2020/21 dataset is captured in 2020.

28. Data is reported in million tonnes (Mt) or million tonnes per annum (Mtpa), rounded to the nearest 1,000 tonnes to avoid spurious precision. The exception being hazardous wastes which is rounded to the nearest 500 tonnes as these wastes are produced in lesser amounts. For this reason, there may be some minor discrepancies where figures in text and tables of the report are totalled (i.e. numbers may not add exactly to totals shown or to 100%).

29. Forecasts of waste arisings and capacity needs (including management methods) for the major waste streams and for total waste arisings are reported over the reporting period at five-year intervals (i.e. baseline arisings reported for 2020, with forecast arisings and capacity needs reported for 2021, 2026, 2031, 2036, and 2041).

Current waste arisings

Municipal waste

30. Municipal waste is also referred to as Local Authority Collected Waste (LACW), and generally consists of household waste and any other wastes collected from Household Waste Recycling Centres (HWRCs)[12], commercial or industrial premises, and waste resulting from the clearance of fly-tipped materials and litter. Household waste makes up the majority of municipal waste, for South Yorkshire household waste typically accounts for over 90% of municipal waste.

31. Data for municipal waste is collected and reported by waste collection and disposal authorities being Barnsley Metropolitan Borough Council, Doncaster Metropolitan

12 Also referred to as civic amenity sites.

Borough Council, Rotherham Metropolitan Borough Council, and Sheffield City Council. This data is collated nationally through the WasteDataFlow database which is maintained by the Department for Environment, Food, and Rural Affairs (Defra). Defra also publish this information through the data.gov.uk website, refer to LACW Management Statistics[13]. Data for this waste stream is up-to-date and accurate.

32. This method accords with the national policy and guidance[14] and is reflective of methodology applied to recent WNAs in surrounding regional and WPA areas. This approach provides for a consistent approach whilst giving consideration to local circumstance.

33. Municipal waste generated within South Yorkshire and current management methods are summarised in the table below. The baseline for municipal waste is 2020.

Table 1: Municipal waste arisings and management, 2020 (million tonnes)

South Yorkshire		0.590
Barnsley		0.116 (20%)
Doncaster		0.154 (26%)
Rotherham		0.111 (19%)
Sheffield		0.208 (35%)
Preparation for reuse and recycling	Materials recycling	0.154 (26%)
	Composting	0.080 (14%)
Treatment and energy recovery		0.346 (59%)
Disposal to non-hazardous landfill (including stable non-reactive hazardous wastes, SNRHW)		0.008 (1%)

34. Management of municipal waste for each authority is undertaken through commercial contracts. Residual municipal waste management for the BDR area is contracted to Renewi, and expires mid 2040; with potential to extend to 2045. Management processes provided under the contract include processing in preparation for recycling, anaerobic digestion (AD), and Mechanical Biological Treatment (MBT) at the BDR Waste Treatment Facility located at Bolton Road, Manvers in Rotherham. Refuse derived fuel (RDF) produced from the MBT is transported to the Enfinium Ferrybridge Energy from Waste (EfW) EF1 & EF2 plants located near Knottingley, West Yorkshire where it is used in energy recovery. For Sheffield, municipal waste management is contracted to Veolia with the contract expiring 2038. Sheffield's municipal waste management includes processing in preparation for recycling with residual municipal waste used in energy recovery at the Sheffield Energy Recovery Facility (ERF) located at Bernard Road in Sheffield. A summary of the contracts and processes involved is set out in Appendix 1.

35. A very small amount (less than 1%) of municipal waste was disposed of at non-hazardous (stable non-reactive hazardous waste, SNRHW) landfill, as such all

13 LACW Management Statistics
14 NPPG, Waste, What are the potential sources of information of waste data to inform the preparation of Local Plans? Paragraph: 035 Reference ID: 28-035-20141016

waste disposed of has been captured as non-hazardous landfill (including SNRHW).

36. Management methods were derived from the Defra LACW Management Statistics, WasteDataFlow database, and council contract information and records.

Commercial and industrial (C&I) waste

37. C&I waste is defined as 'waste from premises used mainly for trade, business, sport, recreation or entertainment' (Environmental Protection Act 1990 s5.75(7)). It will generally consist of a wide range of wastes (such as mixed wastes, mineral wastes, chemical wastes, metals, discarded equipment, animal, and vegetable waste including food waste, healthcare waste, and others) and contains a high proportion of recyclable materials.

Environment Agency waste operator return databases

38. Waste collected from businesses is subject to commercial contracts, and although waste collection companies collect data for their own operational purposes, this information is not available to WPAs. Waste operator returns are submitted to the EA through the Duty of Care system with the information collated through the Waste Data Interrogator (WDI) and Incinerator Returns databases, maintained by the EA[15].

39. C&I waste is reported through the EA databases under Basic waste category: 'household, industrial, and commercial (HIC) waste'. HIC data originating from South Yorkshire[16] was extracted from the EA databases reporting on industry returns for the most recent five years (i.e. 2016 to 2020[17]). Up to, and including 2018, the WDI and Incinerator Returns databases were separate. Waste captured as arising from South Yorkshire from both the WDI and Incinerator Returns databases were added together for years preceding 2019. From 2019 onwards the WDI includes waste received at facilities previously captured through the Incinerator Returns database.

40. Total arisings derived from the EA databases are often referred to 'as managed' indicating that the databases capture only that part of the waste arisings that are managed through permitted waste management facilities. However, with respect to informing the preparation of Local Plans the as managed waste arisings provide a good indication of the waste management capacity that needs to be provided for when considering waste planning matters; as such the use of as managed figures derived from the EA databases is fit-for-purpose.

15 These databases are referred to as the EA waste operator return databases, or EA databases.
16 Total 'as managed' arisings (from the EA databases) are derived by adding together the waste received to facilities within South Yorkshire (identified as originating from South Yorkshire), and waste received at facilities within other WPA's (identified as originating from South Yorkshire) – i.e. wastes arising from and managed within South Yorkshire plus waste arising from South Yorkshire exported for management elsewhere. Results can then be filtered or cleansed as necessary. Where reference to South Yorkshire means the WPAs of South Yorkshire and waste identified as origin 'Not codeable - South Yorkshire'.
17 Referred to as WDI 2016/2017/2018/2019/2020 according to the year that returns were reported.

41. Each record includes a descriptor of the type of waste using the European Waste Code (EWC), these codes were used to filter the returns from the WDI to identify C&I waste. The following waste types were removed from the WDI dataset extracted for South Yorkshire: mining and quarrying wastes (Chapter 01), construction and demolition wastes (Chapter 17) – these wastes are accounted for through CD&E waste; municipal wastes (Chapter 20) – accounted for through municipal waste; digestate from AD that can be used as soil conditioner (EWC 190604 and 190606); landfill leachate (EWC 190703) – treated on-site/specialist waste water plant; sludges from treatment of urban waste water – accounted for through waste water studies and is treated as sludge treatment centres operated by the relevant utilities companies (EWC 190805); and outputs from waste management processes that are unlikely to undergo further treatment or that are an output product such as Refuse Derived Fuels (RDF) (refer EWC Chapter 19[18]) – accounted for through residual waste estimates, discussed further below.

42. Outputs from waste management processes that are likely to be further treated include EWC sub-chapter 1912 (e.g. 191201 paper and cardboard, 191202 ferrous metals, etc.). These wastes were retained as they are most likely waste that has been processed through an intermediate (transfer) facility or Materials Recycling Facility (MRF) and re-classified according to the specific waste type. Such wastes may be suitable for treatment rather than going for disposal and so should be scoped in. Trommel fines reported as arisings within South Yorkshire (including from waste imported), classified as EWC 191212, account for an average (2018 to 2020) of 0.414 Mtpa; of this around a quarter was recycled or otherwise recovered and three-quarters was disposed of to non-hazardous landfill (predominantly within the Yorkshire & Humber region). Although disposal to non-hazardous landfill is the main management route for residual wastes, the amount recovered is increasing over time, this demonstrates that there is the potential for further recovery. A significant amount of this is likely to have originated from outside of South Yorkshire, however, has been produced as a residual waste (e.g. from processing at MRFs of waste imported to South Yorkshire from other WPAs) at facilities located within South Yorkshire. The required capacity to manage such wastes may not have previously been captured and so these wastes are considered within the scope of this WNA over the reporting period but are not included in the arisings forecasts or indicative capacity needs. Forecasts of residual waste arisings and potential management methods are prepared separately and are discussed in the relevant sections of this WNA, refer to ‘Residual arisings’ (paragraphs 131 to 139) and ‘Future needs’ (paragraphs 177 to 189). This approach will help to ensure that the scope of the WNA is broadly representative.

43. Residual outputs from waste management processes and output products such as Refuse Derived Fuels (RDF) that were identified as originating from South Yorkshire were included in calculations for capacity requirements but not in waste arising forecasts as this waste type is an output or residual waste produced from treatment processes. Including these wastes would result in compounding

18 Analysis of EWC Chapter 19 wastes were undertaken for each year with residual waste unlikely to undergo further treatment removed from the dataset.

overestimation of the waste arisings. Residual waste arisings are discussed in more detail in this WNA refer to 'Residual arisings' (paragraphs 131 to 139).

44. Waste records entered into the EA databases also include information on the type of facility type and site waste operation permits. Waste management methods were determined by filtering the data by facility and permit types.

45. There is potential for overestimation where waste is handled at intermediate facilities such as transfer stations. Waste recorded through intermediate facilities (including clinical, non-hazardous, and hazardous waste transfer stations) was removed from the dataset. The reasoning for removing these records is that waste recorded at intermediate facilities is then transferred onto another facility for further processing and/or treatment and is then captured again when received at this facility, potentially resulting in double counting. Where waste is transferred outside of South Yorkshire it is reasoned that this waste should be captured under the field 'WPA origin' when received at the facility for further treatment. Where waste has been recorded through intermediate facilities, either identified as transfer/treatment in the WDI or permitted for transfer and materials recycling by the WPA, such records were captured under materials recycling at a rate of 25% of the recorded tonnage (to reflect that the facility involves both transfer and some form of preparation for reuse and/or recycling).

46. Management rates were determined by identifying the amount of waste recorded against facilities sorted by facility and permit type, this information was then cross-referenced (for waste received to facilities within South Yorkshire) against the Councils permitted sites database.

47. It is important to acknowledge that the WDI database may contain errors due to data entry and particularly in relation to omissions in information fields on the returns, including waste origin. Data for waste records originating from South Yorkshire are captured under the Yorkshire & Humber region, and there is a historic issue with waste movements not being correctly attributed to an origin WPA, that is these movements are recorded as 'WPA Not Codeable – Yorks & Humber'. This means that there is the possibility that some arisings from South Yorkshire are assigned to the generic Yorks & Humber group (where waste records show Yorks & Humber for the Recorded Origin and Origin WPA fields). This also occurs at the sub-region level with waste recorded as 'WPA Not codeable – South Yorkshire'. This affects the ability to attribute waste arisings to individual WPAs with a high degree of certainty (for records reported as origin South Yorkshire or Yorks & Humber only). C&I waste arisings directly attributed to South Yorkshire fluctuate significantly over the last five years. This, taken with the historic regional reporting (WPA Not codeable – Yorks & Humber), indicates that it is highly likely that a portion of waste recorded under the generic Yorks & Humber group could be attributed to South Yorkshire. As the waste records have been entered under the generic Yorks & Humber group with no further breakdown it is not possible to determine which individual records should be attributed to South Yorkshire; this also applies to records entered under the generic South Yorkshire group. It was therefore necessary to estimate how much of this waste may be attributed to South Yorkshire, and how to attribute this to the WPA level. NOMIS employee counts for

C&I sectors are reported on an annual basis and provide a view of economic and industry activity within an area. A percentage breakdown (for individual WPAs, South Yorkshire, and Yorks & Humber) was derived as a factor of the total employee count. This resulted in three-year averages (2017 to 2019) of 24% for South Yorkshire of Yorks & Humber, and at the WPA level 14% for Barnsley (of South Yorkshire), 21% for Doncaster, 17% for Rotherham, and 47% for Sheffield.

48. It is also possible that some C&I waste arisings are recorded under EWC Chapter 20 municipal. To account for this the total municipal waste arisings (Defra LACW Management Statistics) for the WPAs were subtracted from the total Chapter 20 municipal waste identified as originating from WPAs[19] (i.e. Total EWC Chapter 20 – Total municipal/LACW). These additional potential C&I arisings (i.e. C&I was captured under the generic Yorks & Humber group and surplus EWC Chapter 20 municipal wastes) account for an average 0.144 Mtpa. The total C&I arisings (including potential C&I captured under the generic Yorks & Humber group and surplus EWC Chapter 20 municipal wastes) indicate arisings of 0.960 Mt for 2020 or a three-year average of around 0.961 Mt for South Yorkshire.

49. Management methods for C&I waste captured under the generic Yorks & Humber group and surplus EWC Chapter 20 municipal waste could not be determined as it was not possible to identify the individual records that make up these component of C&I arisings. The total tonnes were simply added onto the total C&I waste arisings for the relevant year and it was assumed that the management methods identified continue to apply (refer paragraph 47 - 47).

50. For comparison purposes, the total C&I arisings attributed directly to individual WPAs and the generic South Yorkshire group (not including records captured under the generic Yorks & Humber group and surplus EWC Chapter 20 municipal wastes) derived from the EA databases indicate arisings of 0.794 Mt for 2020 or a three-year average of around 0.816 Mt for South Yorkshire.

Defra UK Statistics on Waste

51. The UK Statistics on Waste was released in March 2021 (published by Defra), this included updated estimates for C&I waste for 2010 to 2019. The updated C&I estimate are derived from application of the revised ‘reconcile’ methodology to calculate C&I waste generated in England. The methodology revisions note sets out how the method was revised, refer Defra 2019 C&I waste arising’s methodology revisions for England. It should be noted that the Defra 2021 report clearly acknowledges that C&I waste generation remains extremely difficult to estimate owing to data limitations and data gaps. As a result, C&I estimates for England have a much higher level of uncertainty than municipal waste.

52. The latest estimates for C&I waste arisings indicate that a total of 37.2Mt was produced in England in 2019 (Defra 2021 Report, Table 6). Local estimates were produced by apportioning the total C&I waste for England to a local level by applying the percentage total employee count represented within South Yorkshire

19 EWC Chapter 20 wastes recorded through intermediate facilities were treated in the same manner as outline in the paragraph 45 to avoid double counting.

(of England) (2.16% for 2016 and 2.16% for 2017, 2.17% for 2018 and 2.15% for 2019, NOMIS) producing estimates of 0.716 Mt for 2016, 0.782 Mt for 2017, 0.808 Mt for 2018, and 0.799 Mt for 2019 with a three-year average of 0.769 Mt. This exercise was also repeated to obtain estimates for waste arisings at the WPA level using the same method (i.e. applying the percentage total employee count represented within individual WPAs (of South Yorkshire and England). The dataset accompanying the Defra 2021 UK Statistics on Waste splits total generation of waste for England by NACE[20] economic activities and EWC, in addition it can be filtered based on hazardous and non-hazardous waste (Defra 2021, Table 5.1). Removing NACE economic activities that are not relevant to the C&I waste stream or to South Yorkshire may help to provide a better estimate. NACE economic activity fields that were removed included: mining and quarrying, and manufacture of coke and refined petroleum products (such activities are not undertaken within the WPA); water collection, treatment and supply, sewerage, remediation activities, and other waste management services; construction; and household. The dataset was also filtered to remove hazardous wastes. It is assumed that these are captured under the relevant waste streams and that retaining these wastes within the dataset would likely produce an overestimate for C&I wastes. It should be noted that this dataset applies to 2016 and 2018 waste generation. This resulted in a total estimated C&I waste for England of 28.9 Mt for 2016 and 32.8 Mt for 2018 (reduced from 33.1 Mt and 37.2 Mt respectively, refer Defra 2021 Report Table 6). Applying the percentage employee count (for the broad industry sectors) represented within South Yorkshire (of England) for 2016 and 2018 results in figures of 0.627 Mt and 0.713 Mt respectively. An alternate method is to analyse the total generation of waste split by NACE economic activity and EWC waste material (Defra 2021, Table 5.1) and apportion this based on representation of the broad industry sectors (NOMIS employee count) within South Yorkshire; resulting in a figures for 2016 and 2018 of 0.645 Mt and 0.756 Mt respectively. This demonstrates that the unfiltered Defra data may not pick up on local variances in the sectors present within the individual WPA area.

53. In order to compare the filtered Defra estimates to current as managed arisings both employee number projections and the total ‘real’ Gross Value Added (GVA) by authority area (House of Commons 2021) growth profiles were applied to extrapolate the data forward and identify estimated arisings for 2017, 2019, and 2020. It should be noted that the Defra dataset was not intended to be drilled down to WPA area levels and so results derived using this method are acknowledged to represent an estimate only. This produced results ranging from 0.687 Mt to 0.723 Mt for 2020; both of which are lower than the as managed estimates derived from the EA databases. Comparison with the UK Statistics on Waste is useful for comparison or sensitivity testing purposes and helps to inform identification of a local estimate.

20 The Statistical classification of economic activities in the European Community, abbreviated as NACE (Nomenclature statistique des activités économiques dans la Communauté européenne).

Identifying a local estimate

54. Estimated waste arisings derived from EA databases and Defra 2021 were compared for the purpose of sensitivity testing. Estimated arisings ranged between 0.687 Mt and 0.960 Mt, with those derived from national estimates lower than the EA database as managed estimates. In line with avoiding spurious accuracy and to reflect that EA database estimates produced vary depending on the reporting region and scope, and that the Defra national arising estimates are not designed to be drilled-down to WPA area levels (and so may not be an accurate local representation), the average of the EA database as managed estimates has been taken as the estimated total C&I waste arisings to inform this WNA; producing a figure of 0.877 Mt for 2020.

55. This method accords with the national policy and guidance[21] and is reflective of methodology applied to recent WNAs in surrounding regions and WPA areas. This approach provides for a consistent approach whilst giving consideration to local circumstance.

56. C&I waste generated within South Yorkshire and management methods are summarised in the table below.

Table 2: C&I waste arisings and management, 2020 (million tonnes)

South Yorkshire		0.877
Barnsley		0.123 (14%)
Doncaster		0.184 (21%)
Rotherham		0.151 (17%)
Sheffield		0.418 (47%)
Preparation for reuse and recycling	Materials recycling	0.382 (44%)
	Inert recycling	0.006 (1%)
	Composting	0.018 (2%)
Treatment and energy recovery		0.395 (45%)
Disposal to non-hazardous landfill (including SNRHW)		0.066 (7%)
Disposal to restricted landfill		0.008 (1%)
Disposal via incineration – no energy recovery		<0.001 (<1%)

57. Management rates for 2020 are based on returns reported through the EA databases (2020). A small amount of waste (<1%) is disposed of through incineration without energy recovery and at restricted landfill (associated with a specific industrial process and not receiving other waste types, located within the factory curtilage).

58. Due to the potential for some waste records to have been incorrectly assigned to the generic Yorks & Humber group it was not possible to split C&I waste disposal to non-hazardous landfill into non-hazardous and non-hazardous (SNRHW), as such

21 NPPG, Waste, What are the potential sources of information of waste data to inform the preparation of Local Plans? Paragraph: 035 Reference ID: 28-035-20141016

all waste disposed of has been captured as non-hazardous landfill (including SNRHW).

Construction, demolition, and excavation (CD&E) waste

59. CD&E waste means waste materials that arise from the construction or demolition of buildings and/or civil engineering infrastructure, including hard construction and demolition waste, and excavation waste (and soils). Hard construction and demolition waste may include concrete, bricks, tiles, bituminous mixtures, railway ballast, and mixtures of the various components. Excavation waste may include clean and contaminated soil, stone, and rocks arising from land levelling, filling, and/or general foundations. The majority of this type of waste is made from inert materials such as concrete, rubble, and soils. A small proportion of CD&E waste is non-inert materials such as wood, metals, and plastic that can be managed via non-hazardous waste treatment facilities. CD&E waste may also include hazardous waste materials such as lead, asbestos, liquid paints, oils, etc. CD&E waste contains a high proportion of recyclable materials.

Environment Agency waste operator return databases

60. As previously discussed in relation to C&I waste, waste operator returns are available through the EA WDI and Incinerator Returns databases. It is widely acknowledged that a significant proportion of total CD&E waste arisings are reused on site or at exempt site; this unseen capacity is not captured through the EA databases.

61. Inert waste is reported through the EA databases under Basic waste category: Inert/C&D. Inert wastes predominately include Chapter 17 construction and demolition wastes (including excavated soil from construction sites). Data for inert waste originating from South Yorkshire (both received at facilities within South Yorkshire and other WPAs) was extracted from the EA databases reporting on industry returns for the most recent five years (i.e. 2016 to 2020). Any CD&E wastes identified from analysis of other waste streams were carried across to the CD&E arisings dataset for the relevant reporting year (e.g. EWC Chapter 01 wastes from mining and quarrying, and Chapter 19 and 20 soils, sand and stones). As per the method applied to C&I waste arising (refer paragraph 45), waste recorded through intermediate facilities were removed with waste recorded through transfer/treatment facilities captured under materials recycling at a rate of 25% of the recorded tonnage.

62. Waste captured as arising from South Yorkshire from both the WDI and Incinerator Returns databases were added together (for years preceding 2019). Waste management methods were determined in the same manner applied to C&I wastes (refer paragraph 46).

63. As with C&I wastes, some arisings from South Yorkshire may be captured under the generic Yorks & Humber group due to historic regional reporting (refer paragraph 47). Dwelling stock completion figures are reported by the Ministry of Housing, Communities, and Local Government (MHCLG) / Department for Levelling Up, Housing and Communities (DLUHC) and provide a view of construction activity

within an area. A percentage breakdown (for individual WPAs, South Yorkshire, and Yorks & Humber) was derived as a factor of the total dwelling stock completions for WPAs of South Yorkshire, and South Yorkshire of Yorks & Humber. This resulted in a three-year average of 26% for South Yorkshire of Yorks & Humber (2017 to 2019). The rate of 26% was applied to wastes reported under the generic Yorks & Humber group and added onto wastes reported under South Yorkshire to produce an estimate of as managed CD&E wastes. Again (as with C&I wastes), this was also applied at the local level to determine potential arisings at the individual WPA level, with three-year averages of 20% for Barnsley (of South Yorkshire), 24% for Doncaster, 9% for Rotherham, and 47% for Sheffield (refer Table 3). The estimated as managed CD&E arisings derived from the EA databases (including records captured under the generic Yorks & Humber group) indicate arisings of 1.536 Mt for 2020 or a three-year average of around 1.510 Mtpa for South Yorkshire

64. For comparison purposes, the total C&I arisings attributed directly to individual WPAs and the generic South Yorkshire group (not including records captured under the generic Yorks & Humber group) derived from the EA databases indicate arisings of 1.102 Mt for 2020 or a three-year average of around 1.023 Mt for South Yorkshire. Of this around a third was identified as wastes other than EWC 170504 non-hazardous soils and stones with the majority (just over 95%) being recovered.

Defra UK statistics on waste

65. The Defra 2021 UK statistics on waste sets out estimates of CD&E waste (including dredging) for England of 116.8 Mt for 2014, 120.3 Mt for 2016, and 119.4 Mt for 2018 (Defra 2021, Report Table 7). Removing hazardous wastes and dredging spoils from the total CD&E produces estimates of 105.8 Mt for 2014, 110.9 Mt for 2016, and 111.3 Mt for 2018 (Defra 2021, Report Table 7 and dataset Table 5.1) for total CD&E waste arisings. Local estimates were determined be applying the percentage of construction activity (dwelling completions MHCLG) attributed to South Yorkshire (of England) (2.23% for 2014, 2.19% for 2016 and 1.95% for 2018) to the total estimated CD&E arisings for England. This produced estimates for total CD&E waste arisings for South Yorkshire of 2.360 Mt for 2014, 2.425 Mt for 2016, and 2.169 Mt for 2018.

Identifying a local estimate

66. Estimated waste arisings derived from EA databases and Defra 2021 were compared for the purpose of sensitivity testing. The national CD&E waste arising estimate (Defra 2021) acknowledges that a significant percentage of construction and demolition waste arisings are managed or reused on-site, or at exempt sites, and that this management capacity is unseen; this is also acknowledged in the NPPG[22]. This may go some way to explaining the variance between estimated as managed and total CD&E arisings reported through surveys and the EA databases; with that reported through the EA databases forming the portion managed at

22 NPPG, Waste, How should waste planning authorities forecast future construction and demolition waste arisings? ‘ … a sizeable proportion of construction and demolition waste arisings are managed or reused on-site, or exempt sites, so it is critical that some provision is made for unseen capacity in this way …’ Paragraph: 033 Reference ID: 28-033-20141016

permitted waste management facilities and the remainder being the portion managed or reused on-site, or at exempt sites.

67. As such, and in the absence of any more accurate local data, the figures derived from the EA databases are taken to form the best available data regarding CD&E waste requiring management at permitted facilities for which South Yorkshire, as WPAs, are responsible for. The Defra 2021 estimates are taken to form the estimated total CD&E waste arisings. The difference between the estimated total CD&E waste arisings and the actual as managed arisings is assumed to make up the unseen arisings managed either on site or at exempt sites; this accounts for, on average, about half of the estimated total CD&E arisings which is quite high however may also reflect that the national estimates are not made for the purpose of drilling down to WPA level. The method applied reflects that the national CD&E arising estimates are not designed to be drilled-down to a local level and helps to avoid spurious accuracy.

68. The national Defra estimates were extrapolated forward using a growth profile based annual dwelling completions (considered to reflect construction output), and has been taken as the estimated total CD&E waste arisings; producing a figure of 2.308 Mt for 2020. The figure derived from the EA database is taken to form the as managed portion to inform this WNA, being 1.319 Mt for 2020.

69. This method accords with national policy and guidance[23] and is reflective of methodology applied to recent WNAs in surrounding regional and WPA areas. This approach provides for a consistent approach whilst giving consideration to local circumstance.

70. CD&E waste generated within South Yorkshire and management methods are summarised in the table below.

23 NPPG, Waste, What are the potential sources of information of waste data to inform the preparation of Local Plans? Paragraph: 035 Reference ID: 28-035-20141016

Table 3: CD&E waste arisings and management, 2020 (million tonnes)

South Yorkshire - Total		2.308
South Yorkshire - As managed		1.319
Barnsley		0.259 (20%)
Doncaster		0.321 (24%)
Rotherham		0.122 (9%)
Sheffield		0.617 (47%)
Preparation for reuse and recycling	Materials recycling	0.226 (17%)
	Composting	0.001 (<1%)
	Inert recycling	0.234 (18%)
Other treatment and recovery	Treatment and energy recovery	0.023 (2%)
	Soil treatment	0.078 (6%)
	Inert recovery (includes deposit of inert waste associated with the restoration of permitted mineral extraction sites)	0.656 (50%)
Disposal	Disposal to inert landfill	<0.001 (<1%)
	Disposal to non-hazardous landfill (including SNRHW)	0.100 (8%)

71. Management rates for 2020 are based on returns reported through the EA databases (2020).

72. The majority of waste disposed of to non-hazardous landfill (including SNRHW), comprised minerals, soil, stones, and other inert fill that may be being deposited at these sites for engineering and restoration purposes. This may give the impression of higher disposal rates.

73. Due to the potential for some waste records to have been incorrectly assigned to the generic Yorks & Humber group it was not possible to split CD&E waste disposed of to non-hazardous landfill into non-hazardous and non-hazardous (SNRHW), as such all waste disposed of has been captured as non-hazardous landfill (including SNRHW).

Hazardous waste

74. Hazardous waste has historically been considered material that poses the greatest risk to human health or the environment, including materials such as asbestos, oils, solvents, and chemical wastes. The Landfill Directive refers to some wastes as ‘hazardous’, rather than ‘special’, broadening the definition to include everyday items such as fluorescent tubes, monitors, and televisions that have reached the end of their lives. Hazardous materials are subject to strict controls on carriage, treatment, and disposal. Even so, as hazardous waste is generated from such a wide array of uses and operations (from households, healthcare/medical, and industry) the way that it is recorded is not the same; this may result in data omissions or anomalies.

EA Hazardous Waste Data Interrogator

75. The most accurate data available on hazardous waste arisings is from the EA Hazardous Waste Data Interrogator (HWDI) database. Data held on the HWDI is derived from waste operator returns submitted to the EA, who maintain the HWDI.

76. Data extracted for all consignments arising from South Yorkshire from the HWDI databases indicate arisings of 0.161 Mt for 2020 or a three-year average (2018 to 2020) for hazardous waste arisings[24] of around 0.156 Mtpa. As with data extracted from the WDI, waste recorded through intermediate facilities (recorded as Transfer R and Transfer D) were removed from the hazardous waste dataset.

77. Several anomalies were found in the dataset that are likely to be once off occurrences relating perhaps to utilities or highway work projects (EWC 170301) and trommel fines contaminated with dangerous substances (EWC 191211). These were removed from the dataset to allow for determination of averaged arisings and management rates that provide a representative view of hazardous waste in the area, and emerging trends. Smaller amounts of these wastes are recorded year-on-year and these smaller amounts were retained, only the large once off consignments were removed.

78. This method accords with national policy and guidance[25] and is generally reflective of methodology applied to recent WNAs in surrounding regional and WPA areas.

79. Hazardous waste generated within South Yorkshire and current management methods are summarised in the table below.

Table 4: Hazardous waste arisings and management, 2020 (million tonnes)

South Yorkshire		0.161
Barnsley		0.009 (6%)
Doncaster		0.016 (10%)
Rotherham		0.084 (52%)
Sheffield		0.052 (32%)
Recycling, recovery, and other treatment	Recovery (includes preparation for reuse and recycling)	0.078 (49%)
	Treatment and other recovery (includes incineration with energy recovery)	0.059 (37%)
Disposal	Disposal to hazardous landfill	0.021 (13%)
	Disposal via incineration - no energy recovery	0.002 (1%)

80. Total arisings and management rates for 2020 are based on returns reported through the HWDI (2020).

24 Total of consignments arisings from South Yorkshire minus Transfer (R) and Transfer (D). Large inputs of hazardous were recorded as disposed of to landfill – further investigation of consignments reported through the WDI indicate that the majority of this was waste output materials/residual wastes and/or attributed to other WPAs.

25 NPPG, Waste, What are the potential sources of information of waste data to inform the preparation of Local Plans? Paragraph: 035 Reference ID: 28-035-20141016

Radioactive waste

81. It is essential that all radioactive waste and materials be safely and appropriately managed in ways that pose no unacceptable risks to people or the environment. The decommissioning of nuclear power reactors produces the majority of radioactive waste in the UK, with other sources including the generation of electricity in nuclear power stations and from the associated production and processing of the nuclear fuel, use of radioactive materials in industry, medicine and research, extraction of materials which include some naturally occurring radioactive materials, and from military nuclear programmes.

82. Radioactive waste is divided into categories according to how much radioactivity it contains and the heat that this radioactivity produces, the main categories including high, intermediate, and low level waste. Low level radioactive waste (LLW) may comprise building rubble, soil, and steel items arising from the decommissioning and clean-up of nuclear reactors, facilities, and sites as well as paper, plastics, and scrap metal items from the operation of nuclear facilities. Very low level waste (VLLW) is a sub-category of LLW.

83. According to the Nuclear Decommissioning Authority (NDA) UK Radioactive Waste Inventory 2019[26], LLW (including VLLW) makes up the majority (more than 94%) of the UK's total volume of radioactive waste – but contains less than 0.1% of the total radioactivity.

84. Application of the waste hierarchy has resulted in new approaches for the management of LLW in more sustainable ways, with 76% of LLW projected for disposal in 2019, compared with 78% in 2015, and 95% in 2009[27].

85. LLW can be disposed of at near surface facilities. Waste at the lower activity range (of LLW) may not require the level of engineering and containment provided by the LLWR facility and could undergo treatment (e.g. incineration or metals recycling) or be disposed of via alternative routes, such as disposal to existing landfill including non-hazardous landfill (where permitted for such activities). The majority of LLW forecast to arise over the period 2019 to 2024 are expected to be diverted away from disposal at the LLW Repository (LLWR) facility near Drigg, Cumbria; waste is to be disposed of at off-site landfill facilities and the Dounreay LLW facility in Caithness. The diversion of significant amounts of waste away from disposal at the LLWR facility has extended its projected operating life to 2130.

86. The NDA 2019 Inventory does not identify any radioactive waste produced within South Yorkshire. The Inventory is updated every three years as such the 2019 Inventory forms the best available information.

87. The data collection on solid low-level waste from the non-nuclear sector, Department of Energy and Climate Change (DECC) 2008 provides an overall view

26 UK Radioactive Waste Inventory, NDA 2019 , referred to as the NDA 2019 Inventory
27 Refer pages 58 and 55 of the 2019 and 2016 Inventory Reports respectively (2019 Inventory Report, 2016 Inventory Report)

of the waste arisings and disposals from the non-nuclear sector, which identifies estimates of LLW arisings by WPA. Estimates of LLW from the non-nuclear industry (DECC 2008, Table 3) indicate arisings of 31.33m^3 for South Yorkshire (0.06% of the total non-nuclear arisings reported through the survey for England, Scotland, and Wales) for the reporting year 2007. Though dated this is the best available information on radioactive waste arisings from the non-nuclear industry.

88. Arisings of radioactive waste from both nuclear and non-nuclear industries within South Yorkshire are very low; the WPA area is not a significant producer of radioactive wastes.

Other wastes

89. Agricultural waste and wastewater are also generated within South Yorkshire. There are no national or local targets for the management of such wastes, however these wastes have been taken into consideration at an appropriate level (outlined below).

Agricultural waste

90. Agricultural waste is waste material that is generated from agricultural premises; the majority of agricultural waste is not classified as controlled wastes. The majority of agricultural wastes are bulk materials such as animal manure and waste slurries. Non-natural agricultural wastes include discarded pesticide containers, plastics, bags and sheets, tyres, batteries, clinical waste, old machinery, oil, packaging waste, etc. The WFD captures non-natural components of this waste stream, which account for a very small amount[28] (<1%) and are thought to be managed via the use of Household Waste Recycling Centres and transfer to others (contractors). Very little data is available on waste arisings within the agricultural sector, particularly at a local level. As such the WNA assumes that the non-natural component of agricultural waste is captured under either trade waste received at HWRCs or within the C&I waste stream.

91. The EA databases may capture some agricultural wastes under EWC Sub-chapter 0201 (Wastes from agriculture, horticulture, aquaculture, forestry, hunting, and fishing). A total of 0.012 Mt of waste was reported under EWC Sub-chapter 0201 originating from South Yorkshire in 2020.

Water supply, sewage and wastewater

92. Within South Yorkshire, water supply and sewage and wastewater is managed by Yorkshire Water, Anglian Water, and Severn Trent Water each of which prepare operational Water Resource Management Plans and 25-year business and asset management strategies. The individual Borough and City Councils have separately prepared the relevant flood risk and water cycle studies (such as Strategic Flood Risk Assessment, Local Flood Risk Management Strategy, Surface Water Management Plan, and Water Cycle Study) in order to identify major issues

28 EA 2001 Towards sustainable agricultural waste management (R&D Technical Report P1-399/1) indicated arisings of non-natural components for 2000 of 0.5Mt for the UK. Figures for agricultural waste cannot account for wastes stockpiled on site (at farms).

associated with the planned growth for the area such as sewage treatment, water quality, supply and efficiency, flood risk management, and sustainable drainage systems. Although WLPs have a role to play in relation to development control and management, the scope of WLPs (relating to demand and future needs for water supply, sewage, and wastewater) is somewhat limited as these matters are addressed through the plans and strategies produced by the aforementioned water and wastewater companies. The scope of any WLP should include policies that are generally supportive of an increase in sewage treatment capacity where required to serve existing or planned development in accordance with the Development Plan.

Forecasting waste arisings over the reporting period

93. In order to plan for provision of new capacity it is first necessary to forecast waste arisings over the reporting period. This has been done separately for each of the waste streams (municipal, C&I, CD&E, and hazardous waste) due to the different factors that drive waste arisings and affect growth. Waste arising forecasts for individual streams are detailed below.

Municipal waste

94. Municipal waste management is subject to commercial contracts that determine current and future management methods and rates. As previously outlined (paragraph 34), the management of municipal waste is undertaken through commercial contracts. Management processes provided under the contracts include: for the Barnsley, Doncaster, and Rotherham (BDR) area, preparation for recycling, Anaerobic Digestion (AD), and Mechanical Biological Treatment (MBT) with the resulting Refuse Derived Fuel (RDF) (produced from the MBT) transported to Enfinium Ferrybridge Energy from Waste (EfW) EF1 & EF2 plants. For Sheffield, preparation for recycling with the residual municipal waste used in energy recovery at the Sheffield Energy Recovery Facility (ERF). Contract expiry dates are: for the BDR area, mid 2040 with potential to extend to 2045; and for Sheffield, 2038.

95. In preparing this WNA officers have liaised with the municipal waste management teams for the South Yorkshire WPAs in order to reflect future intent regarding municipal waste management at an appropriate level and to ensure that the WNA satisfies the WFD targets. The existing waste management contracts have been incorporated into targets and forecasts to the fullest extent possible based on information supplied. Current rates for recycling (including composting) and total recovery sit at 40% for recycling and over 95% for total recovery.

96. For the purpose of the WNA the following targets are proposed, set out in the table below. The proposed targets are based on overall recovery and disposal rates as this approach is considered to allow for flexibility, including potential changes to contracts. There is no block to exceeding the total recovery targets and further reducing landfill/disposal rates.

Table 5: Municipal waste targets

Waste hierarchy level	Target
Total recovery	Maintain current rates (or over 95% from 2021 onwards)
Disposal – Non-hazardous landfill (including SNRHW)	Maintain current rates (or a maximum of 5% from 2021 onwards)

97. The Environment Act 2021 empowers the SoS to set legally binding 'long-term' (15 year +) targets in respect of any matter which relates to the natural environment or people's enjoyment of the natural environment, this includes resource efficiency and waste reduction. Previously, the Government had stated that the Environment Bill would support achievement of a 65% recycling target for municipal waste by 2035. Clear responsibilities as a result of the recent Environment Act have still yet to be set out and were not available at the time of writing this report. The existing waste contracts are in place until mid 2040 for the BDR area and 2038 for Sheffield. The ability of South Yorkshire WPAs to achieve these rates may be affected by the existing contractual arrangements however the Borough and City Councils will work to incorporate the targets set by the Secretary of State at an appropriate level, once such targets are regulated.

98. The target applied to municipal waste for the purpose of this WNA is to maintain current overall recovery rates of over 95% from 2021 onwards. This approach allows for flexibility in management options, whilst also recognising that there are existing contractual arrangements in place and that there may be differences in reporting of figures due to grouping of waste management processes. Of relevance to South Yorkshire (under the current municipal waste contracts) is the AD plant, which produces a compost-like output but is captured under treatment and energy recovery due to energy production, and the MBT plant, which includes metal recycling and production of an RDF. If waste processed through the AD and MBT were captured under recycling (including composting) the total recycling figure would increase. The application of targets should give consideration to local circumstance. The target of 65% recycling by 2035 for municipal waste has been accounted for through this WNA as an aspirational target. However, given the uncertainty regarding the future direction in the wider policy context (targets) and scope for altering management methods/rates under the existing contracts, it is considered that the target of 95% total recovery provides for a realistic and attainable goal and provides for flexibility to build in national targets once these are confirmed.

99. The following assumptions were made in preparing the municipal waste forecasts:

- Current recycling, composting, and recovery rates will not decrease.
- Rates (%) applied to determine household and trade components of total municipal waste and management methods are based on an average of figures over recent years (the most recent three-year period) with data sourced from Defra LACW statistics, Waste Data Flow, and council contract information and records.

- Application of targets (in the case of applying possible Environment Act targets) was achieved by applying an even graduation from current rates (2020) to the full target rate (applied at the target year e.g. 2030).
- Municipal waste arisings for the year 2020 (of 0.590 Mt) were forecast from 2020 up to 2041 based on dwellings forecasts for the individual WPAs (tonnes per dwelling) giving an average annual increase over the reporting period of 0.64% per annum.

100. This methodology accords with national policy and guidance[29].

101. Forecast municipal waste arising and management methods over the reporting period (at five year intervals) are detailed in the table below.

Table 6: Municipal waste forecast by management method up to 2041 (million tonnes per annum)

South Yorkshire		**2021**	**2026**	**2031**	**2036**	**2041**
		0.581	0.600	0.622	0.643	0.665
Barnsley		0.114	0.119	0.125	0.130	0.135
Doncaster		0.153	0.158	0.163	0.168	0.173
Rotherham		0.113	0.115	0.118	0.121	0.123
Sheffield		0.201	0.208	0.216	0.225	0.233
Waste hierarchy level and broad management method						
Preparation for reuse and recycling						
Materials recycling		0.150	0.155	0.161	0.166	0.172
Composting		0.089	0.092	0.095	0.098	0.101
Treatment and other forms of recovery						
Treatment and energy recovery	Total	0.328	0.338	0.351	0.363	0.375
	Mechanical biological treatment	0.227	0.235	0.242	0.250	0.258
	Anaerobic digestion	0.269	0.278	0.288	0.298	0.309
	Energy from Waste	0.058	0.060	0.062	0.064	0.066
Disposal						
Non-hazardous landfill (including SNRHW)		0.014	0.015	0.015	0.016	0.016

102. Application of targets that were previously set out in the Environment Bill (and that under the Environment Act the SoS may set, refer paragraph 2) of 65% recycling for municipal waste by 2035 results in the following tonnages for management rates at the end of the reporting period: 0.279 Mtpa for materials recycling, 0.153 Mtpa for composting, 0.215 Mtpa for treatment and energy recovery, and 0.017 Mtpa for disposal to non-hazardous landfill (including SNRHW).

29 NPPG, Waste, How should waste planning authorities forecast future municipal waste arisings? Paragraph: 029 Reference ID: 28-029-20141016

103. Insufficient data was available to split municipal waste disposal to non-hazardous landfill into non-hazardous and non-hazardous (SNRHW), as such all waste disposed of has been captured as non-hazardous landfill (including SNRHW).

104. Other biological waste management processes, such as AD, may take up compost capacity where the waste composition input into the facility captures the same waste type. AD may also be appropriate for the management of separate food waste collection and disposal.

Commercial and industrial (C&I) waste

105. C&I waste management is subject to commercial contracts that determine current and future management methods and rates. Information regarding individual contracts is not available to the council and the council is not able to exert direct influence over such matters. However, a range of legislative and market drivers exist (e.g. landfill tax, targets and producer responsibility measures) that are driving change and seeing more waste diverted from landfill.

106. Targets for C&I waste, are limited to packaging recycling and recovery targets as set out in the Packaging and Packaging Waste Directive 94/62/EC. Packaging waste targets have recently been reviewed by Defra with updated targets including 75% of packaging waste recycled and 82% recovered (in total) by 2020. Operator returns (2020) indicate that for packaging waste (EWC Chapter 15) attributed to South Yorkshire over 90% was recovered.

107. For the purpose of the WNA targets of 95% recovery and a maximum 5% disposal to landfill by 2035 for all C&I waste are proposed. The proposed targets are based on overall recovery and disposal rates as this approach is considered to allow for flexibility regarding market demands and commercial contracts. Although current management method rates for arisings indicate a total recovery rate that is just above 90% the last five years shows some fluctuation with the three-year average being 90%. The WDI dataset also indicates that of the wastes currently sent for disposal the majority of this is potentially recoverable. Note that there is no block to exceeding the total recovery targets and further reducing disposal rates.

108. As previously outlined, estimates for current arisings for South Yorkshire were determined as a product of local as managed arisings (EA databases), refer paragraphs 38 - 50. Growth profiles derived from total ‘real’ GVA annual increase (House of Commons 2021) were applied over the reporting period to forecast arisings up to 2030 (1.1% per annum), with the ten-year averaged ‘real’ GVA (2010 to 2019) applied for the period 2031 to 2041 (1.4% per annum).

109. During preparation of this WNA the Covid-19 virus pandemic affected the global economy. The most recent quarterly reports on economic statistics available from the ONS were used to provide context to growth profiles (2021 Quarters 1 to 3)[30]. It is difficult to determine the true impacts of the pandemic on the economy for 2021, and what recovery might look like, at this stage. Reduced employment and economic activity experienced during the pandemic will have an impact on waste

30 https://www.ons.gov.uk/economy

arisings. This situation should be monitored and the WNA model updated in line with updated data and forecasts from the ONS.

110. Availability of local economic forecasts was limited, particularly any recent data or that produced during/in the context of the Covid-19 pandemic. The House of Commons forecasts were released in May 2021 and form the most up-to-date information available that includes data for the wider Yorks & Humber region which is likely to be not too dissimilar to circumstances within South Yorkshire, as such can reasonably be used as a proxy. The ten-year period preceding the Covid-19 pandemic provides a local view of GVA growth. This methodology accords with national policy and guidance[31].

111. Management methods applied to forecasts were derived from the three-year average of EA databases (2018 to 2020) management rates. Although there was some fluctuation in management method rates over the three-year period the average is likely to indicate emerging trends, and best reflect local circumstance. Rates for management methods have been applied and increased incrementally to achieve targets as relevant.

112. The following assumptions were made in preparing the C&I waste forecasts:

- Growth in C&I waste arisings is a direct factor of economic growth.
- Impact of, and recovery from, Covid-19 will see a decrease in economic activity, gradually recovering over a period of 5+ years.
- Current recycling, composting, and recovery rates will not decrease.
- Application of targets was achieved by applying an even graduation from three-year average rates (2018 to 2020) up to the full target rate (applied at the target year e.g. 2035).
- The proportion of waste types attributed to business sectors identified through the Defra 2021 dataset is transferable to South Yorkshire.
- Waste recorded at intermediate facilities (i.e. waste transfer stations) is subsequently managed, and accounted for, at other waste management facilities (e.g. MRF, treatment, landfill, etc.).
- Waste recorded through intermediate facilities identified as transfer/treatment (either in the WDI or permitted by the WPA for transfer and materials recycling), has been captured under materials recycling at a rate of 25% (unless stated otherwise and informed by site-specific information) of the recorded tonnage in order to reflect that the facility involves some form of preparation for reuse and/or recycling.

31 NPPG, Waste, How can waste planning authorities forecast future commercial and industrial waste arisings? Paragraph: 032 Reference ID: 28-032-20141016

Table 7: C&I waste forecast by management method up to 2041 (million tonnes per annum)

South Yorkshire	2021	2026	2031	2036	2041
	0.889	0.939	0.994	1.066	1.143
Barnsley	0.125	0.132	0.140	0.150	0.161
Doncaster	0.186	0.197	0.209	0.225	0.241
Rotherham	0.153	0.162	0.172	0.184	0.197
Sheffield	0.425	0.448	0.473	0.507	0.543
Waste hierarchy level and broad management method					
Preparation for reuse and recycling					
Materials recycling	0.388	0.423	0.462	0.507	0.543
Inert recycling	0.004	0.004	0.005	0.005	0.006
Composting	0.016	0.017	0.018	0.020	0.022
Treatment and other forms of recovery					
Treatment and energy recovery	0.393	0.418	0.445	0.480	0.514
Disposal					
Non-hazardous landfill (including SNRHW)	0.077	0.067	0.057	0.050	0.053

113. A small amount of waste (<1%) is disposed of through incineration without energy recovery and at restricted landfill (associated with a specific industrial process and not receiving other waste types, located within the factory curtilage).

114. Insufficient data was available to split C&I waste disposal to non-hazardous landfill into non-hazardous and non-hazardous (SNRHW), as such all waste disposed of has been captured as non-hazardous landfill (including SNRHW).

Construction, demolition, and excavation (CD&E) waste

115. CD&E waste management is also subject to commercial contracts that determine current and future management methods and rates. As with C&I waste this information is not available to the council and the ability of the council to directly influence such matters is limited, however a similar range of legislative and market drivers (including the Aggregates Levy) are acting on operators to divert waste from landfill.

116. Targets for CD&E waste are limited to that set out in the WFD requiring recovery of at least 70% of C&D wastes by 2020 (excluding naturally occurring material defined in category EWC 170504 – non-hazardous soils and stones), including backfilling operations using waste to substitute other materials. Current as managed arisings indicate that EWC 170504 wastes account for around two-thirds of CD&E waste as managed. Of other CD&E wastes the majority is processed for reuse and recycling or otherwise recovered[32] achieving a total recovery of around 95%; exceeding the WFD target. The WDI dataset also indicates that of the wastes (scoped in, i.e. other than EWC 170504) currently sent for disposal to landfill some of this is potentially

32 Other recovery includes soil treatment and inert recovery (including deposit of inert waste to land associated with the restoration of permitted mineral extraction sites) as well as other forms of treatment and recovery (including energy from waste processes).

recoverable. The Management of Non-Aggregate Waste Report (WRAP 2016) estimates that up to 5% of CD&E apportioned to landfill could be managed through energy recovery processes. Applying this to South Yorkshire CD&E as managed waste arisings disposed of to non-hazardous landfill (not including EWC 170504) produces a figure of less than 0.001Mt. Total as managed wood waste arisings are around 0.011 Mt for South Yorkshire in 2020, all of which is either processed for reuse and recycling or otherwise recovered. It is possible that some wood waste is mixed with other wastes and disposed of to landfill however the extent of this cannot be determined. Subsequently there may be potential for capacity greater than that of identified arisings for wood waste reuse, recycling and other recovery.

117. There are several permitted non-hazardous landfills within the South Yorkshire area with permissions expiring between 2022 and 2042 (refer to Appendix 2). Inert waste (in particular EWC 170504) is deposited at these sites for engineering purposes and for restoration in line with planned closures. EWC 170504 wastes are highly recoverable and there is normally a preference for such material to be directed to permitted mineral extraction sites to support restoration, if not otherwise recovered. There are also inert recovery/disposal sites permitted within South Yorkshire, predominantly associated with the restoration of mineral extraction sites. Permissions for these sites expire between 2022 and beyond the reporting period, however, dependant on availability of inert restoration materials (and operational requirements) it is common for these sites to require extensions of time in order to achieve surface levels (i.e. fill up the void) as per the agreed restoration scheme.

118. For the purpose of the WNA the following targets for CD&E waste have been identified: for EWC 170504 – maintaining current rates of 95%[33] recovery and a maximum 5% disposal to landfill from 2021 onwards; and for other wastes (excluding EWC 170504 wastes) – increasing to 95% recovery by 2030 with a maximum 5% disposal to landfill, this target builds on the existing WFD target and management rates. The proposed targets are based on overall recovery and disposal rates as this approach is considered to allow for flexibility regarding market demands and commercial contracts. The target for EWC 170504 wastes takes into account the current management rates, the highly recoverable nature of this waste, and that as more waste is recovered (from all streams) the need for non-hazardous (including SNRHW) landfill will reduce subsequently reducing the requirement for inert waste for engineering and restoration purposes in the long-term. Note that there is no block to exceeding the total recovery targets and further reducing landfill/disposal rates.

119. As previously outlined, and in line with the national guidance, estimates for as managed arisings of CD&E waste were determined as a product of local as managed arisings (EA databases), refer paragraphs 60 - 67. The as managed arisings are those wastes that require management through facilities for which the WPA is responsible for. The total arisings were derived from national estimates and were taken forward to 2020 to enable comparison with the total as managed arisings derived from the EA databases, refer paragraphs 66 - 67. The growth

33 Current rates exceed 95% and so the current rate will be maintained.

profile was based on dwelling stock forecasts (forming a more conservative approach) and was applied to both the as managed and total arisings figures over the reporting period to forecast arisings up to 2041. The difference between the as managed and total representing waste that is reused or managed on-site or at exempt sites.

120. As with C&I waste, potential impacts from the Covid-19 virus pandemic have been built into the growth profile. The ONS reported[34] that total construction output decreased by 12.5% in 2020 compared with 2019. The Construction Products Association (CPA) reported an estimated decrease of 14.3% in 2020 and forecast recovery of 13.7% increase in 2021 and 6.3% in 2022. Growth profiles were adjusted to reflect the CPA figures, with incremental increases up to 2025 to achieve the original forecast (dwelling stock) rates. This situation should be monitored and the WNA model updated in line with updated data and forecasts where available.

121. It should be noted that generation of CD&E waste is different from other waste streams in that the generation of waste is tied to construction and/or demolition projects (e.g. redevelopment, housing construction, infrastructure projects, etc.) and so does not grow year-on-year. Where the annual increase forecast for dwelling stocks remains steady (i.e. the same year-on-year) no growth was forecast however where the forecast indicated an increase or decrease the percentage increase or decrease was applied to the CD&E forecast. This reflects that CD&E waste is not subject to a compounding growth profile. Forecasts for dwelling stock were sourced from the adopted and emerging Local Plan evidence base (Barnsley Metropolitan Borough Council Barnsley Local Plan 2019, Doncaster Council and Rotherham Metropolitan Borough Council 2021 Doncaster and Rotherham Local Aggregates Assessment (2019/20), Sheffield City Council September 2020 The Sheffield Plan Issues and Options Housing Technical Note). The forecasts indicate that there may be some fluctuations but overall the arisings remain much the same over the reporting period.

122. Infrastructure projects located within South Yorkshire, identified in the National Infrastructure Delivery Plan (NIDP) 2016 to 2021, include the main line (railway) improvements to the existing network in Sheffield), Trans Pennine tunnel between Sheffield and Manchester (and options to enhance the A66, A69, and north-west quadrant of the M60), and the northern roads improvements and capacity enhancement to the M1 at J35a-39, Rotherham to Wakefield. These projects could potentially produce a temporary increase on demand for inert recycling and recovery, and some of this may be delivered on-site. The extent of the additional off-site demand is not known. There are no specific significant planned regeneration projects identified within South Yorkshire that would result in a significant increase in waste generation that have not been accounted for through dwelling stock and growth forecasts.

34 ONS February 2021 Construction output in Great Britain

123. The approach applied to forecasting arisings for CD&E strikes a balance between reflecting growth patterns and forecasting waste arisings where the waste stream is acknowledged not to be subject to a compounding growth profile. This methodology accords with national policy and guidance[35].

124. Management methods were derived from the three-year average of management rates as per the EA databases (2018 to 2020). Although there was some fluctuation in management method rates over the three-year period the average is likely to indicate emerging trends and best reflect local circumstance. Rates for management methods have been applied and increased incrementally to achieve targets as relevant.

125. The following assumptions were made in preparing the CD&E waste forecasts:

- Growth in CD&E waste is tied to construction and/or demolition projects and so does not continually grow year-on-year.
- Dwelling stock forecasts indicate general construction activity likely to take place and may therefore reflect waste generation.
- Impact of, and recovery from, Covid-19 will see a decrease in construction output (including associated waste arisings), gradually recovering over a period of 5+ years.
- Current recycling and recovery rates will not decrease.
- Application of targets was achieved by applying an even graduation from three-year average rates (2018 to 2020) up to the full target rate (applied at the target year e.g. 2030).
- There is a significant quantity of CD&E waste that is reused on-site or at exempt sites and this will continue to be the case.
- Waste recorded at intermediate facilities (i.e. waste transfer stations) is subsequently managed, and accounted for, at other waste management facilities (e.g. MRF, treatment, landfill, etc.).
- Waste recorded through intermediate facilities identified as transfer/treatment (either in the WDI or permitted by the WPA for transfer and materials recycling), has been captured under materials recycling at a rate of 25% (unless stated otherwise and informed by site-specific information) of the recorded tonnage in order to reflect that the facility involves some form of preparation for reuse and/or recycling.

35 NPPG, Waste, How should waste planning authorities forecast future construction and demolition waste arisings? Paragraph: 033 Reference ID: 28-033-20141016

Table 8: As managed CD&E waste forecast by management method up to 2041 (million tonnes per annum)

South Yorkshire – As managed	2021	2026	2031	2036	2041
	1.267	1.529	1.588	1.588	1.588
Barnsley	0.249	0.360	0.374	0.374	0.374
Doncaster	0.308	0.292	0.303	0.303	0.303
Rotherham	0.117	0.180	0.186	0.186	0.186
Sheffield	0.592	0.698	0.725	0.725	0.725
Waste hierarchy level and broad management method					
Preparation for reuse and recycling					
Materials recycling	0.247	0.299	0.311	0.311	0.311
Inert recycling	0.199	0.243	0.254	0.254	0.254
Composting	<0.001	<0.001	<0.001	<0.001	<0.001
Treatment and other forms of recovery					
Treatment and energy recovery	0.018	0.022	0.023	0.023	0.023
Soil treatment	0.062	0.075	0.079	0.079	0.079
Inert recovery^	0.640	0.794	0.842	0.842	0.842
Disposal					
Non-hazardous landfill (including SNRHW)	0.100	0.095	0.078	0.078	0.078

^ Inert recovery includes deposit of inert waste associated with the restoration of permitted mineral extraction sites.

126. A small amount of waste (<1%) is disposed of to inert landfill (not beneficial or associated with restoration works).

127. Insufficient data was available to split CD&E waste disposal to non-hazardous landfill into non-hazardous and non-hazardous (SNRHW), as such all waste disposed of has been captured as non-hazardous landfill (including SNRHW).

Hazardous waste

128. There are no targets for the management of hazardous wastes. Hazardous wastes are generated from a wide array of uses and operations (from households, healthcare/medical, and industry); as such the drivers that act on municipal, C&I, and CD&E wastes also influence the generation and management of hazardous waste. Time series data for hazardous waste arisings was extracted from the HWDI for the period 2016 to 2020. The HWDI as managed data indicates that hazardous waste fluctuates slightly year-on-year but has generally been around 0.150 Mtpa. The three-year (2018 to 2020) average has been applied as the estimated arisings for 2021 from which forecasts have been made over the reporting period.

129. Commercial and industrial business sector operations are thought to account for a large proportion of hazardous wastes generated. As such the growth profile applied to C&I waste was also applied to hazardous waste. This growth profile was applied to the 2021 estimated arisings figure. As there are no targets for hazardous waste the management methods were derived from the three-year average of the HWDI (2018 to 2020). Although there was some fluctuation in management method rates over the three-year period the average is likely to indicate emerging trends and best

reflect local circumstance and trends. This method accords with national policy and guidance[36].

130. The following assumptions were made in preparing the hazardous waste forecasts:

- Growth in hazardous waste reflects that of C&I waste.
- Current recycling and recovery rates will not decrease.
- Waste recorded at intermediate facilities (i.e. waste transfer stations) is subsequently managed, and accounted for, at other waste management facilities (e.g. MRF, treatment, landfill, etc.), as indicated in the HWDI (e.g. consignments recorded under Transfer (D) and (R) indicates waste transfer prior to disposal and recovery respectively).

Table 9: Hazardous waste forecast by management method up to 2041 (million tonnes per annum)

South Yorkshire	2021	2026	2031	2036	2041
	0.156	0.165	0.175	0.188	0.201
Barnsley	0.008	0.008	0.008	0.009	0.010
Doncaster	0.013	0.014	0.015	0.016	0.017
Rotherham	0.082	0.087	0.092	0.099	0.106
Sheffield	0.054	0.057	0.060	0.064	0.069
Waste hierarchy level and broad management method					
Recovery and treatment	0.140	0.152	0.161	0.172	0.185
Disposal via hazardous landfill	0.015	0.011	0.012	0.013	0.014
Disposal via incineration – no energy recovery	0.002	0.002	0.002	0.002	0.002

Residual waste arisings

131. Waste outputs are also produced as a result of waste treatment processes. Increasing the diversion of waste from landfill and driving waste up the waste management hierarchy will result in an increase in waste outputs from treatment processes, also referred to as residual waste. Potential residual waste arisings have been calculated to provide a broad guide to possible arisings over the reporting period, however the application of such figures is heavily caveated. Estimated residue output rates are derived from a limited range of technologies that may not reflect the final technologies that come on stream during the reporting period. This is due to the dynamic nature of the waste management industry and emerging technologies. Hence it is recognised that, although it is necessary to acknowledge the potential future capacity requirements for waste management facilities including final disposal, forecasts for residual arisings cannot be determined with any level of certainty.

36 NPPG, Waste, How should waste planning authorities forecast future hazardous waste arisings? Paragraph: 034 Reference ID: 28-034-20141016

132. Some residual waste from treatment processes as per the current management methods and rates are captured through the EA databases and include EWC Chapter 19 wastes[37]. Outputs from waste management processes that are likely to be further treated (e.g. EWC sub-chapter 1912) were retained as these might not necessarily be a waste residue from treatment processes, but rather waste that has been processed through an intermediate (transfer) facility or MRF and re-classified according to the specific waste type (e.g. EWC 191201 paper and cardboard, EWC 191202 ferrous metals, etc.).

133. A recent EA study[38] into trommel fines (classified as EWC 191212 other wastes - including mixtures of materials - from mechanical treatment of wastes other than those mentioned in EWC 191211), indicate that some of this waste may be being incorrectly classified as non-hazardous, i.e. should be classified as EWC 191211 (other wastes - including mixtures of materials - from mechanical treatment of waste containing dangerous substances – i.e. a hazardous waste). Wider issues encountered whilst undertaking the study (Covid-19) affected the sample size and analysis meaning that the study is not representative across England and so a blanket approach (of the findings) cannot be applied. The study is useful though, as it does highlight the need for improved analysis and monitoring of these specific 'mirror' waste types – by operators and the EA.

Taking account of residual arisings

134. The EA WDI 2020 reported around 0.281 Mt[39] of EWC 191212 for South Yorkshire (increasing to 0.396 Mt when including a portion of waste identified as WPA Not Codeable - Yorks & Humber). An additional 0.318 Mt of other residual wastes from treatment processes were also identified (but not included in waste arising estimates), including wastes from composting, soil remediation, and other treatment processes (including Refuse Derived Fuel (RDF) and Solid Recovered Fuel (SRF)); increasing to 0.345 Mt when including a portion of waste identified as WPA Not Codeable - Yorks & Humber. Estimates of residues produced based on typical output rates applied to the existing management methods for South Yorkshire waste arisings only (not including intermediate facilities) sit at just above 0.300 Mtpa. South Yorkshire is a significant importer of wastes from other WPAs, particularly to materials recycling facilities. This indicates that a significant amount, up to two-thirds, of these types of waste are likely to be produced from the processing of waste that has originated from outside of South Yorkshire (e.g. processing of waste imported from other WPAs at MRFs located within South Yorkshire). Unfortunately, there is no definitive way of knowing how much of such wastes can be directly attributed to South Yorkshire. The required capacity to

37 Note that EWC sub-chapter 1912 (waste from the mechanical treatment of waste (e.g. sorting, crushing, compacting, pellatising) not otherwise specified) includes many wastes that can be clearly identified (e.g. plastic, glass, paper, wood, etc.) that, for the purpose of the plan-making process, are not captured under residual wastes as these are wastes that have been sorted into specific streams with the intention of being transferred onto treatment facilities (or that could be).
38 EA Trommel fines: Chemical analysis and waste classification, June 2020
39 It is possible that some of this made up of outputs generated from waste imported into the plan area and processed at treatment facilities within the plan area.

manage such wastes may not have previously been captured and so an estimate of the arisings over the plan period (based on the C&I growth profile) attributed to South Yorkshire and those likely to be from processing of imported wastes is identified below.

135. Residue output rates (per one tonne of waste input) applied to determine potential arisings are: processing of recyclables 15%; composting 15%; and treatment and energy recovery 20%. Small amounts of hazardous residual waste may also be produced from thermal treatment processes at a rate of 3%. Outputs vary widely and are dependent on the technology employed, scale of facility, waste composition, type of waste input, quality of waste input (e.g. contaminant level and calorific value), and operational efficiency of the individual plant/facility. Not all of this material needs be disposed of to landfill; it can be reused within the operational cycle, further treated using other technologies, recycled or used in construction[40].

136. Based on the waste arisings, management methods, and targets for the main waste streams, it is estimated that by 2041 non-hazardous residual wastes arisings from treatment of waste originating from South Yorkshire could require non-hazardous waste management capacity (including disposal) of around 0.350 to 0.400 Mtpa, with an additional 0.025 Mtpa for hazardous waste management capacity (including disposal) (refer paragraphs 131 to 135). Arisings of residual waste from imported waste treated within South Yorkshire could require management capacity (including disposal) of around 0.650 Mtpa by 2041 (refer to Waste Movements, paragraphs 145 to 149). Of the estimated current residual waste arisings just under half is currently disposed of to non-hazardous landfill, with a similar amount received at EfW plants, and the remainder at materials recycling, inert recycling, and other treatment facilities. The majority of EWC 191212 is disposed of to non-hazardous landfill, with some received at other waste management facilities for further treatment including material recycling, physical treatment, and other treatment (including energy recovery) facilities. The majority of EWC 191211 (of around 0.003 Mt recorded for South Yorkshire) was received at management facilities for biological and physical-chemical treatment. Although disposal to non-hazardous landfill is currently the main management route for residual wastes, the amount recovered is increasing over time, this demonstrates that there is the potential for further recovery.

137. Recently published guidance from the EA on excavated waste from utilities installation and repair[41] will result in unassessed waste from utilities excavations being classified as hazardous from 31 October 2020; previously classified as non-hazardous. Utility providers and operators were advised by the EA to prepare and implement protocols for the classification and assessment of excavated wastes to allow for correct classification of wastes. Again, this guidance highlights the need

40 Mineral Products Association 2019 Contribution of recycled and secondary materials to total aggregates supply in Great Britain indicates that 86% of Incinerator Bottom Ash (IBA) can be reused as aggregate.

41 EA Guidance - Excavated waste from utilities installation and repair: Regulatory Position Statement (RPS) 211, April 2020

for improved analysis and monitoring of specific waste types – by operators and the EA.

138. From a waste planning perspective, these examples highlight the need to consider residual arisings and ensure that such wastes are managed and pushed up the waste hierarchy, with disposal being the least preferred option.

139. Due to the uncertainties associated with obtaining estimates for waste arisings for South Yorkshire as well as residues themselves (refer paragraphs 47-47 and 131), such wastes have not been incorporated into the waste arisings, forecasts, and future capacity needs. Given the uncertainty associated with these figures caution should be taken in their application.

Monitoring future arisings

140. Where possible, future arisings (actuals and estimates) and existing operational capacity of waste management facilities within the WPA area will be monitored from the best available information sources as part of the annual monitoring report.

Low Level Radioactive Waste

141. Local forecasts for LLW have not been prepared as part of this WNA given the very low arisings previously recorded.

142. The NDA 2019 Inventory estimates that nationally the total amount of radioactive waste currently held in stores at 01 April 2019 and forecast in the future up to 2135 would occupy a volume of about 4.47 million m^3 (final volume after all wastes have been packaged). Of this LLW (and VLLW) account for 3.97 million m^3 (89%).

143. The Strategy for the Management of Solid LLW from the Non-nuclear Industry in the UK (DECC 2012)[42] estimates that total UK arisings from the non-nuclear industry are very unlikely to exceed 100,000m^3 per year. Survey results suggest that the majority of this can be attributed to the medical and research sectors. Management methods (reported through the survey) for LLW from the non-nuclear industry include disposal to landfill and via incineration. Naturally Occurring Radioactive Material waste arising from the oil and gas industries (e.g. from the decommissioning of oil and gas rigs) is currently not quantified but could arise for disposal in the future.

Management and disposal of LLW

144. As previously noted, application of the waste hierarchy has resulted in diversion of LLW from the LLWR facility. Management options available include incineration, metal recycling and alternative disposal. The Policy for the Long Term Management of Solid Low Level Radioactive Waste in the United Kingdom (Defra 2007)[43] allows for the disposal of some types of LLW to existing landfill, including: controlled burials of LLW and high volume VLLW. Such landfills could include non-inert landfill; the disposal of LLW generally does not require the same level of

42 Strategy for the Management of Solid LLW from the Non-nuclear Industry in the UK, DECC 2012
43 Policy for the Long Term Management of Solid Low Level Radioactive Waste in the United Kingdom, Defra 2007

engineering as a hazardous landfill. The disposal of such waste to existing landfill is regulated by the EA under the Environmental Permitting Regulations. This policy direction is reflected through the UK Strategy for the Management of Solid Low Level Radioactive Waste from the Nuclear Industry (DECC 2016)[44], which states that LLW producers and managers should develop a LLW Management Plan to take account of current and future arisings of LLW with particular emphasis on application of the waste hierarchy and Best Available Techniques (BAT). The proximity principal and waste transport issues should also be given appropriate consideration. The Policy and the UK Strategy also require appropriate engagement with stakeholders, including communities that may be affected (including those in the vicinity of disposal sites), and must meet the needs of the regulators.

Waste movements

145. Not all waste can be managed within the boundary of the WPA from which it arises. This is due to contractual arrangements, operational networks and capacity requirements, as well as geographical convenience and other factors. There will normally be some movement of waste into and out of WPAs; this is reflected by the position of seeking net self-sufficiency.

146. Waste movements were determined by analysing data extracted from the EA databases on waste[45] received at facilities within South Yorkshire (imports) and waste received at facilities within other WPAs (exports)[46]. The table below provides an overview of waste movements for 2019 and 2020.

Table 10: Waste movements South Yorkshire, 2019 and 2020 (million tonnes)

Waste stream	Imports (from other WPAs to South Yorkshire)	Exports (from South Yorkshire to other WPAs)	Balance (imports minus exports)
HIC (Municipal and C&I)			
2019	2.785	0.794	1.991
2020	2.012	0.760	1.252
Inerts (CD&E)			
2019	1.125	0.165	0.960
2020	0.716	0.172	0.544
Hazardous			
2019	0.069	0.149	-0.080
2020	0.068	0.129	-0.061
Total			
2019	3.979	1.108	2.871
2020	2.796	1.061	1.735

44 UK Strategy for the Management of Solid Low Level Radioactive Waste from the Nuclear Industry, DECC 2016

45 Excludes intermediate facilities or wastes outside the scope of the WNA (e.g. sewage and waste water, including sludges).

46 Derived from the excel extract of the WDI and Incinerator Returns.

147. Data attributed directly to South Yorkshire indicates that overall the South Yorkshire WPAs are a net importer of waste, in total importing just over 3.5 times the amount of waste exported in 2019 and 2.5 times in 2020. To some extent the scale of exports may be skewed by some waste records being incorrectly assigned to the generic Yorks & Humber group. There is no way of determining the extent to which this affects the data.

Waste imports and exports

Waste imported from other WPAs

148. Of waste managed within the South Yorkshire area the main management method is materials recycling (including metal recycling), followed by other treatment and energy recovery, and then disposal to non-hazardous landfill.

149. HIC waste imported into South Yorkshire (2020) was predominantly from the Yorks & Humber region (over half) with the remainder mainly from the East Midlands, North West, and West Midlands regions. Similarly, the majority of inert waste imported into South Yorkshire (2020) was received from the Yorks & Humber and East Midlands (around a third each), with the remainder largely from the North West and West Midlands. Lesser amounts of both HIC and inert wastes were received from all remaining regions, including from London (HIC and inerts both under 0.050 Mt). The movements of waste very much reflect the geographical relationship of South Yorkshire with the surrounding regions, and changes in the way that waste is now managed.

150. Hazardous waste received to facilities within South Yorkshire (2020) was predominantly from the North East, East Midlands, Yorks & Humber, and South East regions, with lesser amounts from all other regions.

Waste exported to other WPAs

151. Of HIC waste exported from South Yorkshire (2020) around two-thirds was received at facilities within the Yorks & Humber region, and around a quarter to the East Midlands. Similarly, the majority of inert waste exported from South Yorkshire (2020) was received at facilities within the Yorks & Humber (over half) and East Midlands (just over a third) regions. Lesser amounts of both HIC and inert wastes were exported to all remaining regions.

152. Information regarding management of waste exported may not be reflective of actual management methods due to some waste records being incorrectly assigned to the generic Yorks & Humber group. Broad management methods reported through the EA databases for exports indicate that: for HIC waste – around half was received at facilities for other treatment and energy recovery, a quarter was received at materials recycling facilities (including metal recycling), and a quarter was disposed of to non-hazardous landfill.

153. Of hazardous waste exported from South Yorkshire (2020) the majority was received at facilities within the East Midlands, Yorks & Humber, North West, North East, West Midlands, and East of England regions, with lesser amounts exported to all other regions.

Identification of strategic movements and the Duty to Cooperate

154. The following matters are typically considered to be of a strategic[47] nature (of relevance to waste planning) that could potentially affect another authority and therefore could form a DtC matter: indicative waste management capacity needs, the spatial strategy for waste development (particularly non-hazardous disposal to landfill), and the proposed allocations/designations for waste development. It is only where the movement of waste is of a particularly large volume or of a specialised nature (e.g. hazardous or radioactive waste) that this could be considered a strategic issue and therefore become relevant to the identified DtC matters.

155. A survey of WPAs was undertaken in September 2021 in line with the DtC regarding strategic waste movements. Movements were identified using the EA databases reporting on returns for the three-year period from 2017 to 2019. Strategic movement thresholds were defined relative to waste arisings for each of the WPAs, this is because the four authorities that make up the South Yorkshire area vary in the quantity of waste arisings, these thresholds are:

- Household, Industrial and Commercial (HIC) waste - From an individual WPA to an individual waste management facility 10,000 tonnes per annum (tpa),
- Inert waste - From an individual WPA to an individual waste management facility 10,000 tpa for Barnsley, Doncaster and Rotherham, and 15,000 tpa for Sheffield, and
- Hazardous waste - From an individual WPA to another WPA for a specific management method (e.g. recovery, treatment, landfill, etc.) 350 tpa for Barnsley, 500 tpa for Doncaster and Rotherham, and 1,000 tpa for Sheffield.

156. In order to identify thresholds relative to South Yorkshire WPA, the quantum of waste arising from South Yorkshire was taken into consideration. Local circumstance has been given consideration in the identification of the above thresholds, which typically represent a minimum of 5% of waste arisings for the relevant waste stream; a 5% significance level is widely accepted as indicating a significant difference. These thresholds allow for a more focussed view to be taken regarding strategic movements and identification of potential DtC matters. Movements below these levels would seem to indicate once-off or ad-hoc arrangements that are by their nature not strategic, or are smaller quantities that may be able to be accommodated at another facility. Hazardous waste arisings and movements tend to be of a reduced scale when compared with other waste streams and so the threshold is lower, in addition facilities for the management of hazardous waste tend to involve more specialised processes and as such have a much wider catchment area.

157. Waste movements identified as being above the thresholds over the three-year period from 2017 to 2019 from the EA databases are reported in Appendix 3 and summarised below (rounded to 1,000 tonnes). These operator waste returns were

47 It is for the authority of South Yorkshire to determine what is a strategic matter (in line with Zurich Assurance Ltd v Winchester CC and South Downs NPA 2014 that how the authority goes about deciding what is a strategic matter is a matter for their judgement).

analysed in order to identify any potential DtC and strategic waste movements and matters with relevant WPAs.

158. With regards to imports, the main WPAs from which waste was consistently received over the three-year period to facilities within South Yorkshire (above the thresholds) included: HIC waste – Derbyshire, Lancashire, Leeds, Lincolnshire; inert waste – Wakefield and London (WPA Note Codeable); hazardous waste – Essex, Flintshire, Derbyshire, Nottingham City, Redcar & Cleveland, Suffolk, and Wakefield. There were also consistent records for HIC identified as WPA Not Codeable for HIC from the East Midlands, North West, West Midlands, and Yorks & Humber regions, and for inerts from London and Yorks & Humber regions as well as outside the UK.

159. With regards to exports, the main WPAs that waste was consistently exported to from South Yorkshire (above the thresholds) included: HIC waste – Derbyshire, Halton, Leeds, and Wakefield; inert waste – Wakefield; and hazardous waste – Derbyshire, Kingston Upon Hull City, Kirklees, Knowsley, Leeds, Lancashire, Northamptonshire, North East Lincolnshire, North Lincolnshire, Sefton, Staffordshire, Stoke-on-Trent City, Stockton-on-Tees. Note that some waste received from WPA Not Codeable - Yorks & Humber may include some waste arising from South Yorkshire due to some waste records being incorrectly assigned to the generic Yorks & Humber group.

Duty to Cooperate matters

160. Following identification of waste movements, relevant WPAs were surveyed, the purpose of which was to: confirm the general scale of movements; gain an understanding of what other WPAs considered as strategic movements; identify any DtC matters; and identify if there were any planning restrictions or other consideration regarding the continuation of movements.

161. The survey return rate was just over half. Where no response has been received this is taken as agreement and that no strategic matters have been identified between the WPA and the South Yorkshire WPAs. Authorities that responded to the DtC survey regarding waste movements included: Cheshire East, Cheshire West & Chester, Durham, East Riding of Yorkshire & Hull City, Essex, Gateshead, Greater Manchester, Hampshire, Hertfordshire, Kent, Kirklees, Leicestershire, Lincolnshire, Leeds, Northamptonshire (North and West), Norfolk, North Yorkshire, Redcar & Cleveland, Sefton St Helens & Knowsley, Staffordshire, Surrey, and Warrington.

162. Overall, responses received agreed with the occurrence and quantum of waste movements as well as the use of the thresholds. Some variance in data was noted, this may be as a result of differences in databases queries and rounding. Overall the general the scale of movements was reflected and agreed upon. Some respondents noted that other WPAs and WTABs had agreed different thresholds, whilst others stated that the thresholds were considered reasonable and suitable. Regarding thresholds agreed at regional or higher levels through practice guides or Memorandum of Understanding (MoU) it should be noted that such documents set out guidance for member WPAs but it remains for the individual WPAs to determine what strategic movements are in order to reflect local circumstances and this should

be based on best available information. Whilst South Yorkshire agree that the thresholds agreed in other regions provide for a useful starting point, such matters should be considered relative to the WPA to determine if such thresholds reflect local circumstances and would therefore provide a view to actual strategic movements and DtC matters. This is because smaller authorities, who generate less waste, would consider lesser quantities significant, whereas this would not be the case for larger authorities or those that accommodate facilities with sub-regional or wider catchment areas.

163. No DtC issues or general planning policy considerations that would affect movements over the reporting period were identified, however it was noted that, in line with national policy, WPAs are seeking to achieve net self-sufficiency and so movements may reduce as treatment capacity increases; however, some movements will still occur due to commercial contracts and operational arrangements. A small number of authorities confirmed that their non-hazardous landfills are now closed and would not be able to take waste in the future. It was acknowledged by several authorities that whilst the aim is to manage waste as close to source as possible there is likely to still be movements of waste around the country and in particular hazardous waste due to the specialist nature of the waste. Most authorities did not feel that there were any strategic matters between the respective authorities but that waste movements would be kept under review. The following responses were of note:

- Network Rail submitted an application for a Transport and Works Act Order in March 2021 to upgrade the Trans Pennine route from Huddersfield to Westtown (Dewsbury). It is envisaged that the construction works for this project could lead to an increase in the amount of CD&E waste originating in the Huddersfield-Dewsbury area and could potentially increase demand for inert recycling, recovery/deposit to land sites/facilities in South Yorkshire.
- One authority (Cheshire West and Chester) did consider the movements between authorities to be strategic but did not identify any specific strategic waste planning matters between the authorities at this time, however, noted that they would like to be a signatory if South Yorkshire were to prepare a Statement of Common Ground (SoCG) regarding waste issues. The existence of waste movements between WPAs does not in itself require a SoCG, the need for a SoCG will be considered and take account of the national policy and guidance.

164. South Yorkshire will continue to work with relevant authorities in relation to waste movements and any strategic waste planning matters as appropriate. It is important to note that commercial contracts are largely outside the WPAs remit, however the Council is committed to planning positively and work with industry to develop the additional capacity to address the WPA areas future needs, and wider needs as appropriate.

Wider waste management needs

Import of wastes and additional capacity

165. As indicated in Table 10 above, South Yorkshire WPAs are a net importer of waste, The import of significant amounts of waste into the South Yorkshire area, and management of residual wastes, demonstrates that the South Yorkshire WPAs are providing for additional waste management capacity of more than local significance. The import and treatment of waste from other WPAs gives rise to residual waste arisings that may also require further treatment and recovery, discussed in the previous section 'Residual arisings' (paragraphs 131 to 139).

London's waste

166. The Draft London Plan, July 2019[48] reports that in 2015 London produced just under 18 Mt of waste. A total of 11.4 Mt of waste was exported in 2015 with household and C&I waste accounting for 3.449 Mt with the remainder (7.9 Mt) being CD&E waste. Although the Draft London Plan is not an adopted plan this summary provides a useful and consistent basis from which to project future needs on.

167. The adopted London Plan includes the intent to achieve greater net self-sufficiency in London and these are reflected in the Draft London Plan (Policies S17 and S18) including targets to manage as much of London's waste within London as practicable, work towards managing the equivalent of 100% of London's waste within London by 2026, zero biodegradable or recyclable waste sent to landfill by 2026, and recycle/recover 95% of CD&E waste. It also seeks to reduce the proportion of household and C&I waste exported from the capital over time – from 3.449 Mt in 2015 to 1.725 Mt in 2021 and zero by 2026 (onwards).

168. The majority of waste exported from London in 2015 went to WPAs in the East of England and the South East regions. The Yorks & Humber region received a total of 0.294 Mt with a small amount, 0.012 Mt, received in South Yorkshire; less than 1% of London's exported HIC waste. This amount has increased in recent years, with South Yorkshire receiving around 3% (0.057 Mt in 2019 and 0.046 Mt in 2020) of London's non-apportioned HIC waste; predominantly to metal recycling and other treatment (including energy recovery) facilities. Import of non-apportioned household and C&I waste from London has not been identified as a strategic matter for South Yorkshire, particularly as it does not involve disposal. Furthermore, the potential for waste displacement resulting from waste exported from London received to other WPAs (that receive significant amounts of London's non-apportioned HIC waste) affecting South Yorkshire is considered low, evidenced by the scale of identified waste movements.

48 Draft London Plan, July 2019. Refer paragraphs 9.7.2 and 9.8.1, and Table 9.3.

Industry views

169. A survey was undertaken in September to December 2021 to gauge views from the waste management industry (and those of other interested parties) on waste planning matters including current and future market conditions facing South Yorkshire, and emerging waste planning matters. Information was also sought (from operators or their agents) regarding information on existing sites. The survey received a low return rate, however this is fairly typical of this type of survey. This does mean that whilst the opinions shared can be taken account of, they are not representative of industry interests across the South Yorkshire area. A summary of views received is provided below:

- The main areas where opportunities were identified included: the Environment Act and resulting changes that will need to be made to implement the requirements set out in the Act; identification of locations for waste management facilities, in particular materials recycling; commercial waste services; and provision of joint waste management planning and services.
- The main blocks to driving waste up the waste management hierarchy were perceived to be: low demand and lack of incentives (including funding); decisions driven by economics rather than environmental grounds; lack of community support and participation; lack of alternative options for consumers (to reduce waste generation); consumerism and throw-away society; and at a local level, the need to feed EfW plants which may divert waste from other forms of recovery.
- The main blocks to the development of new waste management facilities or increased capacity were perceived to be: lack of incentives and funding; security of contracts (short-term contracts offer low financial security for operators); unimplemented capacity masking actual capacity needs; management/end fate of outputs from treatment processes; and bureaucratic processes and policy (including determination timeframes for planning applications). It was considered that there needed to be more focus on: circular whole-of-life systems; encouraging a move away from disposal; and identification of more opportunities (i.e. allocation of sites and/or locations) for accommodating a wider variety of waste management facilities.
- Locally specific circumstances included: lack of investment in modern infrastructure (to improve separation of recyclates); limited waste management options for diversion of waste; and lack of engagement and community participation.
- Regarding targets, including those that may be set by the Secretary of State under powers of the Environment Act, it was felt that the target for municipal waste of 65% recycling and 10% or less by 2035 is possible however would require a change (diversification) in waste management services provided, but

that South Yorkshire should aspire to these targets. In addition there was considered to be significant gains to be made for C&I wastes, especially food waste. The main challenges to achieving targets included resources, community engagement and participation, and change in waste management services/infrastructure.

- The future focus and emerging trends for waste management were considered to be impacts of the Environment Act, climate change actions, and the minimisation and management of food waste and plastics.
- Regarding the need to account for residual waste arisings (outputs from treatment processes), it was considered that improved reporting of these materials (to the EA) would be beneficial, and that processes such as materials recycling, AD, and EfW would play an important part in further treatment options.
- Regarding uncertainty in policy and the economic climate influencing market conditions and wider policy changes (including Brexit and the Covid-19 pandemic), it was considered that such impacts are difficult to forecast with associated instability being short-term, seeing stabilisation of the market in 5+ years. Specifically relating to pandemic effects, the downturn in the various economic sectors was stated to have had a knock-on effect for related waste streams but this has been experienced differently within the waste management sector e.g. increase in household collections vs. decrease in hospitality sectors. There may be longer term effects of changed working patterns.

Waste management capacity

Estimated existing capacity

170. Existing waste sites operating within the WPA area already contribute towards supporting sustainable communities and meeting future needs. The majority of these facilities are expected to continue to operate throughout the reporting period. The estimated existing waste management capacity is set out in the tables below and is made up from a variety of facilities located throughout the WPA area. Details of waste commitments are set out in Appendix 2.

171. The capacity estimates only capture the capacity of existing sites with extant planning permission.

172. The existing capacity was determined by collating information from several existing sources including council planning application and permission records, operator returns and reports, EA databases (2016 to 2020), EA waste licence and permit registers, and the EA Waste Infrastructure Inventory 2010 as well as officer

estimates[49] where necessary. Where available, returns for individual sites were collated from EA databases for the period 2016 to 2020. The highest capacity over this five-year period has been taken to be the estimated existing capacity for the site (figures rounded to nearest 1,000 tonnes) and applied over the remaining period (2021 to 2041), unless other available information suggested otherwise (e.g. grant of recent planning permission, planned closure or rationalisation of operator assets).

173. Several planning permissions have recently been granted (mostly in Doncaster); these included permission for an EfW plant (0.300 Mtpa capacity at Kirk Sandall). Note that the capacity of this recent permissions was not been included in the existing capacity or capacity gap calculations. Other recent permission involved extensions in time for existing operations and variations to operations not affecting existing capacity. The WPAs are not aware of any planned closures that would need to be incorporated into capacity projections. Unfortunately updated remaining void space data was not available for one inert recovery site, this means that there may be slightly more existing capacity than is identified in this WNA report; however it is not likely to be a significant amount. Work will continue to update this data with the WNA to reflect this. Planning permission end dates have been applied where applicable.

174. Not all of the estimated existing capacity is utilised year-on-year; this is evidenced by operator returns, which report reduced (or zero) throughput for some years for some sites. However, this capacity is assumed to be available to be utilised or brought online for future years. Estimated capacity may fluctuate over the reporting period in response to planned closures and expiry of planning permission where relevant. Note that where facilities have been identified as transfer stations that also include materials recycling processes 25% of their capacity has been assumed to contribute towards capacity for materials recycling.

175. The information collated on existing capacity and void space fed into determining future needs (the capacity gap) over the reporting period.

49 Officer estimates of capacity are derived from previous experience with the individual site and/or similar sites as well as pers. comm. with the operator.

Table 11: Estimated existing waste management capacity (million tonnes per annum)

Waste hierarchy level	Waste stream	Waste management facility	Estimated capacity
Preparing for reuse and recycling	Mixed	Materials recycling	0.590
	Mixed	Metal recycling and End of life vehicles	1.195
	CD&E	Inert recycling	0.312
	Mixed	Composting	0.086
Treatment and other forms of recovery	Mixed	Mechanical Biological Treatment	0.250
	Mixed	Anaerobic Digestion and other biological treatment	0.054
	Mixed	Energy from Waste	0.739
	Mixed	Other treatment (physical, physical-chemical, chemical, etc.)	0.909
	Hazardous	Other treatment (physical, physical-chemical, chemical, etc.)	0.154
	CD&E	Soil treatment	0.209
Disposal	Mixed	Incineration with no energy recovery	<0.001

Table 12: Estimated existing remaining void space 2021 to 2041 (million tonnes)

Waste hierarchy level	Waste stream	Waste management facility	Estimated void space
Other forms of recovery	CD&E	Inert recovery[A]	3.050
Disposal	Mixed	Non-hazardous landfill	3.025
	Industry specific	Restricted landfill	0.231

A - Updated data was not available for one inert recovery site and so the existing capacity may be slightly more than in the table above. Work is ongoing to address this data gap. In addition, inert materials will be required for engineering and restoration of non-hazardous landfill sites (estimated at 0.751 Mt up to 2041), and planning applications for extension of the permitted end date for two (inert recovery) sites have yet to be determined, if approved these would realise use of an additional 3.2 Mt over the reporting period.

176. In addition, the capacity associated with exempt waste sites[50] has been analysed. Exemptions require renewal after three years and it is not known if the site is operating and what extent of the capacity is used, therefore any estimate for such capacity comes with a high degree of uncertainty and therefore has not been included in calculations for existing capacity, capacity gap, or future needs. It is estimated that such sites may contribute and additional 0.134 Mt of capacity towards preparing for reuse and recycling, and 0.164 Mtpa of disposal with no energy recovery.

Future needs

177. In order to ascertain future needs the capacity gap must be identified, this is the difference between the existing estimated capacity and the management capacity resulting from forecasts. The future needs represent the capacity required to

[50] Register of Waste Exemptions

manage waste appropriately to achieve relevant targets and deliver net self-sufficiency over the reporting period. These should be taken as indicative figures.

178. The indicative future needs (i.e. that needed in addition to the existing estimated capacity) over the reporting period are set out in the tables below.

Table 13: Summary of waste arisings and future needs up to 2041 (million tonnes per annum)

			Indicative total waste management capacity needs				
			2021	2026	2031	2036	2041
Total waste arisings			2.890	3.230	3.375	3.481	3.592
Non-hazardous waste management							
Preparing for reuse and recycling	Materials recycling	Forecast arisings	0.785	0.876	0.933	0.984	1.026
		Existing capacity	1.784	1.784	1.784	1.784	1.784
		Capacity gap	0.999	0.908	0.851	0.800	0.758
	Composting	Forecast arisings	0.105	0.109	0.114	0.119	0.123
		Existing capacity	0.086	0.086	0.086	0.086	0.086
		Capacity gap	-0.019	-0.023	-0.028	-0.033	-0.037
	Inert recycling	Forecast arisings	0.204	0.247	0.259	0.260	0.260
		Existing capacity	0.312	0.188	0.188	0.158	0.158
		Capacity gap	0.108	-0.060	-0.072	-0.102	-0.102
Treatment and other forms of recovery	Treatment and energy recovery[A]	Forecast arisings	0.736	0.775	0.816	0.862	0.909
		Existing capacity	1.702	1.702	1.702	1.702	1.702
		Capacity gap	0.966	0.927	0.886	0.840	0.793
	Soil treatment	Forecast arisings	0.062	0.075	0.079	0.079	0.079
		Existing capacity	0.209	0.209	0.209	0.127	0.127
		Capacity gap	0.147	0.134	0.130	0.048	0.048
Other recovery	Inert recovery[B]	Forecast arisings	0.643	0.797	0.845	0.845	0.845
		Existing capacity	0.800	0.285	0.045	0.045	0.045
		Capacity gap	0.157	-0.512	-0.800	-0.800	-0.800
Non-hazardous waste disposal							
Disposal - Non-hazardous landfill		Forecast arisings	0.192	0.177	0.150	0.143	0.147
		Existing capacity	0.300	0.200	0.200	0.000	0.000
		Capacity gap	0.108	0.023	0.050	-0.143	-0.147
Hazardous waste management							
Recovery and treatment		Forecast arisings	0.140	0.152	0.161	0.172	0.185
		Existing capacity	0.154	0.154	0.154	0.154	0.154
		Capacity gap	0.014	0.002	-0.007	-0.018	-0.031
Disposal - Hazardous landfill		Forecast arisings	0.015	0.011	0.012	0.013	0.014
		Existing capacity	0.000	0.000	0.000	0.000	0.000
		Capacity gap	-0.015	-0.011	-0.012	-0.013	-0.014

A - Treatment and energy recovery refer to AD, EfW, and other physical/chemical treatment processes.
B - Available data indicates that, within South Yorkshire, inert waste that may elsewhere be disposed of to inert landfill is recovered through deposit of inert waste to land for beneficial purposes such as restoration of mineral extraction sites with extant planning permission. Updated data was not available for one inert recovery site and so the existing capacity may be slightly more than in the table above. Work is ongoing to address this data gap. In addition, inert materials will be required for engineering and restoration of non-hazardous landfill sites (estimated at 0.070 Mtpa up to 2025, 0.110 Mtpa 2025-2027, and 0.030 Mtpa

2028-2033), and planning applications for extension of the permitted end date for two (inert recovery) sites have yet to be determined, if approved these would realise use of an additional 3.2 Mt over the reporting period; further reducing inert recovery capacity gaps.

179. Overall, South Yorkshire is making good progress towards achieving net self-sufficiency for waste management. Existing facilities provide for more than sufficient capacity with regards to net self-sufficiency for preparation for reuse and recycling, treatment and energy recovery, and soil treatment over the reporting period, and inert recycling up to 2025. When viewed in terms of total arisings and existing capacity South Yorkshire currently provides waste management capacity that exceeds total arisings; the majority of this capacity is associated with facilities for preparation for reuse and recycling, and treatment and energy recovery.

Addressing the capacity gaps and potential need for facilities

180. Capacity gaps have been identified for composting, inert recycling, inert recovery, and non-hazardous (including SNRHW) landfill, as well as hazardous recovery and treatment, and hazardous landfill.

181. Based on the indicative future waste management capacity needs identified in the table above, there is potential, dependant on the scale of the individual facilities and processes employed, for the following facilities to be provided within the South Yorkshire area: composting (or other biological treatment processes), inert recycling, and inert recovery associated with restoration (e.g. colliery or mineral extraction sites). In addition, given the significant amounts of residues arising from treatment processes (from facilities located within South Yorkshire), facilities for further recovery and treatment of residues (arising as outputs from treatment processes) may support the waste management hierarchy and further diversion of waste from landfill.

182. The capacity gaps change slightly when the possible municipal waste targets (65% recycled by 2035) provided for through the Environment Act are applied. Application of this target results in additional need for composting (or other biological treatment process) of 0.052 Mtpa by 2041, increasing the capacity gap to 0.089 Mt. This target would also see an increase in materials recycling (around 0.107 Mtpa) and a decrease in treatment and energy recovery (around 0.160 Mtpa) by 2041; however there is sufficient existing capacity to accommodate these increases (with regards to net self-sufficiency) and so this would not create a deficit in capacity.

183. The estimated total future needs (void space) for deposit to land and disposal from 2021 to 2041 for waste arisings are:

- inert recovery (deposit of inert waste to land for beneficial purposes) 16.949 Mt (includes inert landfill that could be diverted to inert recovery),
- non-hazardous (including SNRHW) landfill 3.362 Mt, and
- hazardous landfill 0.262 Mt.

184. The available permitted void space (2021 to 2041) for inert recovery is 3.841 Mt, resulting in a total capacity gap of 13.108 Mt, however, this may be reduced by the following factors: planning applications for extension of the permitted end date for

two sites have yet to be determined, if approved these would realise use of an additional 3.2 Mt over the reporting period; updated remaining void space data was not available for one inert recovery site and so the existing capacity is likely to be slightly more than in the table above; there is a need for an estimated total 0.751 Mt of inert material for the restoration of non-hazardous landfill; and inert material will be required for the restoration of existing and future mineral extraction sites within the South Yorkshire area. Together, these are likely to provide a significant portion of the identified capacity gap for inert recovery. Inert materials are highly recoverable and much sought after to facilitate the restoration of permitted mineral extraction sites. Such sites in neighbouring WPAs may also seek to take up some of the inert waste identified for inert recovery in order to facilitate restoration.

185. The available void space (2021 to 2041) for non-hazardous landfill is 3.025 Mt, resulting in a total capacity gap of 0.337 Mt. Estimates for residual waste arisings (from the South Yorkshire area) indicate potential for arisings of around 2 Mt that may be disposed of to landfill over the period 2021 to 2041. This would result in a capacity gap of around 2.5 Mt for non-hazardous landfill, however, there is potential for further treatment and recovery of residual wastes. Figures for residual waste arising estimates are heavily caveated owing to uncertainty in data and future management methods.

186. The appropriateness of South Yorkshire to accommodate extensions to existing non-hazardous landfill or additional capacity for hazardous recovery and treatment would need to be determined on a site by site basis and in compliance with adopted development management policies. Given current trends within the waste management sector (rationalisation of assets and market responses to demand for disposal) some of the future needs for such capacity is likely to continue to be met at facilities outside of the South Yorkshire area, i.e. though the continued export of waste to other WPA areas. No strategic or DtC matters have been identified in relation to the principle or continuation of such movements, however it was noted that some sites were coming to the end of their life (refer Appendix 2). Ongoing monitoring of waste movements particularly for disposal to non-hazardous landfill (including residues), and continued working with relevant WPAs regarding strategic waste planning matters will be necessary to ensure that wastes are managed, and that any necessary capacity planned for, appropriately.

187. Potential additional capacity needs resulting from residual waste arisings[51] from waste treatment processes (of waste arising from within the WPA area) that may require further treatment and/or disposal over the period 2020 to 2041 are estimated below:

- treatment (including energy recovery) 0.089 Mtpa at 2021 increasing up to 0.115 Mtpa by 2041,
- metal recycling 0.010 Mtpa at 2021 increasing up to 0.012 Mtpa by 2041,

51 Such arisings are heavily dependent on future waste management trends and methods, operational efficiencies, and other market factors.

- Incinerator Bottom Ash (IBA) processing 0.086 Mtpa at 2021 increasing up to 0.106 Mtpa by 2041,
- non-hazardous (including SNRHW) landfill of around 2 Mt over the period 2021 to 2041, and
- hazardous disposal of around 0.500 Mt over the period 2021 to 2041.

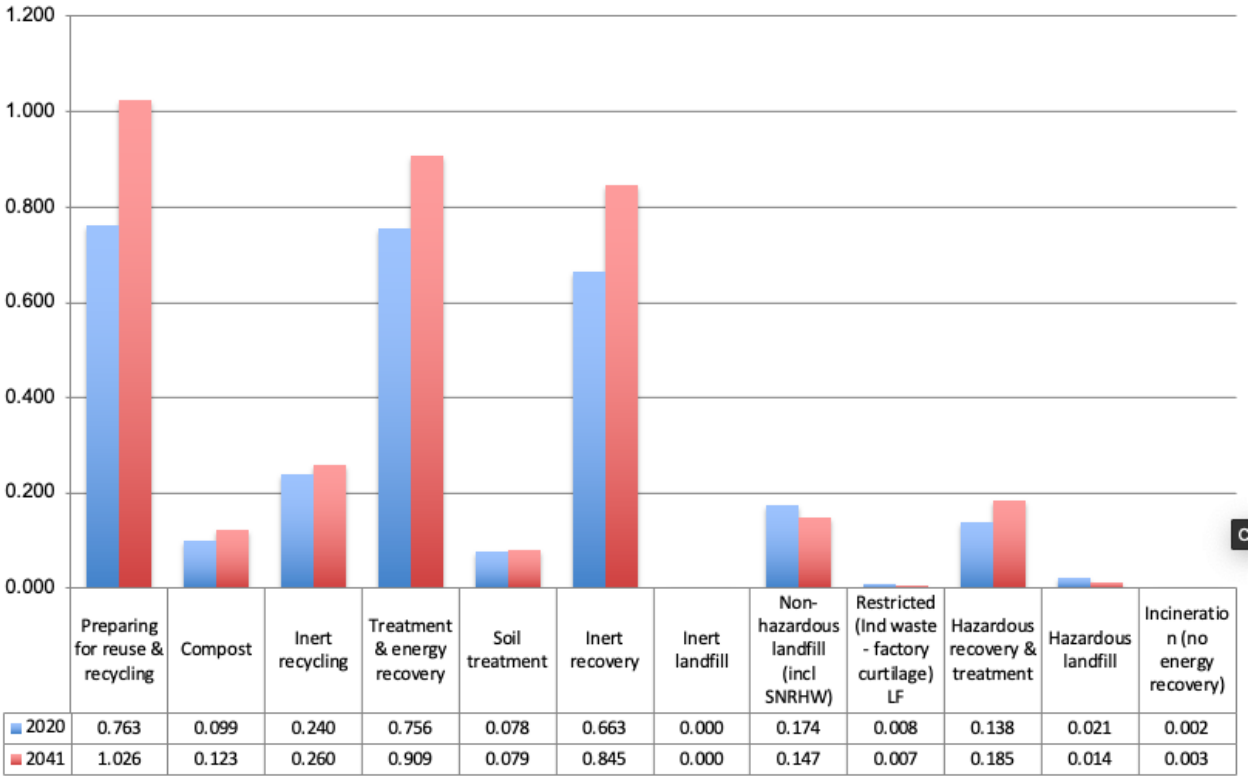
188. In addition, there may be a need for capacity for the treatment of residual wastes arising produced as an output from the processing of waste from other WPAs imported into the South Yorkshire area, this may account for around 0.650 Mtpa by the end of the reporting period (2041). Note that there is considerable uncertainty in quantifying residual wastes and forecasting these (refer paragraphs 131 to 139). The import of significant amounts of waste into the South Yorkshire area, and management of residual wastes, demonstrates that the South Yorkshire WPAs are providing for additional waste management capacity of more than local significance.

189. It is recognised that future disposal requirements will be significantly different to that of the past, with new technologies and processes diverting more waste and reducing the need for residual wastes to be disposed of to landfill. This creates somewhat of a moving target and highlights the need for continual monitoring of disposal, including disposal of residues, to ensure that wastes are managed, and any necessary capacity planned for appropriately. It is also likely that a significant amount of the residual waste for disposal to landfill could be recovered by other treatment processes.

Conclusion

190. Current waste arisings[52] for South Yorkshire are estimated to total just under 3 Mtpa; this includes municipal, C&I, CD&E, and hazardous wastes. Forecasts indicate that waste arisings could increase to just over 3.5 Mtpa by the end of the reporting period (2041). Current management methods achieve overall rates of around 93% for total recovery (including recycling) and 7% for disposal. Forecasts indicate that South Yorkshire could achieve a total recovery rate (including recycling) of over 95% by 2030. In addition, residual wastes, occurring as outputs from waste treatment processes, will continue to arise and require management, such wastes were estimated for 2020 to be in the region of 0.300 Mt for waste originating from South Yorkshire and 0.400 Mt for residual waste arising from imports that are processed within South Yorkshire. This waste may require additional management capacity to maximise further recovery and diversion from landfill.

52 Refers to as managed waste arisings.



	Preparing for reuse & recycling	Compost	Inert recycling	Treatment & energy recovery	Soil treatment	Inert recovery	Inert landfill	Non-hazardous landfill (incl SNRHW)	Restricted (Ind waste - factory curtilage) LF	Hazardous recovery & treatment	Hazardous landfill	Incineration (no energy recovery)
2020	0.763	0.099	0.240	0.756	0.078	0.663	0.000	0.174	0.008	0.138	0.021	0.002
2041	1.026	0.123	0.260	0.909	0.079	0.845	0.000	0.147	0.007	0.185	0.014	0.003

Figure 1: Waste arisings and management methods in 2020 compared to that in 2041 (million tonnes per annum)

191. Overall, South Yorkshire is making good progress towards achieving net self-sufficiency for waste management. Existing facilities provide for more than sufficient capacity with regards to net self-sufficiency for preparation for reuse and recycling, treatment and energy recovery, and soil treatment over the reporting period, and inert recycling up to 2025. When viewed in terms of total arisings and existing capacity South Yorkshire currently provides waste management capacity that exceeds total arisings; the majority of this capacity is associated with facilities for preparation for reuse and recycling, and treatment and energy recovery.

192. Capacity gaps have been identified for composting, inert recycling, inert recovery, and non-hazardous (including SNRHW) landfill, as well as hazardous recovery and treatment, and hazardous landfill.

193. There is a potential, dependant on the scale of the individual facilities and processes employed, for the following facilities to be provided within the WPA area: composting (or other biological treatment processes), inert recycling, and inert recovery associated with restoration (e.g. colliery or mineral extraction sites). In addition, given the significant amounts of residues arising from treatment processes (from facilities located within South Yorkshire), facilities for further recovery and treatment of residues (that arise as an output from waste management processes) may support the waste management hierarchy and further diversion of waste from landfill. The appropriateness of South Yorkshire to accommodate extensions to existing non-hazardous landfill or additional capacity for hazardous recovery and

treatment facilities would need to be determined on a site by site basis and in compliance with adopted development management policies.

194. Whilst the aim for South Yorkshire, and more widely within England, is to move towards achieving net self-sufficiency for waste management, cross-boundary movements will continue to occur (both imports and exports). No strategic or DtC matters have been identified in relation to the principle or continuation of such movements, however it was noted that some disposal sites within South Yorkshire are coming to the end of their operational life (refer Appendix 2).

195. Ongoing monitoring of waste movements and remaining void space, particularly for disposal to non-hazardous landfill (including residues), and continued working with relevant WPAs regarding strategic waste planning matters will be necessary to ensure that wastes are managed, and that any necessary capacity planned for, appropriately.

Appendix 1: Municipal waste management contracts

Table A1.1: Summary of municipal waste management contracts

	Barnsley	Doncaster	Rotherham	Sheffield
Collection	In house	Suez	In house	Veolia
Residual	BDR PFI MBT/AD Renewi Ends 2040 (can be extended to 2045)			Sheffield's ERF Veolia PPP Ends 2038
HWRC	FCC joint contract with BDR Ends October 2023 Element of reuse included			Subcontracted to Veolia UK Ends 2038
Garden waste	Jack Moody Recycling Ltd Ends 31 March 2026 (potential to extend to 2028)	Freeland Horticulture Ends 2023 (potential to extend to 2025)	Biowise Limited T/A Wastewise Awarded 2020 ends 2023 with the potential to extend by 2 x 12 months	Veolia PPP Ends 2036 Disposal subcontracted to Freeland Horticulture
Paper and card	Kerbside - Palm Recycling Extended to 2023	Dealt with through SUEZ Contract Ends 2026	Veolia ES, Beighton to recycle Paper and Cardboard Ends 2024 (potential to extend to 2026)	Veolia PPP Ends 2038
Mixed dry recycling	GRUK Recycling Ends 2023	Dealt with through SUEZ Contract Ends 2026	HW Martin ES, to Recycle Glass Bottles, Steel and aluminium tins and cans + plastic Bottles, Pots Tubs and trays and Textiles Ends 2024 (potential to extend to 2026)	Veolia PPP Ends 2038
Commercial waste residual only	BDR PFI MBT/AD Renewi Ends 2040	BDR PFI MBT/AD Renewi Ends 2040	In-house collection Disposal BDR PFI MBT/AD Renewi Ends 2040	

Appendix 2: Waste management sites with extant planning permission

Table A2.1: Barnsley - Waste management sites with extant planning permission

Site	Operator	Location / Address
Household waste recycling centres and transfer sites		
Nicholas Lane HWRC (Goldthorpe HWRC)	F C C Recycling (UK) Limited	Goldthorpe HWRC, Nicholas Lane, Goldthorpe, Barnsley, South Yorkshire, S63 9AS,
Springvale HWRC (Penistone HWRC)	F C C Recycling (UK) Limited	Penistone HWRC, Sheffield Road, Springvale, Penistone, Barnsley, South Yorkshire, S36 6HJ,
West Street Worsbrough HWRC (Warren Vale HWRC)	F C C Recycling (UK) Limited	West Street HWRC, West Street, Worsbrough, Barnsley, South Yorkshire, S70 5DJ,
Smithies Lane HWRC	Sampson Roger	Smithies Lane HWRC, Smithies Lane, Smithies, Barnsley, South Yorkshire, S71 1NL,
Jakto Transport Ltd	Jakto Transport Ltd	Barnsley Main Colliery Site, Oaks Lane, Stairfoot, Barnsley, South Yorkshire, S71 1HJ,
Boulder Bridge Lane Site	Mr Derek Heeley & Mr Melvin Corbett	Boulder Bridge Lane Site, Boulder Bridge Lane, Carlton, Barnsley, South Yorkshire, S71 3HJ,
J Edwards Waste Management Ltd	J Edwards Waste Management Ltd	Lidget Lane Ind Est, Albion Drive Thurnscoe, Rotherham, South Yorkshire, S63 0BA
Grange Lane Transfer Station	Renewi UK Services Limited	Grange Lane Transfer Station, Grange Lane, Stairfoot, Barnsley, South Yorkshire, S71 5QQ,
Materials recycling facilities		
Hazelhead EPR/QP3238EP	R Plevin and Sons Limited	R Plevin and Sons Limited, Hazlehead, Crow Edge, South Yorkshire, S36 4HG,
Metal recycling, End of Life Vehicles, and car breakers		
P J Plant & Equipment	P J Plant & Equipment Ltd	39 Brierley Road, Shafton, Barnsley, South Yorkshire, S72 8QW,
Becketts Yard	Beckett C K	Becketts Yard, Boulder Bridge Lane, Carlton, Barnsley, South Yorkshire, S71 3HJ,
Land At Boulder Bridge Lane	Sims Group UK Ltd	Land At, Boulder Bridge Lane, Off Shaw Lane, Carlton, Barnsley, South Yorkshire, S71 3HJ,

Site	Operator	Location / Address
J Blackburn & Sons Ltd	J Blackburn & Sons Ltd	Units 27 & 28 Wharncliffe Business Park, Longfields Road, Carlton, Barnsley, South Yorkshire, S71 3HT,
Wallis Metals	Wallis James	Rear Of Greyhound Stadium, Nicholas Lane, Goldthorpe, Barnsley, South Yorkshire, S63 9AS,
Geoff Ripley	Ripley, Geoff	Boulder Bridge, Shaw Lane, Carlton, Barnsley, South Yorkshire, S71 3HJ,
Lowfield Road Dismantlers	Lowfield Road Dismantlers Ltd	Lowfield Road, Bolton-on-dearne, Rotherham, South Yorkshire, S63 8JD,
Number 1 Autosalvage	Number 1 Autosalvage	Land/premises at Lowfield Road, Bolton On Dearne, Barnsley, South Yorkshire, S63 8JD,
Parton & Allen	Parton & Allen	Land/premises At, Boulder Bridge Lane, Carlton, Barnsley, South Yorkshire, S71 3HJ,
Warwick Ward (machinery) Ltd	Warwick Ward Machinery Ltd	Land / Premises At, Blacker Hill Sidings, Blacker Hill, Barnsley, South Yorkshire, S74 ORE,
Welbourn Car Dismantlers	Welbourn Paul	Welbourn Car Dismantlers, Boulder Bridge Lane, Carlton, Barnsley, South Yorkshire, S71 3HJ,
Trevor Wigley & Son Bus Ltd.	T. Wigley & Son Bus Limited	Boulder Bridge Lane, Off Shaw Lane, Carlton, Barnsley, South Yorkshire, S71 3HJ,
B H Scrap Metals, Forge Lane	B H Scrap Metals Ltd	1 Low Forge, Wortley, Sheffield, South Yorkshire, S35 7DN,
Bulk Metals Ltd	Bulk Metals Limited	Laurence Works Ind Estate, Springvale, Penistone, South Yorkshire, S36 6HF,
Q N Q Motor Services UK Ltd	Qualter-Smith Paul Anthony	1 West Road, Pogmoor Barnsley S75 2DH (EA adddress: Mapplewell Industrial Park, Mapplewell Drive, Mapplewell)
Maxis Trading Ltd	Maxis Trading Ltd	Beever Street, Goldthorpe, Rotherham, South Yorkshire, S63 9HT
S R S Automotive Ltd	S R S Automotive Ltd	Unit 3, Carbon Court, Spring Vale Road, Park Springs, Barnsley, South Yorkshire, S72 7FF
Inert recycling		
Land At Junction Of Pontefract Road And Burton Road	Sealquest Limited	Land At Junction Of, Pontefract Road & Burton Road, West Green, Barnsley

Site	Operator	Location / Address
Whaley Road	Wordsworth Crushing Ltd	Wordsworth Crushing Ltd, Whaley Road, Low Barugh, Barnsley, South Yorkshire, S75 1HT,
Compost		
NA		
Other forms of treatment		
Carlton Road Site	Glass Recycling (UK) Ltd	418 Carlton Road, Carlton, Barnsley, South Yorkshire, S71 3HX,
The Cullet Yard	G B Cullet Limited	Mitchell's Enterprise Park, Off Bradbury Balk Lane, Wombwell, Barnsley, South Yorkshire, S73 8HR,
C K Beckett Oil Processing	C K Beckett	Boulder Bridge Lane, Carlton, South Yorkshire, S71 3HJ,
Mobile Plant S R 2010 No4	J G Pears (Newark) Limited	Bella Vista Farm, Penistone, Barnsley, South Yorkshire, S36 9FN,
Mobile Plant S R 2010 No5	Pickford Contracting Ltd	
Soil treatment		
Unit 7	G M M Multi Utilities Limited	Unit 7, Peel Place, Barnsley, South Yorkshire, S71 1LU,
Caulfield Concrete Yard Former D T S Recycling Centre	Shaw Lane Aggregates And Recycling Limited	Shaw Lane Est Boulder Bridge, Carlton, Barnsley, South Yorkshire, S71 3HJ,
Inert recovery		
Former Carlton Colliery Site	Portward Homes Limited	Former Carlton Colliery Site, Shaw Lane, Carlton, Barnsley, South Yorkshire, S71 3HJ,
Disposal		
NA		

Table A2.2: Doncaster - Waste management sites with extant planning permission

Site	Operator	Location / Address
Household waste recycling centres and transfer sites		
Bootham Lane HWRC	F C C Recycling (UK) Limited	Bootham Lane HWRC, Bootham Lane, Dunscroft, Doncaster, South Yorkshire, DN7 4JT,
Carcroft HWRC Site	F C C Recycling (UK) Limited	Carcroft HWRC Site, Bentley Moor Lane, Carcroft, Doncaster, South Yorkshire, DN6 7BD,
Conisbrough HWRC	F C C Recycling (UK) Limited	Conisbrough HWRC, Crookhill Road, Conisbrough, Doncaster, South Yorkshire, DN12 2AE,
Rossington HWRC	F C C Recycling (UK) Limited	Rossington HWRC, Bankwood Lane Ind Est, Rossington, Doncaster, South Yorkshire, DN11 0PS,
Springwell Lane / Ballby HWRC	F C C Recycling (UK) Limited	Springwell Lane HWRC, Springwell Lane, Balby, Doncaster, South Yorkshire,
Armthorpe HWRC	F C C Recycling (UK) Limited	Armthorpe HWRC, Armthorpe Road, Pot Hill Armthorpe, Doncaster, South Yorkshire, DN2 5QB,
White Rose Recycling Centre	Forward Environmental Limited	Whitelea Grove Industrial Estate, Swinton, Mexborough, South Yorkshire, S64 9QP
C H Middleton Limited	C H Middleton Ltd	65 / 71 Sprotbrough Road, Sprotbrough, Doncaster, South Yorkshire, DN5 8BW,
Armthorpe Recycling Centre	Yorkshire Aggregates Limited	Armthorpe Recycling Centre, Holme Wood Lane, Armthorpe, Doncaster, South Yorkshire, DN3 3EH,
Dave Shaws Waste Transfer Station Inc: Quickskip	Shaw Dave	Land/ Premises At, Clay Lane West, Long Sandall, Doncaster, South Yorkshire, DN2 4RA,
Doncaster Waste Transfer Station	Suez Recycling And Recovery UK Ltd	Doncaster Waste Transfer Station, Sandall Stones Road, Kirk Sandall Ind Est, Doncaster, South Yorkshire, DN3 1QR,
Dumpall Skip Hire	Remondis Doncaster Limited	Land/premises At, Clay Lane, Kirk Sandall, Doncaster, South Yorkshire, DN2 4RD,
The Haven Works	Thompson Fuels & Skip Hire Services Ltd	The New Depot, Naylor Street, Parkgate, South Yorkshire, S62 6BP
Materials recycling facilities		
Bankwood Lane Industrial Estate	Attero Recycling Ltd / Eco Power	Bankwood Lane Industrial Est, Bankwood Lane, Rossington,

Site	Operator	Location / Address
	Environmental Limited	Doncaster, South Yorkshire, DN11 0PS,
J J Miller Skip Hire	Miller Jason	J J Miller Skip Hire, Hop Hills Lane, Dunscroft, Doncaster, South Yorkshire, DN7 4JX,
Unit 3 & 4 Plot 7	Skip 2 It Doncaster Ltd	Unit 3 & 4 Plot 7, 17, Clayfield Industrial Estate, Doncaster, South Yorkshire
Whitelea Grove Ind Est	Betapack Compliance Scheme Ltd	Whitelea Grove Industrial Estate, Swinton, Mexborough, South Yorkshire, S64 9QP
H M P Hatfield	Recycling Lives (Social Enterprises) Limited	H M P Hatfield, Thorne Road, Doncaster, South Yorkshire, DN7 6EL,
Metal recycling, End of Life Vehicles, and car breakers		
Balby Dismantlers	Phillips Keith	Railing Sidings, Greenfield Lane, Balby, Doncaster, South Yorkshire, DN4 0PW,
Cf Booth (Doncaster) Ltd	C F Booth (Doncaster) Ltd	Land/premises At, Wharf Road, Off Milethorn Lane, Doncaster, South Yorkshire, DN1 2ST,
Ken Urwin Motorcycles Ltd	Ken Urwin Motorcycles Ltd	60 King Street, Thorne, Doncaster, South Yorkshire, DN8 5BA,
Markham Metals	Pritchard David J	Markham Metals, Barton Lane, Armthorpe, Doncaster, South Yorkshire, DN3 3AA,
Queens Road Garage	Seymour Raymond	Willow Garth, Off Queens Road, Askern, Doncaster, South Yorkshire, DN6 0LU,
Synetiq Limited	Synetiq Limited	Land/premises At, Bentley Moor Lane, Adwick - Le - Street, Doncaster, South Yorkshire, DN6 7BD,
Bankwood Lane	Morris & Co (Handlers) Limited	New Rossington, Doncaster, South Yorkshire, DN11 0PS,
F Hird & Son	Hird Thomas Charles	Land/premises At, Barton Lane, Armthorpe, Doncaster, South Yorkshire, DN3 3AB,
Carr Hill Brass Foundry EPR/BM1091IW	Pegler Ltd	St Catherine's Avenue, Doncaster, DN4 8DF,
G A Motor Spares	Abeysekera Gary	Unit 2 Ash Holt Ind Park, Bank End Road, Blaxton, Doncaster, South Yorkshire, DN9 3NT,
Yorkshire Metal Recycling	Yorkshire Metal Recycling Ltd	Yorkshire Metal Recycling, Sandall Stones Road, Kirk Sandall, Doncaster, South Yorkshire, DN3 1QR,

Site	Operator	Location / Address
Yorkshire Metal Recycling Ltd	Yorkshire Metal Recycling Ltd	Yorkshire Metal Recycling, Sandall Stones Road, Kirk Sandall, Doncaster, South Yorkshire, DN3 1QR,
Inert recycling		
Finningley Quarry Waste Facility	Tetron Finningley Llp	Old Bawtry Road, Austerfield, Doncaster,
Tudworth Recycling Centre	Grantham Industries Limited	Tudworth Recycling Centre, Tudworth Road, Hatfield, Doncaster, South Yorkshire, DN7 6HQ,
Wheatley Cullet Processing Plant	URM (UK) Limited	Land/premises At, Barnby Dun Road, Doncaster, South Yorkshire, DN2 4RH,
Bank End Quarry	Blaxton Aggregates Limited	Bank End Quarry, Bank End Road, Blaxton, Doncaster, South Yorkshire, DN9 3AN,
Carcroft Recycling Centre	Doncaster Metropolitan Borough Council	Carcraft Recycling Centre, Brooklands, Doncaster, South Yorkshire, DN6 7BA,
Doncaster Wood Yard	Network Rail Infrastructure Limited	Land At Doncaster Wood Yard, Ten Pound Walk, Doncaster, South Yorkshire, DN4 5HX,
Holme Hall Quarry Landfill And Recycling	Breedon Southern Limited	Holme Hall Recycling, Stainton, Maltby, Rotherham, South Yorkshire, S66 7RD,
Compost		
Wroot Road Composting Facility	Freeland Horticulture Limited	Wroot Road Quarry, Wroot Road, Finningley, Doncaster, South Yorkshire, DN9 3DU,
Other forms of treatment		
Brier Hills Farm	Brier Hills Recycling Ltd	Brier Hills Farm, Brier Hills Lane Off Stainforth Moor Road, Hatfield, Doncaster, South Yorkshire, DN7 6HA,
Kirk Sandall Thermal Treatment Plant	Trackwork Ltd	Sandall Lane, Kirk Sandall Ind Est, Doncaster
Markham Grange Nursery And Steam Museum	Nuttall Victor	Markham Grange Nursey And Steam Museum, Long Lands Lane, Brodsworth, Doncaster, South Yorkshire, DN5 7XB,
Thorpe Marsh Oil Management Unit EPR/HP3038MR	National Grid Electricity Tranmission Plc	Thorpe Marsh 275 Substation, Thorpe Bank, Barnby Dun, South Yorkshire, DN3 1ET,
A One+ Integrated Highways Services Gulley Waste Treatment Facility	Colas Ltd, Halcrow Group Ltd & Costain Ltd	Sprotborough Motorway Depot, Melton Road, Sprotborough, Doncaster, South Yorkshire, DN5 7PY,

Site	Operator	Location / Address
Soil treatment		
Hazel Lane Quarry & Landfill	Cat Plant (Quarry) Ltd	Hazel Lane Quarry & Landfill, Hazel Lane, Hampole, Doncaster, South Yorkshire, DN6 7EX,
Partridge Hill Quarry	Misson Sand & Gravel Company Limited	Partridge Hill Quarry, High Common Lane, Austerfield, Doncaster, South Yorkshire, DN10 6HA,
Unit 1 Phase 1	A Catlow Recycling & Aggregate Supplies Ltd	S64 0JJ
Inert recovery		
Austerfield Quarry	Bolland Plant & Recycling Limited	Austerfield Quarry, High Common Lane, Austerfield, Doncaster, South Yorkshire, DN10 6HA,
Doncaster Moto Parc	J White & Co (TDE) Ltd	Old Bawtry Road, Finningley, Doncaster, South Yorkshire, DN10 6QU,
Dunsville Quarry	Breedon Southern Limited	Dunsville Quarry, Woodhouse Lane, Dunsville, South Yorkshire, DN7 6AD,
Stainton Quarry	Marshalls Mono Limited	Stainton Quarry, Ruddle Mill Lane, Stainton, Rotherham, South Yorkshire, S66 7RH,
Tudworth Hall Farm	Simon Sleath	Tudworth Hall Farm, Tudworth Road, Hatfield, Doncaster, South Yorkshire, DN7 6HQ,
Holme Hall Quarry Landfill	Breedon Southern Limited	Holme Hall Quarry Landfill, Holme Hall Lane, Stainton, South Yorkshire, S66 7RD,
Disposal		
Time Right Ltd	Time Right Ltd / Trading as Pet Cremation Services	Carcroft Ind Est, Bentley Moor Lane, Adwick Le Street, Doncaster
Bootham Lane Landfill * *Non-hazardous landfill, landfilling operations to cease 2025 and restoration complete 2027.*	BDR Waste Disposal Ltd	Bootham Lane, Dunscroft, Doncaster, DN7 4JT,
Hazel Lane Quarry * *Non-hazardous landfill, landfilling operations permitted up to 2032.*	Catplant Quarry Ltd	Hazel Lane Quarry, Hazel Lane, Hampole, Doncaster, DN6 7EX,

Table A2.3: Rotherham - Waste management sites with extant planning permission

Site	Operator	Location / Address
Household waste recycling centres and transfer sites		
Carr Hill HWRC	FCC Recycling (UK) Limited	Greasbrough Road, Greasbrough, Rotherham, South Yorkshire, S61 4QL,
Lidget Lane HWRC	FCC Recycling (UK) Limited	Ravenfield, Rotherham, South Yorkshire, S65 4LY,
Magilla HWRC	FCC Recycling (UK) Limited	Common Road, North Anston, Rotherham, South Yorkshire, S25 4AH,
Warren Vale HWRC	FCC Recycling (IUK) Limited / W Maw Recycling Ltd	Warren Vale Road, Rawmarsh, Rotherham, South Yorkshire, S62 7RW,
Roy Hatfield Limited	Roy Hatfield Limited	Roy Hatfield Limited, Fullerton Road, Brinsworth, Rotherham, South Yorkshire, S60 1DH,
Rotherham Waste Oils - EPR/KP3732KJ	Rotherham Waste Oils Ltd	Quarry Oil Depot, Kilnhurst Road, Kilnhurst, South Yorkshire, S64 5TL,
W Maw	W Maw Recycling Limited	W Maw Recycling Ltd, Steel Street, Holmes, Rotherham, South Yorkshire, S61 1DF,
Safety Kleen	Safety Kleen UK Ltd	Safety Kleen UK Ltd, Bookers Way, Todwick Road Industrial E, Dinnington, South Yorkshire, S25 3SH,
K C M Metals & Skip Hire	Hickling Charles Philip & Keith Mark	Effingham Mills, Ginhouse Lane, Rotherham, South Yorkshire, S61 4QN,
Milltol Ltd	Milltol Ltd	Land/ Premises At, Yard Off Steel Street, Holmes Ind Est, Rotherham, South Yorkshire, S61 1DF,
Ronald Hull Jnr Ltd	Ronald Hull Jnr Ltd	Mangham Road, Parkgate, Rotherham, South Yorkshire, S62 6EF,
T D E Enterprises	T D E Enterprises Ltd	Transfer Station, Holmes Industrial Estate, Rotherham, South Yorkshire, S61 1DF
The Foundary	T K Lynskey (Excavations) Ltd	The Foundary, Common Lane, Wath Upon Dearne, Rotherham, South Yorkshire, S63 7DX,
Materials recycling facilities		
The Glassworks	Beatson Clark Limited	The Glassworks, Greasbrough Road, Rotherham, South Yorkshire, S60 1TZ,

Site	Operator	Location / Address
Kniveton (UK) Ltd	Kniveton (UK) Ltd	North Drive, Northfield Ind Est, Greasborough Road, Rotherham, South Yorkshire, S60 1QF,
Rapid Skips	Mr Luke Brown And Mr Darren Brown	Yard 2, School Lane, Parkgate, Rotherham, South Yorkshire, S62 6FH,
SME Metal and Recycling	S M E Environmental Services Ltd	Unit 1, Lloyd Street, Parkgate, Rotherham, South Yorkshire, S62 6JG,
Crown Works	Veolia Environmental Services	Crown Works, Rotherham Road, Beighton, S20, 1AH
Metal recycling, End of Life Vehicles, and car breakers		
Arrowzone Ltd	Arrowzone Ltd	Mangham Works, Mangham Road, Parkgate, Rotherham, South Yorkshire, S62 6EF,
C F Booth Ltd	C F Booth Ltd	Clarence Metal Works, Armer Street, Rotherham, South Yorkshire, S60 1AF,
Cupola Works	Collins W	Land/premises At, Masbrough Street, Rotherham, South Yorkshire, S60 1ER,
E L G Utica Alloys Limited	E L G Utica Alloys Limited	Unit 1, Adwick Park, Manvers, Rotherham, South Yorkshire, S63 5AB,
European Asian Metal Limited	European Asian Metal Limited	European Asian Metal, North Drive Road, Northfield Industrial Est, Rotherham, South Yorkshire, S60 1QF,
London Wiper Company Limited	T/a Universal Recycling Company / Remet Processing Ltd	Wharf Road, Kilnhurst, Mexborough, South Yorkshire, S64 5SY,
Milltol Ltd	Milltol Ltd	Land/ Premises At, Yard Off Steel Street, Holmes Ind Est, Rotherham, South Yorkshire, S61 1DF,
Rotherham Metals Recycling Facility	S J M Alloys And Metals Ltd	Unit 10 Mangham Road, Barbot Hall Industrial Es, Rotherham, South Yorkshire, SE62 6EF,
Sims Group UK Ltd	Sims Group UK Ltd	Hill Brooks Works, Ulley Lane, Aston, Sheffield, South Yorkshire, S26 2DR,
Cronimet (G B) Limited	Cronimet (Great Britain) Limited	Cronimet (G B) Limited, Greasbrough Road, Rotherham, South Yorkshire, S60 1RW,
Bradgate Motors	Bradgate Motors	Land/premises At, Wortley, Rotherham, South Yorkshire, S61 1JP,

Site	Operator	Location / Address
Mitzy Bitz	Trade & Save Imports Limited	2/3 Gateway Close, Parkgate, Rotherham, South Yorkshire, S62 6LJ,
D S M C Salvage	Wilkinson Daniel	Unit 2 A, Job Lot Business Park, Canklow Road, Rotherham, South Yorkshire, S60 2JF,
M L B Autospares Limited	M L B Autospares Limited	Kilnhurst Road, Kilnhurst, Rotherham, South Yorkshire, S64 5TL,
K B P Vauxhall	Manton Wayne	Kilnhurst Business Park, 5b Glasshouse Lane, Kilnhrst, Rotherham, South Yorkshire, S64 5TH,
Waste And Salvage	Rotherham Car And Van Breakers Ltd	Waste And Salvage, Aldwarke Road, Parkgate, Rotherham, South Yorkshire, S62 6BZ,
Vass Group Ltd	Vass Group Limited	Thames House, Thames Street, Rotherham, South Yorkshire, S60 1LU,
Inert recycling		
G Morley Limited	G Morley Limited	Midland Street, Off Rotherham Street, Parkgate, Rotherham, South Yorkshire, S62 6EA,
Plot 6 Top Yard (Rapid Aggregates)	Rehill Wallslough Ltd	Plot 6 Top Yard (Rapid Aggregates), Steel Street, Rotherham, South Yorkshire, S61 1DF,
Aldwarke Terrace	Ronald Hull Jnr Limited	Aldwarke Terrace, Aldwarke Road, Parkgate, Rotherham, South Yorkshire, S62 6BX,
Shaws Waste Recycling Limited	Shaws Waste Recycling Ltd	The Recycling Centre, Derwent Way, Wath West Ind Estate, Wath Upon Dearne, South Yorkshire, S63 6EX
Compost		
Gorsefield Farm Compost Facility	Gorsefield Farm Ltd	Gorsefield Farm, Lidget Lane, Bramley, Rotherham, South Yorkshire, S65 4LY,
Other forms of treatment		
Renewi BDR Waste Treatment Facility	Renewi UK Services Limited	Bolton Road, Manvers, Rotherham, South Yorkshire, S63 7LL,
Aldwarke WWTW	Yorkshire Water Services Ltd	Aldwarke Wwtw, Aldwarke Lane, Rotherham, South Yorkshire, S65 3SR,
Templeborough Biomass Power Plant EPR/GP3433WS	Templeborough Biomass Power Plant Limited /	Templeborough Biomass Power Plant, River View, Rotherham, S60 1FA

Site	Operator	Location / Address
	Babcock & Wilcox Volund Limited	
Liberty Specialty Steel	Harsco Metals Group Ltd	Speciality Steel, Aldwarke Lane, Rotherham, S65 3SR
Steelphalt - EPR/VP3736DH	Harsco Metals Group Ltd	Steelphalt, Sheffield Road, The Ickles, South Yorks, S601DR,
Stobart Biomass	Stobart Biomass Products Limited	Stobart Biomass, North Drive, Rotherham, S60 1QF
Bio UK Fuels, Unit 3 The Ickles	Bio-UK Fuels (Sheffield) Limited	Unit 3, The Ickles, Sheffield Road, Rotherham, South Yorkshire, S60 1DP,
Hazardous waste treatment		
Ron Hull Jnr Ltd Waste Transfer & Treatment Facility	Ronald Hull Jnr Ltd	Mangham 80, Mangham Road, Parkgate, Rotherham, South Yorkshire, S62 6EF,
Woodland Environmental Services	Woodland Oil Limited	The New Depot, Naylor Street, Parkgate, South Yorkshire, S62 6BP
Soil treatment		
Waverley Soil Treatment Facility	Red Materials Limited	Orgreave Road, Catcliffe, Rotherham, South Yorkshire, S13 9XQ
Inert recovery		
Maltby Colliery	Maltby Restoration Limited	Maltby Colliery, Tickhill Road, Maltby, Rotherham, South Yorkshire, S66 7QW,
Waverley New Community	Pure Land Developments Limited	Waverley New Community, Orgreave Road, Catcliffe, Rotherham, South Yorkshire, S60 5TG,
Fishing Pond At Swallownest	Golden Lakes Limited	Fishing Pond At, Swallownest, Sheffield, South Yorkshire, S26 4TL
Thurcroft Old Plant Area	B D R Waste Disposal Ltd	Thurcroft Landfill, Kingsforth Lane, Thurcroft, Rotherham, South Yorkshire
Disposal		
Oxbow Pond ** Non-hazardous landfill, void space nearing depletion (before 2025).*	Liberty Steel Group	S60 1DW

Table A2.4: Sheffield - Waste management sites with extant planning permission

Site	Operator	Location / Address
Household waste recycling centres and transfer sites		
Smithies Lane Household Waste Recycling Centre	FCC Recycling (UK) Limited	59 Spital Hill, Sheffield, South Yorkshire, S4 7LD,
Beighton Recycling Centre	Veolia E S Sheffield Ltd	Land/ Premises At, Beighton, Sheffield, South Yorkshire, S20,
Blackstock Road Recycling Facility	Veolia E S Sheffield Ltd	Land/ Premises At, Blackstock Road, Gleadless, Sheffield, South Yorkshire, S14 1LW,
Deepcar Recycling Centre	Veolia E S Sheffield Ltd	Land/ Premises At, Manchester Road, Deepcar, Sheffield, South Yorkshire, S36 2UU,
Douglas Road Recycling Centre	Veolia E S Sheffield Ltd	Land/ Premises At, Off Longley Avenue West, Shirecliffe, Sheffield, South Yorkshire, S5 8,
Greaves Lane Recycling Centre	Veolia E S Sheffield Ltd	Land/ Premises At, Greaves Lane, High Green, Sheffield, South Yorkshire, S35 4GR,
T D E Enterprises Limited	T D E Enterprises Ltd	Clifton Works, Neepsend Lane, Sheffield, South Yorkshire, S3 8AW,
Transfer Station	Lilquest Asbestos Management Limited	Unit 12, Waleswood Colliery Industrial Estate, Mansfield Road, Waleswood, Sheffield, South Yorkshire, S29 5PQ
Anway Washrooms Ltd	Anway Washrooms Ltd	Unit 25 Lion Park, Holbrook Ind Est, Halfway, Sheffield, South Yorkshire, S20 3GH,
Rotherham Waste Oils	Derek Neil Rose and Roberta Rose	Land at, 500 Sheffield Road, Tinsley, Sheffield, South Yorkshire, S9 1RT
Unit 12 Waleswood Colliery Industrial Estate	Envirotec Hygiene Services Limited	Valley Works, Deep Lane, Sheffield, South Yorkshire, S5 0DQ,
Old Neespend Gasworks	Arthurs Skips Limited	Old Neepsend Gasworks, Parkwood Road, Neepsend, Sheffield, South Yorkshire, S3 8AU,
Cordtape Environmental Services Limited	Cordtape Environmental Services Ltd	4 Finchwell Close, Handsworth, Sheffield, South Yorkshire, S13 9DF,
Richard Fletcher Metals	Fletcher Plant Limited	Clement Works, Clement Street, Darnall, Sheffield, South Yorkshire, S13 7XD,
Sheffield Tanks And Drums	Sheffield Tank And Drum Company Limited	359-361 Greenland Road, Sheffield, South Yorkshire, S9 5FD,

Site	Operator	Location / Address
Tinsley Park Road Facility	Veolia E S (U K) Limited	Tinsley Park Road Secure Storage Facility, Tinsley Park Road, Sheffield, South Yorkshire, S9 5DL,
Parkwood Springs, Douglas Rd	Frogson Waste Management Limited	21, Douglas Road, Parkwood Springs, Sheffield, South Yorkshire, S3 9SA,
Lilquest Asbestos Management Limited	Chirmarn Limited / Lilquest Asbestos Management Limited	
Valley Works	Bardon Environmental Limited	Valley Works, Deep Lane, Sheffield, South Yorkshire, S5 0DQ,
H R Skip Hire	B Howe & Sons Ltd	H R Skip Hire, New Street, Holbrook Trading Estate, Sheffield, South Yorkshire, S20 3GH,
Sheffield Transfer Station	Biffa Waste Services Ltd	26 Shepherd Street, Shalesmoor, Sheffield, South Yorkshire, S3 7BA,
Bradwell Skip Services	Bradwell Skip Services Ltd	Land / Premises At, Baker Street, Sheffield, South Yorkshire, S9 3WG,
Land Adjoining Otter Street And Baker Street	Bradwell Skip Services Ltd	Land Adjoining Otter Street & Baker Street, Baker Street, Attercliffe, Sheffield, South Yorkshire, S9 3WG,
Mosborough Skips	Dawes Haulage	Mosborough Skips, Plot 14 New Street, Holbrook Industrial Est, Halfway, South Yorkshire, S20 3GH,
O Brien Skip Hire	O'Brien Dean	Land/premises At, Droppingwell Road, Blackburn, Sheffield, South Yorkshire, S61 2DR,
Safety Kleen Dinnington EPR/FP3794VN	Safety-Kleen UK Limited	Salmon Pastures Transfer Station, Attercliffe Road, Sheffield, South Yorkshire, S4 7WT,
Westmoreland Waste Recycling Ltd	Westmoreland Waste Recycling Ltd	Unit 6 - 10, White Rose Park, Sheffield, South Yorkshire, S20 3PJ,
The New Depot EPR/AP3095EM	Woodland Oil Limited	Tinsley Park Road, Attercliffe, Sheffield, South Yorkshire, S9 5DL,
T K Lynskey (Excavations) Ltd	T K Lynskey Excavations Ltd	The Haven Lodge, Haggs Wood, Stainforth, Doncaster, South Yorkshire, DN7 5HT,

Site	Operator	Location / Address
West Street HWRC	FCC Recycling (UK) Limited	Kelham Ind Est, Kelham Street, Balby, Doncaster, South Yorkshire, DN1 3RE,
Materials recycling facilities		
Olive Grove Depot	Amey L G Ltd	Olive Grove Depot, Olive Grove Road, Sheffield, South Yorkshire, S2 3GE,
Brocklebank & Co (Demolition) Limited	Brocklebank & Co (Demolition) Limited	Allende Way, Darnall, Sheffield, South Yorkshire, S9 5AP,
A White & Company Limited	Brocklebank & Co (Demolition) Limited	617 Carlisle Street East, Sheffield, South Yorkshire, S4 7QN,
Lawrence Works	Bulk Waste Management Limited	Laurence Works, Sheffield Road, Penistone, Sheffield, South Yorkshire, S36 6HF,
Dixons Waste Management	Darren Peter Dixon And Arthur Dixon	The Coal Yard, Washford Road, Attercliffe, Sheffield, South Yorkshire, S9 3XW,
F & W Collins Ltd	F & W Collins Ltd	139 Upper Allen Street, Sheffield, South Yorkshire, S3 7GW,
Prospect Farm	Hague Douglas	Prospect Farm, Kirkedge Rd, High Bradfield, Sheffield, South Yorkshire, S6 6LJ,
Clay Wheels Lane Waste Transfer Facility	Hague Plant Ltd	Jubilee House, Clay Wheels Lane, Sheffield, South Yorkshire, S6 1LZ,
Hillfoot Waste Management	Hillfoot Waste Management Ltd	The Yard, Hick Street, Sheffield, South Yorkshire, S3 8BL,
Land At East Earsham Street	Land/premises At, East Earsham Street, Attercliffe, Sheffield, South Yorkshire, S4 7PY,	Whiteheads Waste Management
Carlisle Street East	M H H Contracting Limited	Carlisle Street East, Sheffield, South Yorkshire, S4 8DT,
L K A B Minerals Richmond Limited	Richmond Reclamation Limited	325 Coleford Road, Sheffield, South Yorkshire, S9 5NF,
Tinsley Park Road Secure Storage Facility	Veolia Environmental Services (U K) Plc	Transfer Station, Rowland Street, Sheffield, South Yorkshire, S3 8DE,
Salmon Pastures Waste Transfer Station	Viridor Waste Management Ltd	Unit 5 Ecclesfield 35 Ind Est, Station Road, Ecclesfield, Sheffield, South Yorkshire, S35 9YR,
D J B Recycling Limited	D J B Recycling Limited	Victoria Viaduct, Effingham Lane, Sheffield, South Yorkshire, S4 7YY,

Site	Operator	Location / Address
White Park Recycling Centre	Forward Environmental Ltd	Units 1&3 White Park, Station Road, Halfway, Sheffield, South Yorkshire, S20 3GS,
Metal recycling, End of Life Vehicles, and car breakers		
Charlotte Motor Salvage Ltd	Charlotte Motor Salvage Ltd	Land / Premises At, Brightside Lane, Sheffield, South Yorkshire, S9 2SN,
Messrs D E & K R Morris	Messrs D E & K R Morris	K R Autos, 522 London Road, Heeley, Sheffield, South Yorkshire, S2 4HQ,
Ecclesfield Car & Commercial Spares	Rowding R	26 Station Road, Ecclesfield, Sheffield, South Yorkshire, S35 3YR,
Cooper Car Spares	Cooper Car Spares	Land / Premises At, Livesey Street, Sheffield, South Yorkshire, S6 2BL,
127 Liverpool Street	Javed Mohammed	127 Liverpool Street, Sheffield, South Yorkshire, S9 2PU,
Uza Part Ltd	Mr Arshad Hussain	55 Attercliffe Common, Sheffield, South Yorkshire, S9 2AE,
Sheffield Motor Spares	Mr Ejaz Ahmed & Mr Mohammed Shahid	Sheffield Motor Spares, Grange Lane, Sheffield, South Yorkshire, S5 0DP
Quarry Motors	Mr Neil Sutherland & Mr Steven Sutherland	1-3 Rutland Street, Neepsend, Sheffield, South Yorkshire, S3 9PA,
127 Liverpool Street	Mr Zaffar Hussain & Mr Abdul Jabar	127 Liverpool Street, Sheffield, South Yorkshire, S9 2PU,
Paul Lysandrou	Paul Lysandrou	25 Rutland Street, Neeps End, Sheffield, South Yorkshire, S3 9PP,
Stainless Melting and Continous Casting - EPR/BK6793IC	Outokumpu Stainless Ltd	Outokumpu Stainless Ltd, Europa Link, S9 1TZ,
River Don Works	Brightside Street, South Yorkshire, S9 2SU,	Sheffield Forgemasters International Ltd
A B S Metals & Waste Ltd	A B S Metals & Waste Ltd	Sussex Street, Off Effingham Road, Sheffield, South Yorkshire, S4 7YY,
Balby Metallurgical Ltd	Balby Metallurgical Ltd	C T Stores, Garter Street, Sheffield, South Yorkshire, S4 7QX,
1 Hawke Street	E L G Utica Alloys Limited	1 Hawke Street, Sheffield, South Yorkshire, S9 2SU,
E M R East Coast Road	European Metal Recycling Ltd	East Coast Road, Attercliffe, Sheffield, South Yorkshire, S9 3YD,

Site	Operator	Location / Address
E M R Sheffield Holbrook	European Metal Recycling Ltd	Holbrook Ind Est, Old Lane, Halfway, Sheffield, South Yorkshire, S20 3GZ,
Kuusakoski Ltd	Kuusakoski Ltd	Crown Works, Faraday Road, Sheffield, South Yorkshire, S9 3XZ,
Sterling Commodities Ltd	Sterling Commodities Ltd	Heppenstall Lane, Sheffield, South Yorkshire, S9 3XB,
Stevenson Road, Office Yard Site & Top Yard Site	Walter Heselwood Limited	Walter Heselwood Ltd, Stevenson Road, Sheffield, South Yorkshire, S9 2SG,
Templeborough Works EPR/XP3232WZ	ELG Haniel Metals Ltd	Templeborough Works, Sheffield Road, Tinsley, South Yorkshire, S9 1RT,
8 Grange Mill Lane - EPR/BB3307LT	Mettalis Recycling Limited	8, Grange Mill Lane, SHEFFIELD, S9 1HW,
Loy Transport Limited	Loy Transport Limited	200 Coleridge Road, Sheffield, South Yorkshire, S9 5DA,
G B Housley Limited	G B Housley Limited	404-416 Effingham Road, Sheffield, South Yorkshire, S9 3QB,
D A C Steels Ltd	D A C Steels Ltd	D A C Steels Ltd, 36 - 38 Sussex Street, Sheffield, South Yorkshire, S4 7YY,
Revert Alloys And Metals Ltd	Revert Alloys And Metals Limited	Unit 6 Harleston Works, Forncett Street, Sheffield, South Yorkshire, S4 7QG,
Alloy House	L A Mini Limited	Sheffield Auto Salvage, 398 Petre Street, Sheffield, South Yorkshire, S4 8LU,
Sheffield Sports Salvage	Mr Martyn Bingham And Mr William Bingham	Unit 1a, 35 Catley Road, Darnall, Sheffield, South Yorkshire, S9 5JF,
Low Kost Taxi Ltd	Zafeer Muhammad	Unit 1, Kilton Hill, Sheffield, South Yorkshire, S3 9EB,
Templeborough Depot	Newell & Wright Transport Contractors (Sheffield) Ltd	Templeborough Depot, Sheffield Road, Sheffield, South Yorkshire, S9 1RT,
Inert recycling		
L K A B Minerals Richmond Limited	Richmond Reclamation Limited	318 Coleford Road, Sheffield, South Yorkshire, S9 5NF,
Central Depot	G Morley Limited	Central Depot, Worthing Road, Attercliffe, Sheffield, South Yorkshire, S9 3JA,
Shepherd Street Site	Sampson Roger	26 Shepherd Street, Shalesmoor, Sheffield, South Yorkshire, S3 7BA,

Site	Operator	Location / Address
T K Lynskey (Excavations) Ltd	T K Lynskey Excavations Ltd	Clifton Works, Neepsend Lane, Sheffield, South Yorkshire, S3 8AW
Compost		
Manor Cottages	The Green Estate Ltd	Manor Cottages, 449 Manor Lane, Sheffield, South Yorkshire, S2 1UP,
Other forms of treatment		
Blackburn Meadows Renewable Energy Plant	E.ON UK Blackburn Meadows Limited / E.ON UK Infrastructure Services Limited	Blackburn Meadows Renewable Energy Plant, Alsing Road, S9 1HX,
Holbrook Community Renewable Energy Centre	Equitix ESI CHP (SHEFF) Limited	Holbrook Community Renewable Energy Centre, Rother Valley Way, Holbrook, South Yorkshire, S20 3RW,
Sheffield Energy Recovery Facility	Veolia ES Sheffield Limited	Sheffield Energy Recovery Facility, Bernard Road, Sheffield, South Yorkshire, S4 7YX,
Sheffield WM Centre	Biffa Waste Services Limited	Sheffield Waste Management Centre, Holbrook Rise, Holbrook Industrial Estate, Sheffield, South Yorks, S20 3FG,
Ecclesfield Industrial Waste Treatment Facility	FCC Recycling (UK) Limited	Starnhill Close, Station Road, Ecclesfield, Sheffield, South Yorkshire, S35 9TG,
Airbag Disposal	Airbag Disposal (U K) Limited	Unit 9, Vantage Business Park, Sheffield Road, Tinsley, South Yorkshire, S9 1BG,
Ex Doncasters F V C	Direct Special Metals Ltd	Ex Doncasters F V C, Plot 9 Garter Street, Off Carlisle Street, Sheffield, South Yorkshire, S4 7DY,
Galebest Ltd	Galebest Ltd	Galebest Ltd, Rother Valley Way, Holbrook, Sheffield, South Yorkshire, S20 3RW,
Sheffield IBA Facility EPR/FP3732WU	Blue Phoenix Ltd / Ballast Phoenix Ltd	2, Beeley Wood Lane, Sheffield, South Yorkshire, S6 1QT,
Tinsley Park Works EPR/DP3337ZK	Harsco Metals Group Ltd	c/o Outo Kumpu Stainless Steel Limited, Shepcote Lane, South Yorkshire, S9 1TZ,
Beeley Wood Recycling Village	Waste Recycling And Destruction Limited	Beeley Wood Recycling Village, Claywheels Lane, Sheffield, South Yorkshire, S6 1QT,
March Street Site - EPR/GP3536VT	R.S. BRUCE (METALS &	Bruce Metals Ltd, March Street, South Yorkshire, S9 5DQ,

Site	Operator	Location / Address
	MACHINERY) LIMITED	
Tinsley Park Works EPR/DP3337ZK	Harsco Metals Group Ltd	Tinsley Park Works, C/0 Avesta Polarit LTD, Shelpcote Lane, Sheffield, S9 1TR,
Hazardous waste treatment		
Blackburn Meadows Waste Treatment Facility - EPR/MP3131SA	FCC Recycling (UK) Limited	Blackburn Meadows Landfill Site, Alsing Road, Tinsley, Sheffield, S9 1HL,
Sheffield International Rail Freight Terminal (SIRFT) Development EPR/UP3930NF	Aggregate Industries Limited	Former Tinsley Sidings, Europa Link Road, South Yorkshire,
Soil treatment		
O' Connor Utilities	O' Connor Utilities Limited	Hecla Way, Attercliffe, Sheffield, South Yorkshire, S9 3XG,
Inert recovery		
NA		
Disposal		
Parkwood Landfill **Non-hazardous landfill*	Viridor Waste Management Ltd	Parkwood Road, Neepsend, Sheffield, S3 8AG,
Tinsley Park Works Landfill Site **Restricted (industry specific) landfill*	Outokumpu Stainless Limited	Tinsley Park Works, C/0 Avesta Polarit LTD, Shepcote Lane, Sheffield, S9 1TR,

Appendix 3: Waste movements

Note that where no data is entered in table cells this indicates that the total tonnes received for the relevant reporting year was below the identified threshold.

IMPORTS (received at facilities within South Yorkshire WPAs)

Table A3.1 Non-hazardous waste imported into South Yorkshire WPAs (2017-2019)

South Yorkshire (receiving) WPA	Origin WPA[1]	Waste type	Site name	Operator	Facility type	Thousand tonnes received[2]		
						2017	2018	2019
Barnsley	WPA not codeable East Midlands	HIC	Hazelhead	R Plevin and Sons Limited	Material Recycling Facility	13	13	17
Barnsley	WPA not codeable North West	HIC	Hazelhead	R Plevin and Sons Limited	Material Recycling Facility	21	25	29
Barnsley	WPA not codeable Yorks & Humber	HIC	Hazelhead	R Plevin and Sons Limited	Material Recycling Facility	41	41	35
Barnsley	WPA not codeable Yorks & Humber	Inert	Whaley Road	Wordsworth Crushing Ltd	Inert Waste Transfer / Treatment	13		11
Doncaster	Derby UA	HIC	Bankwood Lane Industrial Estate	Attero Recycling Limited	Material Recycling Facility	12		
Doncaster	Derbyshire	HIC	Wroot Road Composting Facility	Freeland Horticulture Limited	Composting	17		
Doncaster	Lancashire	HIC	Bankwood Lane Industrial Estate	Attero Recycling Limited / Eco Power Environmental Limited	Material Recycling Facility	27	30	25
Doncaster	Leeds	HIC	Hazel Lane Quarry	Catplant Quarry Ltd	Non Hazardous Landfill	26	29	19
Doncaster	Leicester UA	HIC	Bankwood Lane Industrial Estate	Attero Recycling Limited / Eco Power Environmental Limited	Material Recycling Facility	14	15	
Doncaster	Lincolnshire	HIC	Bankwood Lane Industrial Estate	Attero Recycling Limited / Eco Power	Material Recycling Facility	38	30	

South Yorkshire (receiving) WPA	Origin WPA[1]	Waste type	Site name	Operator	Facility type	Thousand tonnes received[2]		
						2017	2018	2019
				Environmental Limited				
Doncaster	Nottinghamshire	HIC	Wroot Road Composting Facility	Freeland Horticulture Limited	Composting	15		
Doncaster	Wakefield	HIC	Hazel Lane Quarry	Catplant Quarry Ltd	Non Hazardous Landfill	17	13	12
Doncaster	Wakefield	HIC	Wroot Road Composting Facility	Freeland Horticulture Limited	Composting			19
Doncaster	WPA not codeable West Midlands	HIC	Bankwood Lane Industrial Estate	Attero Recycling Limited / Eco Power Environmental Limited	Material Recycling Facility	24	10	11
Doncaster	WPA not codeable Yorks & Humber	HIC	Bankwood Lane Industrial Estate	Attero Recycling Limited / Eco Power Environmental Limited	Material Recycling Facility	35	48	107
Doncaster	WPA not codeable Yorks & Humber	HIC	A One+ Integrated Highways Services Gulley Waste Treatment Facility	Colas Ltd, Halcrow Group Ltd & Costain Ltd	Physical Treatment	17	23	
Doncaster	WPA not codeable Yorks & Humber	HIC	Yorkshire Metal Recycling	Yorkshire Metal Recycling Ltd	Metal Recycling		10	
Doncaster	Derbyshire	Inert	Bank End Quarry	Blaxton Aggregates Limited	Inert Waste Transfer / Treatment			23
Doncaster	Hampshire	Inert	Wheatley Cullet Processing Plant	U R M (UK) Limited	Physical Treatment	10		
Doncaster	Leeds	Inert	Hazel Lane Quarry & Landfill	Cat Plant (Quarry) Ltd	Physical Treatment	13		34
Doncaster	Leeds	Inert	Hazel Lane Quarry	Catplant Quarry Ltd	Non Hazardous Landfill	18	18	
Doncaster	Manchester	Inert	Tudworth Recycling Centre	Grantham Industries Limited	Physical Treatment		14	
Doncaster	Norfolk	Inert	Wheatley Cullet Processing Plant	U R M (UK) Limited	Physical Treatment		14	

South Yorkshire (receiving) WPA	Origin WPA[1]	Waste type	Site name	Operator	Facility type	Thousand tonnes received[2]		
						2017	2018	2019
Doncaster	Nottinghamshire	Inert	Holme Hall Quarry Landfill And Recycling	Breedon Southern Limited	Inert Waste Transfer / Treatment		10	
Doncaster	Wakefield	Inert	Wheatley Cullet Processing Plant	U R M (UK) Limited	Physical Treatment	46	54	49
Doncaster	Wakefield	Inert	Bootham Lane Landfill	BDR Waste Disposal Ltd	Non Hazardous Landfill		12	
Doncaster	WPA not codeable East Midlands	Inert	Doncaster Wood Yard	Network Rail Infrastructure Limited	Inert Waste Transfer / Treatment	68	40	
Doncaster	WPA not codeable South West	Inert	Doncaster Wood Yard	Network Rail Infrastructure Limited	Inert Waste Transfer / Treatment		26	
Doncaster	WPA not codeable Yorks & Humber	Inert	Austerfield Quarry	Bolland Plant & Recycling Limited	Deposit of waste to land (recovery)			36
Doncaster	WPA not codeable Yorks & Humber	Inert	Bank End Quarry	Blaxton Aggregates Limited	Inert Waste Transfer / Treatment			21
Doncaster	WPA not codeable Yorks & Humber	Inert	Bankwood Lane Industrial Estate	Eco Power Environmental Limited	Material Recycling Facility		18	14
Doncaster	WPA not codeable Yorks & Humber	Inert	Bankwood Lane Industrial Estate	Attero Recycling Limited	Material Recycling Facility	15		
Doncaster	WPA not codeable Yorks & Humber	Inert	Croft Farm Landfill Site	Veolia ES Landfill Limited	Non Hazardous Landfill	28		
Doncaster	WPA not codeable Yorks & Humber	Inert	Doncaster Wood Yard	Network Rail Infrastructure Limited	Inert Waste Transfer / Treatment			84
Doncaster	WPA not codeable Yorks & Humber	Inert	Dunsville Quarry	Breedon Southern Limited	Deposit of waste to land (recovery)			13
Doncaster	WPA not codeable Yorks & Humber	Inert	Holme Hall Quarry Landfill And Recycling	Breedon Southern Limited	Inert Landfill	99		
Doncaster	WPA not codeable Yorks & Humber	Inert	Holme Hall Quarry Landfill And Recycling	Breedon Southern Limited	Inert Waste Transfer / Treatment	43		

South Yorkshire (receiving) WPA	Origin WPA[1]	Waste type	Site name	Operator	Facility type	Thousand tonnes received[2]		
						2017	2018	2019
Doncaster	WPA not codeable Yorks & Humber	Inert	Westmoreland Waste Recycling Ltd	Westmoreland Waste Recycling Ltd	Non-Haz Waste Transfer / Treatment			25
Rotherham	Bradford City	HIC	Rotherham Steel Terminal	D B Schenker Rail (UK) Limited	Storage - Metal Reprocessing			33
Rotherham	Coventry	HIC	Templeborough Biomass Power Plant	Templeborough Biomass Power Plant Limited	Co-Incinerator (Haz)		16	16
Rotherham	Cumbria	HIC	Maltby Colliery	Maltby Restoration Limited	Deposit of waste to land (recovery)			18
Rotherham	Darlington	HIC	Rotherham Steel Terminal	D B Schenker Rail (UK) Limted	Storage - Metal Reprocessing			32
Rotherham	Derbyshire	HIC	Bolton Road	Renewi UK Services Limited	Biological Treatment	10	13	17
Rotherham	East Riding of Yorkshire	HIC	Templeborough Biomass Power Plant	Templeborough Biomass Power Plant Limited	Co-Incinerator (Haz)			24
Rotherham	Essex	HIC	Templeborough Biomass Power Plant	Templeborough Biomass Power Plant Limited	Co-Incinerator (Haz)			13
Rotherham	Kent	HIC	Templeborough Biomass Power Plant	Templeborough Biomass Power Plant Limited	Co-Incinerator (Haz)			16
Rotherham	Kirklees	HIC	Rotherham Steel Terminal	D B Schenker Rail (UK) Limted	Storage - Metal Reprocessing			13
Rotherham	Lancashire	HIC	W Maw Recycling Ltd	W Maw Recycling Ltd	Non-Haz Waste Transfer / Treatment			26
Rotherham	Manchester	HIC	Rotherham Steel Terminal	D B Schenker Rail (UK) Limted	Storage - Metal Reprocessing			14
Rotherham	Northamptonshire	HIC	Templeborough Biomass Power Plant	Templeborough Biomass Power Plant Limited	Co-Incinerator (Haz)			17
Rotherham	Sandwell	HIC	W Maw Recycling Ltd	W Maw Recycling Ltd	Non-Haz Waste Transfer / Treatment			31

South Yorkshire (receiving) WPA	Origin WPA[1]	Waste type	Site name	Operator	Facility type	Thousand tonnes received[2]		
						2017	2018	2019
Rotherham	WPA not codeable London	HIC	Templeborough Biomass Power Plant	Templeborough Biomass Power Plant Limited	Co-Incinerator (Haz)			20
Rotherham	WPA not codeable West Midlands	HIC	W Maw Recycling Ltd	W Maw Recycling Ltd	Non-Haz Waste Transfer / Treatment			27
Rotherham	WPA not codeable Yorks & Humber	HIC	Specialty Steel	Harsco Metals Group Ltd	Physical Treatment			31
Rotherham	WPA not codeable Yorks & Humber	HIC	Steelphalt	Harsco Metals Group Ltd	Physical Treatment			175
Rotherham	WPA not codeable Yorks & Humber	HIC	Templeborough Biomass Power Plant	Templeborough Biomass Power Plant Limited	Co-Incinerator (Haz)			34
Rotherham	WPA not codeable Yorks & Humber	HIC	Aldwarke Sludge Conditioning Site	Yorkshire Water Services Ltd	Biological Treatment	27	25	16
Rotherham	WPA not codeable Yorks & Humber	HIC	Bolton Road	Renewi UK Services Limited	Biological Treatment	232	214	213
Rotherham	WPA not codeable Yorks & Humber	HIC	Rotherham Aldwarke Site	Speciality Steel UK Limited	Ferrous Metal re-processing			194
Rotherham	WPA not codeable Yorks & Humber	HIC	Specialty Steel	Harsco Metals Group Ltd	Physical Treatment			11
Rotherham	WPA not codeable Yorks & Humber	HIC	Steelphalt	Harsco Metals Group Ltd	Physical Treatment			39
Rotherham	WPA not codeable Yorks & Humber	HIC	Whitelea Grove Ind Est	Betapack Compliance Scheme Ltd	Non-Haz Waste Transfer / Treatment			11
Rotherham	WPA not codeable Yorks & Humber	Inert	Common Lane Site	T K Lynskey (Excavations) Ltd	Non-Haz Waste Transfer / Treatment			30
Rotherham	WPA not codeable Yorks & Humber	Inert	Maltby Colliery	Maltby Restoration Limited	Deposit of waste to land (recovery)			76
Rotherham	WPA not codeable Yorks & Humber	Inert	Roundwood Colliery Restoration Scheme	Shires Development Ltd	Deposit of waste to land (recovery)			28
Rotherham	WPA not codeable Yorks & Humber	Inert	Rotherham Aldwarke Site	Speciality Steel UK Limited	Ferrous Metal re-processing			35

South Yorkshire (receiving) WPA	Origin WPA[1]	Waste type	Site name	Operator	Facility type	Thousand tonnes received[2]		
						2017	2018	2019
Sheffield	Derbyshire	HIC	Stainless Melting and Continuous Casting	Outokumpu Stainless Ltd	Ferrous Metal re-processing			10
Sheffield	Leeds	HIC	Sheffield IBA Facility	Ballast / Blue Phoenix Limited	Physical Treatment	34	39	36
Sheffield	Lincolnshire	HIC	Holbrook Community Renewable Energy Centre	Equitix ESI CHP (SHEFF) Limited	Municipal Waste Incinerator	12	23	12
Sheffield	North Yorkshire	HIC	Sheffield IBA Facility	Blue Phoenix Limited	Physical Treatment			48
Sheffield	Nottinghamshire	HIC	Blackburn Meadows Waste Treatment Facility	FCC Recycling (UK) Limited	Haz Waste Transfer / Treatment		13	
Sheffield	Nottinghamshire	HIC	Sheffield Energy Recovery Facility	Veolia ES Sheffield Limited	Municipal Waste Incinerator	60	62	63
Sheffield	Staffordshire	HIC	Stainless Melting and Continuous Casting	Outokumpu Stainless Ltd	Ferrous Metal re-processing			32
Sheffield	Wakefield	HIC	Sheffield IBA Facility	Ballast / Blue Phoenix Limited	Physical Treatment	124	129	103
Sheffield	Warrington	HIC	Stainless Melting and Continuous Casting	Outokumpu Stainless Ltd	Ferrous Metal re-processing			11
Sheffield	WPA not codeable East Midlands	HIC	Blackburn Meadows Renewable Energy Plant	E.ON UK Blackburn Meadows Limited	EFW Incinerator	77	76	76
Sheffield	WPA not codeable North West	HIC	Blackburn Meadows Renewable Energy Plant	E.ON UK Blackburn Meadows Limited	EFW Incinerator	23	32	25
Sheffield	WPA not codeable Yorks & Humber	HIC	Kuusakoski Ltd	Kuusakoski Ltd	Metal Recycling			37
Sheffield	WPA not codeable Yorks & Humber	HIC	Tinsley Park Works	Harsco Metals Group Ltd	Physical Treatment			39
Sheffield	WPA not codeable Yorks & Humber	HIC	Blackburn Meadows Renewable Energy Plant	E.ON UK Blackburn Meadows Limited	EFW Incinerator	102	106	98
Sheffield	WPA not codeable Yorks & Humber	HIC	E M R East Coast Road	European Metal Recycling Ltd	Metal Recycling		125	106

South Yorkshire (receiving) WPA	Origin WPA[1]	Waste type	Site name	Operator	Facility type	Thousand tonnes received[2]		
						2017	2018	2019
Sheffield	WPA not codeable Yorks & Humber	HIC	Ex Doncasters F V C	Direct Special Metals Ltd	Physical Treatment	22	85	69
Sheffield	WPA not codeable Yorks & Humber	HIC	Stevenson Road, Office Yard Site & Top Yard Site	Walter Heselwood Limited	Metal Recycling	16		13
Sheffield	North Yorkshire	Inert	Sheffield International Rail Freight Terminal (SIRFT) Development	Aggregate Industries Limited	Haz Waste Transfer / Treatment			31
Sheffield	WPA not codeable London	Inert	Templeborough Works	ELG Haniel Metals Ltd	Metal Recycling	18	17	19
Sheffield	WPA not codeable Yorks & Humber	Inert	617 Carlisle Street East	Brocklebank & Co (Demolition) Limited	Non-Haz Waste Transfer / Treatment			115
Sheffield	WPA not codeable Yorks & Humber	Inert	Sheffield International Rail Freight Terminal (SIRFT) Development	Aggregate Industries Limited	Haz Waste Transfer / Treatment			17
Sheffield	WPA not codeable Yorks & Humber	Inert	Templeborough Works	ELG Haniel Metals Ltd	Metal Recycling			33
Sheffield	Outside UK	Inert	Templeborough Works	ELG Haniel Metals Ltd	Metal Recycling	42	39	15
Sheffield	WPA not codeable Yorks & Humber	Inert	Galebest Ltd	Galebest Ltd	Physical Treatment	30	29	24

1 – Where waste origin was reported as 'Not codeable' the region has been applied. For movements reported WPA origin = Not codeable Yorks & Humber it is acknowledged that some of this waste may arise from South Yorkshire WPAs.
2 – Highlighted 'Thousand tonnes received' cells show where there have been consistent movements above thresholds over a three-year period, indicating potential trends in waste movements.

Table A3.2 Hazardous waste imported into South Yorkshire WPAs (2017-2019)

South Yorkshire (receiving) WPA	Origin WPA	Waste fate	Thousand tonnes received[1]		
			2017	2018	2019
Barnsley	Essex	Recovery	1.1	1.1	1.0
Barnsley	Flintshire	Recovery	0.6	0.6	
Barnsley	Kent	Recovery	0.5	0.4	0.4

South Yorkshire (receiving) WPA	Origin WPA	Waste fate	Thousand tonnes received[1]		
			2017	2018	2019
Barnsley	Lancashire	Recovery			1.2
Barnsley	Middlesbrough	Recovery			0.4
Barnsley	North Lincolnshire	Recovery	0.6		
Barnsley	Suffolk	Recovery	0.9	0.8	0.9
Barnsley	Wakefield	Recovery	0.6	0.7	0.9
Doncaster	Cambridgeshire	Incineration with energy recovery		0.5	
Doncaster	Cheshire East	Incineration with energy recovery	0.7	0.6	
Doncaster	Nottinghamshire	Recovery		1.0	
Doncaster	Redcar and Cleveland	Incineration with energy recovery			1.1
Doncaster	Wakefield	Incineration with energy recovery			1.0
Rotherham	County Durham	Recovery	0.7		
Rotherham	Derbyshire	Recovery	1.1	1.6	1.8
Rotherham	Leeds	Recovery		0.8	0.9
Rotherham	North Lincolnshire	Recovery			3.3
Rotherham	Redcar and Cleveland	Recovery	14.4	12.9	12.3
Sheffield	Buckinghamshire	Treatment		2.3	7.9
Sheffield	Derbyshire	Recovery		6.4	1.9
Sheffield	Derbyshire	Treatment	1.5	1.3	1.8
Sheffield	Kent	Treatment	5.0	6.0	
Sheffield	Leicestershire	Treatment	1.2	1.2	
Sheffield	Lincolnshire	Treatment		1.4	1.0
Sheffield	Nottingham City	Treatment	3.7	3.3	4.6
Sheffield	Nottinghamshire	Treatment			1.6

1 - Highlighted 'Thousand tonnes received' cells show where there have been consistent movements above thresholds over a three-year period, indicating potential trends in waste movements.

EXPORTS (waste where origin identified as South Yorkshire received at facilities within other WPAs)

Table A3.3 Non-hazardous waste exported from South Yorkshire WPAs (2017-2019)

South Yorkshire (origin) WPA	Destination (receiving) WPA	Waste type	Site name	Operator	Facility type	Thousand tonnes received[1]		
						2017	2018	2019
Barnsley	Kingston Upon Hull City	HIC	Gibson Lane Site	Transwaste Recycling And Aggregates Ltd	Physical Treatment			12
Barnsley	North Lincolnshire	HIC	Groveport	M R F Glass Recycling Limited	Physical Treatment		24	23
Barnsley	Nottingham City	HIC	Harrimans Lane	Sims Group UK Limited	Metal Recycling			13
Barnsley	Wakefield	HIC	Welbeck Landfill Site	Welbeck Waste Management Ltd	Non Hazardous Landfill	13	14	
Barnsley	Wakefield	Inert	Nostell Quarry Landfill	Gazzella Earthworks Limited	Inert Landfill		15	25
Barnsley	North Yorkshire	Inert	Went Edge Quarry	Went Valley Aggregates And Recycling Limited	Physical Treatment	24		
Doncaster	Leeds	HIC	Mobile Plant	4recycling Limited	Mobile Plant - Treatment			38
Doncaster	North Lincolnshire	HIC	Roxby Landfill	Biffa Waste Services Ltd	Non Hazardous Landfill	339	68	
Doncaster	Nottingham City	HIC	Harrimans Lane	Sims Group UK Limited	Metal Recycling			12
Doncaster	North Yorkshire	Inert	Went Edge Quarry	Went Valley Aggregates And Recycling Limited	Physical Treatment	16		
Doncaster	Nottinghamshire	Inert	Styrrup Quarry	J White & Co (T D E) Ltd	Deposit of waste to land (recovery)	13	10	
Doncaster	Wakefield	Inert	South Kirkby Plant	U R M (UK) Limited	Material Recycling Facility	37	18	21
Rotherham	Darlington	HIC	Cleveland House	Ward Bros (Steel) Limited	Metal Recycling			14
Rotherham	Derbyshire	HIC	Alfreton Recycling Centre	H W Martin Waste Ltd	Haz Waste Transfer / Treatment			11
Rotherham	Derbyshire	HIC	Tunstead Cement and Lime Works	Tarmac Cement and Lime Ltd	Co-Incinerator	15	13	
Rotherham	Gateshead	HIC	Blaydon Quarry Landfill	Octagon Green Solutions Limited	Non Hazardous Landfill		12	
Rotherham	Leeds	HIC	Peckfield Landfill	Caird Peckfield Limited	Non Hazardous Landfill	89	85	86
Rotherham	Wakefield	HIC	Ferrybridge Multifuel Plant	Ferrybridge MFE Limited	Municipal Waste Incinerator	120	135	138

Rotherham	Leeds	Inert	Peckfield Landfill	Caird Peckfield Limited	Non Hazardous Landfill	16	13	
Rotherham	Nottinghamshire	Inert	Styrrup Quarry	J White & Co (TDE) Ltd	Deposit of waste to land (recovery)			11
Rotherham	Wakefield	Inert	Ash Pits Crabtree Lane	Mineral Processing Limited	Physical Treatment		18	
Sheffield	County Durham	HIC	Cleveland IBA	Ballast Phoenix Limited	Physical Treatment	11	15	
Sheffield	Derbyshire	HIC	Alfreton Recycling Centre	H W Martin Waste Ltd	Haz Waste Transfer / Treatment	19	19	20
Sheffield	Derbyshire	HIC	Erin Landfill	Viridor Waste Management Ltd	Non Haz (SNRHW) Landfill	16	19	
Sheffield	Derbyshire	HIC	The Midlands Urban Mine	Johnsons Aggregates and Recycling Limited	Physical Treatment			34
Sheffield	Halton	HIC	Runcorn Energy From Waste Facility	Viridor Waste Management Limited	Municipal Waste Incinerator	25	25	40
Sheffield	Manchester	HIC	South Manchester Resource Recovery Centre	Viridor Waste (Greater Manchester) Ltd	Physical-Chemical Treatment		13	
Sheffield	North Lincolnshire	HIC	South Ferriby Cement Plant	Cemex UK Cement Limited	Co-Incinerator (Haz)	25	19	
Sheffield	North Yorkshire WPA	HIC	Leeming Biogas Facility	Veolia ES (UK) Limited	Biological Treatment	12		
Sheffield	Wakefield	HIC	Ferrybridge Multifuel Plant	Ferrybridge MFE Limited	Municipal Waste Incinerator	44	36	42
Sheffield	Wakefield	HIC	Welbeck Landfill Site	Welbeck Waste Management Ltd	Non Hazardous Landfill	51	74	70
Sheffield	Leeds	Inert	Britannia Quarry	Booth Ventures Limited	Non Hazardous LF		23	
Sheffield	Nottinghamshire	Inert	Styrrup Quarry	J White & Co (T D E) Ltd	Deposit of waste to land (recovery)		28	

1 - Highlighted 'Thousand tonnes received' cells show where there have been consistent movements above thresholds over a three-year period, indicating potential trends in waste movements.

Table A3.4 Hazardous waste exported from South Yorkshire WPAs (2017-2019)

South Yorkshire (origin) WPA	Destination (receiving) WPA	Waste fate	Thousand tonnes received[1]		
			2017	2018	2019
Barnsley	Derbyshire	Recovery	0.5	0.5	0.5
Barnsley	Hertfordshire	Treatment	5.2		
Barnsley	Kirklees	Landfill	0.4		0.7

South Yorkshire (origin) WPA	Destination (receiving) WPA	Waste fate	Thousand tonnes received[1]		
			2017	2018	2019
Barnsley	Leeds	Treatment	1.3	1.1	20.0
Barnsley	Northamptonshire	Landfill			0.8
Barnsley	St Helens	Recovery	0.4		0.4
Barnsley	Stockton-on-Tees	Landfill		1.1	
Barnsley	Surrey	Treatment	1.1		
Barnsley	Staffordshire	Treatment			0.6
Doncaster	Cambridgeshire	Recovery	2.3	2.0	
Doncaster	Kirklees	Treatment	0.9		
Doncaster	Kirklees	Landfill	0.7	1.7	
Doncaster	Lancashire	Recovery	1.2	0.9	0.8
Doncaster	Leeds	Treatment	0.5	0.6	0.6
Doncaster	North East Lincolnshire	Recovery	0.9	1.1	0.6
Doncaster	North Lincolnshire	Landfill	0.6	0.7	1.3
Doncaster	Northamptonshire	Treatment	1.1		
Doncaster	Nottinghamshire	Recovery		0.5	
Doncaster	Stockton-on-Tees	Treatment			1.2
Rotherham	Bexley	Recovery	0.6		
Rotherham	Cheshire West and Chester	Long term storage		0.6	0.7
Rotherham	Derbyshire	Incineration with energy recovery		12.8	0.9
Rotherham	Derbyshire	Recovery		0.9	12.0
Rotherham	Derbyshire	Treatment		24.3	19.5
Rotherham	Kingston Upon Hull City	Recovery	1.4	1.1	1.5
Rotherham	Kirklees	Landfill		1.0	0.5
Rotherham	Knowsley	Treatment	0.7	1.0	0.8
Rotherham	Lancashire	Landfill			3.7
Rotherham	Leeds	Treatment		1.4	4.0
Rotherham	North East Lincolnshire	Recovery	3.4	2.0	3.3
Rotherham	Salford	Treatment			0.6
Rotherham	Sandwell	Recovery			0.6
Rotherham	Sefton	Recovery	2.0	2.1	1.9
Rotherham	Shropshire	Recovery			0.2
Rotherham	Staffordshire	Treatment	6.4	5.5	5.5
Rotherham	Stockton-on-Tees	Treatment		5.4	17.3
Rotherham	Stoke-on-Trent City	Recovery	1.3	1.7	1.1
Rotherham	Wakefield	Recovery	0.6	0.6	0.6
Sheffield	Cambridgeshire	Recovery			1.5

South Yorkshire (origin) WPA	Destination (receiving) WPA	Waste fate	Thousand tonnes received[1]		
			2017	2018	2019
Sheffield	Derbyshire	Landfill	1.1		
Sheffield	Kingston Upon Hull City	Recovery		1.1	1.2
Sheffield	Kirklees	Landfill	2.4	1.0	2.4
Sheffield	Leeds	Treatment	5.4	2.1	
Sheffield	Northamptonshire	Treatment	7.2	8.4	5.0
Sheffield	Northamptonshire	Recovery	1.7		
Sheffield	Sandwell	Treatment			3.2
Sheffield	Staffordshire	Treatment	8.2		
Sheffield	Stockton-on-Tees	Recovery	1.7	5.1	5.7
Sheffield	Stockton-on-Tees	Treatment	2.4		2.2
Sheffield	Walsall	Treatment	4.8	4.8	4.7

1 - Highlighted ‘Thousand tonnes received’ cells show where there have been consistent movements above thresholds over a three-year period, indicating potential trends in waste movements

Appendix 4: Reference list

A list of references used in preparing the WNA is provided below with links to websites where available. References are grouped under the broad areas that the information/dataset was used to inform preparation of the WNA.

Planning policy and local context

Environment Act 2021

Landfill Directive

London Plan, March 2016

London Plan (Draft), November 2017

National Infrastructure Delivery Plan 2016 to 2021

National Planning Policy Framework

National Planning Policy Guidance

National Planning Policy for Waste

National Waste Management Plan for England

National Policy Statements

Our waste, our resources: A strategy for England

Packaging and Packaging Waste Directive

Shaping the future of England's strategic roads

UK Waste Regulations 2011

Waste Framework Directive

Identify historic and current arisings and management methods

DECC Data collection on solid low-level waste from the non-nuclear sector November 2008

Defra 2019 Digest of waste and resource statistics

Defra 2019 Digest of waste and resource statistics

Defra 2021 UK statistics on waste

Defra Local authority collected waste: annual results tables

EA Incinerator returns 2016 to 2020

EA Towards sustainable agricultural waste management, 2001

EA Waste Data Interrogator and Hazardous Waste Data Interrogator database 2013 to 2020

Greater London Authority, London Plan Waste Forecasts and Apportionments 2017

NDA 2016 and 2019 Inventory

NDA 2016 Inventory Site Data

NDA 2016 Radioactive Waste Inventory Report

NDA 2019 Inventory

NDA 2019 Inventory Site Data

Waste DataFlow database

Identifying growth factors and apportioning waste arisings to authority levels and sectors/activity

Barnsley Metropolitan Borough Council Barnsley Local Plan 2019

Construction Products Association 2022 Construction industry forecasts

Doncaster Council and Rotherham Metropolitan Borough Council 2021 Doncaster and Rotherham Local Aggregates Assessment (2019/20)

House of Commons 2021 Briefing Paper: Regional and country economic indicators

MHCLG Housing supply: Net additional dwellings 2001-02 to 2018-19

Office of National Statistics Mid-year population estimates

Office for National Statistics NOMIS

Sheffield City Council 2020 The Sheffield Plan Issues and Options Housing Technical Note

Identifying waste management capacity

EA Incinerator returns 2016 to 2020

EA Environmental Permitting Regulations - Waste sites

EA Environmental Permitting Regulations - Waste operations

EA Environmental Permitting Regulations - Landfill sites

EA Register of waste exemptions

EA Remaining landfill capacity

EA Waste Data Interrogator and Hazardous Waste Data Interrogator database 2013 to 2020

EA Waste infrastructure inventory, 2010

SY WPA Councils – Previous minerals and waste decisions (available through the planning application search functions for the relevant WPA)