Black Country Authorities

Black Country Waste Study Update 2023

Updated waste needs assessment to support preparation of emerging Local Plans for each Black Country Authority – Sandwell

September 2023

Report for

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Document revisions

No.	Details	Date
1	Draft Report	26 July 2023
2	Final Draft Report	6 September 2023
3	Final Report	8 September 2023

Executive summary

Context and Scope of the Black Country Waste Study Update 2023

The Black Country local authorities of Dudley, Sandwell, Walsall and Wolverhampton perform the functions of Waste Collection Authority, Waste Disposal Authority, and Waste Planning Authority. They are collectively known as the Black Country Authorities (BCAs).

The BCAs were preparing a new strategic plan – the Black Country Plan (BCP) – to replace the extant joint Black Country Core Strategy (BCCS) which was adopted in 2011 and covers the period to 2026. The plan period for the BCP was set to cover the period to 2039. Consultation on the Issues and Options took place in 2017, and the Draft Black Country Plan (Regulation 18) was published for consultation between August and October 2021.The outcomes from that consultation, along with further evidence gathering, would have informed the next version of the BCP – called the Publication Plan.

In October 2022, the Leaders of the four BCAs issued a statement stating that the BCP work programme would end in that the authorities were unable to reach agreement on the approach to planning for future development needs within the framework of the BCP. Instead, the focus going forward will be on individual Local Plans, with the BCAs co-operating with each other and with other key bodies in the preparation of these Local Plans.

To inform the Draft BCP, the BCAs commissioned WSP (formally Wood) to undertake a waste planning study for the Black Country to set out the waste evidence base for the BCP. The study included a waste needs assessment. The results of this study were published in the Black Country Waste Study 2020, which was issued alongside the other evidence base documentation to support the Draft BCP.

The waste needs assessment outlined in the Black Country Waste Study (2020) used 2017 as the baseline year and was informed by the latest available waste data at the time the needs assessment was undertaken. Following comments received in response to the Draft BCP Regulation 18 consultation, notably from the West Midlands Regional Technical Advisory Board (WMRTAB), an updated waste needs assessment was undertaken in 2022 using the latest (publicly) available data to inform the then next stage of the BCP plan production, namely the Regulation 19 consultation on the Publication Plan.

It is imperative that the waste evidence base used to inform the waste policies of the emerging individual Local Plans for each BCA are robust and that wherever possible this evidence is based on the latest (publicly) available data.

The Black Country Waste Study Update (2022) presented two baseline years, 2019 and 2020, to reflect the latest available data at that time. 2020 waste data is likely to present an anomaly due to the impact of the COVID pandemic, notably the wholesale shift to learning and working from home and the impact of the many restrictions which saw the prolonged closure of many economic sectors including entertainment, leisure and retail.

More up to date data is now available and as such, the waste needs assessment should be updated using this data to inform the emerging individual Local Plans for each BCA. At the time of writing, the latest available data – Waste Data Flow (for LACW waste) and WDI data – only included data for the period 2021-2022.

The purpose of this Waste Study Update is to:

- Update the waste needs assessment using the latest available data and disaggregate this information for each individual BCA;

- Review draft BCP waste policies and provide recommendations as to how these can be adapted for use in the emerging individual Local Plans for each BCA.

This report is specific to **Sandwell**.

The Updated Baseline for Sandwell

In 2021 Sandwell was estimated to generate approximately 535,000 tonnes of waste. Excluding exempt sites, the largest waste stream was estimated to be construction, demolition and excavation (CD&E) waste at over 273,000 tonnes. 128,000 tonnes were collected by Sandwell from household sources. Commercial and industrial (C&I) waste arisings (including LACW non-household sources) were estimated to be just under 80,000 tonnes and hazardous waste arisings to be nearly 57,000 tonnes. Other waste stream arisings were just over 150 tonnes, composed primarily of batteries and WEEE.

With the exception of exempt sites, just under 90,000 tonnes (16.7%) were re-used, recycled or composted, nearly 170,000 tonnes (31.7%) were subject to recovery or treatment, nearly 213,000 tonnes (39.8%) (mainly construction and demolition waste) was disposed to landfill, and just over 63,000 tonnes (11.7%) were transferred for management elsewhere.

Sandwell is an importer of waste with facilities within its boundaries (including permitted sites and incinerators) managing 1.3 mt in 2021. Of this total the biggest percentage (by tonnage) (35%) was received at Treatment sites, followed by Landfill sites (33%), MRS (19%), Transfer sites (12%), and incinerators (1%).

Overall, Sandwell was estimated to import c.383,000 tonnes more waste than it exported in 2021 being a net importer of non-hazardous waste by approximately 211,000 tonnes and a net importer of hazardous waste by approximately 172,000 tonnes. The vast majority of these imports (82%) arose from within the West Midlands Region.

Despite being a net importer, exports from Sandwell amounted to nearly 608,000 tonnes in 2021. Of these 608,000 tonnes received at permitted sites in England and Wales and incinerators in England, outside of Sandwell, the biggest percentage (by tonnage) (37.5%) was received at Landfill sites, followed by MRS (19.5%), Transfer sites (17%), Treatment sites (15.5%), incinerators (10%) and On/In Land sites (0.5%).

Projected Future Waste Capacity Requirements

The housing supply figures and the employment land requirements used in the projections have been taken from the Sandwell SHLAA and Draft BCP (Regulation 18) and relate to the extent to which Sandwell plans to meet its supply for housing and employment land, with the assumption that Sandwell will need to export some of the demand over the Plan period or find additional sites.

Under the projections, the quantity of waste Sandwell is projected to manage (included imported waste) increases from 1.75 million tonnes (mt) in 2021 to 2.1 mt in 2040/41 equating to an increase of 23% or 1.1% per annum. An ongoing emphasis on waste reduction has seen a 7.5% reduction in waste per household since 2006/07 and this trend could have a significant influence on future waste growth. However, there are emerging changes in the need for different types of waste management capacity. Exports already reflect a shortage of landfill space; household waste Material Recycling Facilities (MRFs) and composting facilities and the way waste will be manged in the future is expected to change significantly with transition towards a Circular Economy. In particular, the quantities of waste reused, recycled and composted are expected to increase substantially.

Waste Management Scenarios & Capacity Gaps

Three waste management scenarios are presented according to the extent to which the Circular Economy targets for re-use and recycling of C&I and municipal waste over the plan period 2021/22 – 2040/41 (i.e. 55% by 2025, 60% by 2030, 65% by 2035) are met. Assumptions for the CD&E stream are based on the targets set under the Waste Framework Directive.

Taking into account known future developments or closures, total waste management capacity projections are projected to decrease from 6.1 mt in 2021 to 1.7 mt in 2041 which is driven by decreasing landfill space with recycling, recovery and transfer capacity not anticipated to change significantly.

Sandwell has sufficient disposal capacity for most of the plan period, but by the end of the plan period, and dependent upon the extent to which diversion from landfill can be achieved, there is need for additional disposal capacity and the contractual arrangements for these exports will be an important focus going forward. As a net importer in an area of significant growth, Sandwell may also experience greater pressure on its already saturated waste management capacity.

To achieve 'net self-sufficiency' Sandwell would be expected to provide for extra waste capacity. If self-sufficiency is to be maintained then an additional 159,000 to 472,000 tonnes of recycling capacity will be required by the end of the Plan Period to support planned housing and employment growth and compensate for the types of waste capacity it cannot accommodate because of being a largely built-up area (e.g. composting, AD, hazardous landfill). The capacity requirements for recycling are expressed as a range, because it depends on the extent to which the Circular Economy recycling targets will be met – the greater the recycling rates achieved, the more recycling capacity will be needed.

There is a surplus of recovery capacity in Sandwell from 2025 onwards under all waste management scenarios, due to planned infrastructure bringing extra capacity online.

Contents

1. Introduction

1.1 The Black Country

1.1.1 The Black Country comprises the four local authorities of Dudley Metropolitan Borough Council, Sandwell Metropolitan Borough Council, Walsall Metropolitan Borough Council and Wolverhampton City Council, and forms a part of the West Midlands conurbation. Each of these authorities is a Unitary Authority (UA) and, as such, performs the functions of Waste Collection Authority (WCA), Waste Disposal Authority (WDA), and Waste Planning Authority (WPA). They are collectively known as the Black Country Authorities (BCAs).

1.1.2 With a resident population of approximately 1.1 million, it is a densely populated region covering a total of 138 square miles (222km^2). The Black Country together with Birmingham, Solihull and Coventry in the West Midlands collectively make up one of the most densely populated areas in the UK.

1.1.3 The Black Country forms a distinctive sub-region on the north and western side of the West Midlands conurbation. It has a unique economic history, settlement form and topography and is very much a product of its industrial past. Until 2001, its population was in slow but steady decline however a policy towards “urban renaissance” has reversed this decline to a level not experienced since the 1970s. This trend is planned to continue.

1.1.4 Sandwell Borough is a large metropolitan borough covering 33 square miles (86 km^2). In 2021 the population was 341,900, with a population density of 3,994 people per square kilometres.

1.2 Discontinued Black Country Plan

1.2.1 The BCAs were preparing a new strategic plan – the Black Country Plan (BCP) – to replace the extant joint Black Country Core Strategy (BCCS) which was adopted in 2011 and covers the period to 2026. The plan period for the BCP was set to cover the period to 2039. Consultation on the Issues and Options took place in 2017, and the Draft Black Country Plan (Regulation 18) was published for consultation between August and October 2021.The outcomes from that consultation, along with further evidence gathering, would have informed the next version of the BCP – called the Publication Plan.

1.2.2 In October 2022, the Leaders of the four BCAs issued a statement stating that the BCP work programme would end in that the authorities were unable to reach agreement on the approach to planning for future development needs within the framework of the BCP. Instead, the focus going forward will be on individual Local Plans, with the BCAs co-operating with each other and with other key bodies in the preparation of these Local Plans.

1.3 Black Country Waste Study 2020

1.3.1 To inform the Draft BCP, the BCAs commissioned Wood Environment & Infrastructure Solutions UK Limited, now WSP UK Limited (hereafter referred to as WSP) to undertake a waste planning study for the Black Country to set out the waste evidence base for the BCP. The study included a waste needs assessment. The results of this study were published in the Black Country Waste Study 2020, which was issued alongside the other evidence base documentation to support the Draft BCP.

1.4 Black Country Waste Study Update 2022

1.4.1 The waste needs assessment outlined in the Black Country Waste Study (2020) used 2017 as the baseline year and was informed by the latest available waste data at the time the needs assessment was undertaken. Following comments received in response to the Draft BCP Regulation 18 consultation, notably from the West Midlands Regional Technical Advisory Board (WMRTAB), an updated waste needs assessment was undertaken in 2022 using the latest (publicly) available data to inform the then next stage of the BCP plan production, namely the Regulation 19 consultation on the Publication Plan.

1.5 Black Country Waste Study Update 2023

1.5.1 It is imperative that the waste evidence base used to inform the waste policies of the emerging individual Local Plans for each BCA are robust and that wherever possible this evidence is based on the latest (publicly) available data.

1.5.2 The Black Country Waste Study Update (2022) presented two baseline years, 2019 and 2020, to reflect the latest available data at that time. 2020 waste data is likely to present an anomaly due to the impact of the COVID pandemic, notably the wholesale shift to learning and working from home and the impact of the many restrictions which saw the prolonged closure of many economic sectors including entertainment, leisure and retail.

1.5.3 More up to date data is now available and as such, the waste needs assessment should be updated using this data to inform the emerging individual Local Plans for each BCA. At the time of writing, the latest available data – Waste Data Flow (for LACW[1] waste) and WDI data – only included data for the period 2021-2022.

1.5.4 The purpose of this Black Country Waste Study Update is to:

- Update the waste needs assessment using the latest available data (**Chapters 2 and 3**) and disaggregate this information for each individual BCA;
- Review draft BCP waste policies and provide recommendations as to how these can be adopted for use in the emerging individual Local Plans for each BCA (**Chapter 4**).

1.5.5 This report is specific to **Sandwell**.

1.5.6 A glossary of terms can be found in **Appendix A**.

[1] LACW = local authority collected waste

2. Updated Waste Needs Assessment: Sandwell

2.1 Updated evidence base

2.1.1 This section reviews and sets out the latest evidence to form the baseline for the emerging Local Plan for Sandwell. As the need to produce data on waste arisings, flows and management have emerged at different times to respond to separate policy requirements, there are gaps and inconsistencies in published material that need to be acknowledged in the preparation of any plan.

2.2 Waste Data Sources and Limitations

2.2.1 The waste data sources, and their limitations can be found in **Appendix B**.

2.2.2 This report presents the baseline year 2021 as part of this waste evidence update. The most recent data sets available at the time of writing have been used, which includes using data sets for 2021/22 and 2021 to estimate waste arisings and methods of management.

2.2.3 The data sets used to calculate existing waste arisings and management methods are not all comparable with each other because they cover slightly different 12-month periods. Whereas the Defra LA Waste Statistics are for the 2021/22 monitoring year (April 2021 – March 2022), the 2021 Waste Data Interrogator (WDI) and Hazardous Waste Interrogator (HWI) data are for the 2021 calendar year (January – December), and later data sets have been used to estimate Agricultural Waste, Batteries, Waste Electrical and Electronic Equipment (WEEE) and Low Level Radioactive Waste (LLRW). Although the data sets are not directly comparable with each other, they nevertheless provide the best available evidence for waste arisings and waste management.

2.2.4 The WDI database was used to estimate arisings for commercial and industrial (C&I) waste, construction, demolition and excavation (CD&E) waste, and agricultural waste based on the waste received at permitted sites by origin. Some entries in the WDI have been coded to the 'West Midlands' and not broken down to specific local authorities, e.g. Sandwell, Birmingham, etc (termed WPA non-codeable in the WDI). These entries have been apportioned using NOMIS Business Counts Enterprises by Industry, see **Appendix B** for more information on this apportionment. All data summary tables in the report have been rounded to the nearest 1,000 tonnes to avoid spurious precision, the underlying detail is provided in **Appendix D**. The arising estimates do not include data from the Welsh Waste Data Interrogator as the tonnages involved are low and make no material difference to the overall arisings estimates for 2021. There is no equivalent readily available data for Scotland or Northern Ireland.

2.2.5 The quantity of waste managed at exempt sites was estimated using information from the waste exemptions register. There is limited data available on the waste exemptions register to estimate waste arisings or site capacity. Arisings are estimated as a function of waste amounts permitted under exemption using a number of untested assumptions therefore the level of confidence associated with these estimates is very low. Waste managed at exempt site has been excluded from future waste and capacity projections due to the uncertainty associated with the estimates.

2.2.6 Waste management estimates for C&I, CD&E and agricultural waste are based on the category of the facility that received the waste arising in Sandwell and may not fully reflect the actual quantities of whether these streams were, for example, recycled or disposed of.

2.2.7 Taking into account the limitations and assumptions stated above, and the fact that the data sources have been combined within the calculations for Sandwell Waste Study, there may be inaccuracies within the data and the figures reported, and they should be interpreted accordingly. That said, what follows represents the most complete and robust publicly available data and is the appropriate basis for policy formulation.

2.3 Current Waste Arisings and Management

2.3.1 Current waste arisings have been estimated as shown in **Figure 2.1**, with waste and recycling arisings estimated according to their source (e.g. household) or type (e.g. hazardous), as appropriate according to convention and statutory reporting requirements, and summed together to estimate total waste and recycling arisings in Sandwell.

Figure 2.1 Current waste arising estimate

2.3.2 **Table 2.1** presents the waste arisings estimates for Sandwell in 2021. This includes a proportion of 'West Midlands' waste, where specific regions or WPAs have not been assigned within the data; the quantity has then been apportioned to Sandwell based on NOMIS Business Counts by Industry. In 2021 Sandwell was estimated to generate approximately 0.5 mt of waste excluding estimates for waste managed at exempt sites. Approximately, 780,000 tonnes of waste were estimated to be managed at exempt sites, but the level of confidence associated with these estimates is "very low" (see **Appendix B**).

2.3.3 Excluding exempt sites, the largest waste stream was estimated to be CD&E waste at 273,000 tonnes. Just under 141,000 tonnes was collected by Sandwell from household and non-household sources. C&I waste arisings were estimated to be just under 80,000 tonnes and hazardous waste arisings to be nearly 57,000 tonnes.

2.3.4 Other waste stream arisings were approximately 150 tonnes, composed of agricultural waste arisings of c.30 tonnes (excluding exempt sites) and c.110 tonnes of waste batteries and WEEE estimated to be collected via retailer take-back schemes and Producer Compliance Schemes. Unfortunately, there was no publicly available information on the quantity of Low Level Radioactive Waste (LLRW) generated in Sandwell. There are also no registered producers of LLRW (primarily hospital trusts and universities) in Sandwell. More details on the data sources used to estimate Sandwell's waste arisings are also included in **Appendix B**.

Table 2.1 Current Waste Arising Sandwell, 2021 (tonnes)

Waste sources		Sandwell
Local Authority Collected Waste (LACW)	Household	128,000
	Non-household	13,000
Commercial & Industrial waste (C&I)	Permitted sites	45,000
	West Midlands (WPA not codeable)	32,000
Construction, Demolition and Excavation waste (CD&E)	Permitted sites	201,000
	West Midlands (WPA not codeable)	72,000
	Exempt sites	223,000
Agricultural waste	Permitted sites	27
	West Midlands (WPA not codeable)	4
	Exempt sites	5,000
Waste managed at exempt sites*		551,000
Hazardous waste		57,000
Retailer take-back and Producer Compliance Scheme collections	Batteries	76
	WEEE	36
Low level radioactive waste (LLRW)	No publicly available information on LLRW quantities and no registered producers	
Total waste arisings**		**1,314,000**

Notes:
Figures rounded to nearest 1,000 tonnes.
(*) excludes exemptions included in CD&E and agricultural waste estimate.
**Total excludes potential double counting between LACW non-household waste and that identified in the WDI as C&I waste (c.13,000 tonnes).
See Appendix C for breakdown of C&I and CD&EW calculation.

2.3.5 Waste arisings for 2021 and the preceding four years 2017, 2018, 2019 and 2020 are included within **Appendix F** to illustrate the trend over these five years. LACW arisings have fluctuated between 137,000 tpa and 142,000 tpa with the 2020 arisings being the lowest over the period. However, this was due to drop in household collected LACW; this could be due to COVID restrictions as the waste arising increased by 4,000 tonnes from 2020 to 2021.

2.3.6 Overall C&I arisings have increased over the recent years. A small reduction was seen between 2017 and 2018 however, in 2019 the C&I increased by 60% to 74,000 tonnes. A decrease was again seen in 2020 resulting in a total arising of 64,000 tonnes, likely an impact of the pandemic, as the tonnages increased to their highest over the period in 2021, when arisings were 77,000 tonnes.

2.3.7 Overall CD&E waste has increased over the last five years, with an overall increase of 43%, with great variation year on year. This may mirror the typical variation in the demand on the construction industry variation and economic implications. The largest reduction was between 2018 arisings and 2019 arisings with an approx. 70% reduction and from 2020 to 2021 the arisings increased by 91% resulting in 273,000 tonnes.

2.3.8 Since 2017 hazardous waste arisings have increased by approx. 13,000 tonnes, with minimal variation. Agricultural waste has reduced significantly from more than 12,000 tonnes in 2018 down to 31 tonnes in 2021, which indicates the variability in arisings from this sector.

2.3.9 **Table 2.2** sets out how Sandwell's waste arisings were managed at permitted sites in 2021 (excludes waste managed at exempt sites). In 2021, just under 90,000 tonnes (16.7%) of waste arisings were reused, recycled or composted, nearly 170,000 tonnes (31.7%) were recovered or treated and nearly 213,000 tonnes (39.8%) were disposed of (primarily to landfill). Just under 63,000 tonnes (11.7%) of waste arisings were managed at a 'transfer' facility where it is stored before bulking and transporting to another facility for reuse, recycling, treatment or disposal.

2.3.10 The proportion of LACW (from household sources) which was reused, recycled or composted in 2021 was estimated to be 27%, 62% of LACW was used to recover energy and 11% was disposed of (primarily to landfill).

2.3.11 The proportion of C&I waste which was reused, recycled or composted in 2021 was estimated to be 41%, 19% of C&I waste was recovered or treated, 13.5% was in transfer and 26.5% was disposed of (primarily to landfill).

2.3.12 In contrast, almost 65% of CD&E waste was estimated to be disposed of (primarily to inert landfill) in 2021, just 8.5% was reused, recycled or composted, 15% was recovered or treated and 12% was in transfer. These figures are likely to underestimate reuse, recycling, composting, and recovery and overestimate disposal because a significant fraction (223,000 tonnes) of CD&E waste is estimated to be reused at exempt sites in construction projects. Defra UK Statistics on Waste[2] also claim that more than 90% of non-hazardous C&D waste generated in the UK is recovered. Possible reasons for such a high disposal rate in both Sandwell and the wider Black Country region might include the following:

- In 2021 there was 1 operational landfill site in Sandwell – a former quarry requiring restoration by infilling of the voids with waste;
- A high proportion of the waste accepted at operational landfills is likely to have been deposited into the void and would therefore have been classified as 'disposal' rather than 'use of waste' or 'recovery' of waste;
- Evidence in the WDI shows that CD&E from Sandwell is being disposed of at Edwin Richards Landfill Site within Sandwell for restoration purposes;
- Sandwell has many sites affected by mining and industrial 'legacy' where imported inert waste is required as part of the land remediation process – this is likely to be classified as 'disposal' rather than 'recovery';
- Many Sandwell sites' excavation waste is not 'inert' due to ground contamination and has to be screened to remove any hazardous material for disposal off-site before the remaining material can be redeposited on-site. This is likely to be one of the reasons for the relatively low recycling rate for CD&E waste in Sandwell; and

[2] https://www.gov.uk/government/statistics/uk-waste-data/uk-statistics-on-waste Defra UK Statistics on Waste (11 May 2022), Table 7

- Other temporary inert waste disposal operations also happen from time to time in Sandwell, for example, infilling of railway cuttings or importation of inert waste to deal with differential site levels, this too is likely to be classified as ‘disposal’ rather than ‘recovery’.

2.3.13 The Defra UK Statistics do not include hazardous C&D waste (such as asbestos) or excavation waste – at least some of the CD&E generated in Sandwell is likely to be asbestos waste from buildings and contaminated soil/ water treatment residues, which require disposal in a hazardous landfill site[3].

2.3.14 With regards to hazardous waste, over 62% in 2021 was recovered/treated and just over 3% is known to be disposed of (primarily to hazardous landfill or incinerator without energy recovery). Around 35% of hazardous waste from Sandwell was managed at a ‘transfer’ facility where it is stored before bulking and transporting to another facility for reuse, recycling, treatment or disposal.

[3] Various attempts have been made to estimate how much contaminated soil is generated in the Black Country, but they are not reliable (e.g. RPS 2009, Black Country Core Strategy Waste Planning Study (3.6) and Black Country Authorities 2010, Black Country Waste Background Paper 2 (Appendix 7))

Table 2.2 Current (2021) Waste Management (tonnes) (Permitted sites only. Excludes exempt sites)

Year	Management method	LACW** (Household sources)	C&I waste	CD&E	Hazardous*	Agriculture waste	Total waste arisings
Sandwell	Reuse, recycling and composting	35,000 (27.3%)	14,000 (31.2%)	11,000 (5.2%)		15 (56.4%)	60,000 (13.8%)
	Recovery and treatment ***	79,000 (62%)	8,000 (17.1%)	16,000 (8%)	35,000 (61.7%)	0 (0.2%)	138,000 (32.07%)
	Transfer		8,000 (17.3%)	17,000 (8.5%)	20,000 (35.1%)	12 (43.4%)	45,000 (10.1%)
	Disposal	14,000 (10.7%)	16,000 (34.4%)	157,000 (78.2%)	2,000 (3.1%)		188,000 (43.7%)
West Midland (apportioned to Sandwell)	Reuse, recycling and composting		17,000 (54.3%)	13,000 (17.4%)		4 (88.8%)	30,000 (28.8%)
	Recovery and treatment ***		7,000 (22.1%)	24,000 (33.7%)		0 (1.5%)	31,000 (30.1%)
	Transfer		3,000 (8.2%)	15,000 (21.2%)		0 (7.9%)	18,000 (17.2%)
	Disposal		5,000 (15.4%)	20,000 (27.7%)		0 (1.8%)	25,000 (23.9%)
Sandwell Total	Reuse, recycling and composting	35,000 (27.3%)	32,000 (40.8%)	23,000 (8.5%)		19 (60.9%)	90,000 (16.7%)
	Recovery and treatment ***	79,000 (62%)	15,000 (19.2%)	40,000 (14.8%)	35,000 (61.7%)	0 (0.4%)	169,000 (32.7%)
	Transfer		10,000 (13.5%)	32,000 (11.9%)	20,000 (35.1%)	12 (38.4%)	63,000 (11.73%)
	Disposal	14,000 (10.7%)	20,000 (26.5%)	177,000 (64.9%)	2,000 (3.1%)	0 (0.2%)	213,000 (39.8%)

Notes:
Figures rounded to nearest 1,000 tonnes.

Totals may not sum due to rounding.
The table excludes waste manged at exempt sites (approx. 780,000 tonnes).
Total Local Authority collected waste managed may not match total Local Authority collected waste collected arisings due to stockpiling of waste between reporting periods.
*LACW and Hazardous ‘recovery and treatment’ method includes ‘other’ fate.
(**) LACW data is for the 2021/22 monitoring year rather than the 2021 calendar year.
(***) Recovery and treatment for all areas includes energy recovery/ recovery of waste as ‘Refuse Derived Fuel’ (RDF).

2.4 Existing Waste Management Capacity

2.4.1 The estimated operational waste management capacity in Sandwell at the 'baseline' date is assumed to be equivalent to 'waste received' at Environment Agency permitted sites and incinerators (with and without energy recovery) in 2021, i.e. 2021 operational capacity, with the exception of landfill sites for the reasons explained below. Further information on the data sources used to estimate Sandwell's existing waste management capacity in 2021 are included in **Appendix B**. The figures in **Table 2.3** are annual capacity estimates and include hazardous waste (as recorded within the WDI). Waste received on/ in land in 2021 has been omitted from the capacity estimates in **Table 2.3** because it is typically a short-term operation not likely to continue over the whole plan period. Waste received at site categories 'Mobile Plant' and 'Storage' have also been excluded as their inclusion would likely infer double counting of waste and they too may be operations not likely to continue over the whole plan period. Landfill capacity is also omitted from **Table 2.3** not found and is reported separately from other waste capacity (see **Table 2.6**), as it is finite / time limited though often a long-term operation, and is not measured in the same way.

2.4.2 Sites falling within the Environment Agency 'Treatment' Site Category have been sub-divided into 'Treatment – Recycling' (= sites whose operations are predominantly preparing for re-use, recycling, or composting) and 'Treatment – Recovery' (= sites whose operations are predominantly recovery of waste as fuel or other waste treatment). This is based on analysis of the operations carried out at each 'Treatment' site, using information provided in planning applications and information published on operators' websites. This sub-categorisation aligns with the waste projections in **Section 3.5** as recycling and recovery fall under two separate categories. It should be noted that both these categories include different types of treatment aimed at either recycling or recovering value from two very different and quite separate waste streams – CD&E waste and hazardous and non-hazardous waste.

2.4.3 There was estimated to be approximately 900,000 tonnes per annum (tpa) of capacity at permitted sites in 2021. Just under 500,000 tpa of this capacity was estimated to be at treatment facilities/operations, with recycling operational capacity under 320,000 tonnes and recovery facilities just under 160,000 tonnes, with approx. 65% of the Sandwell's total 'Treatment' capacity being 'Recycling' and around 35% 'Recovery.'

2.4.4 Just over 250,000 tpa capacity was at metal recycling sites (MRS), of which a high proportion of this capacity is contributed by a relatively small number of very large sites. Approximately 157,000 tpa capacity was at transfer facilities. The transfer and recycling facilities deal with a number of waste streams and may reflect the resultant change in waste operations across the country. Operational capacity at incineration plants was just over 15,000 tpa, all of which was 'with energy recovery' at Innovative Environmental Solutions (UK) Ltd site in Oldbury for the disposal of automotive shredder residue (ASR).

2.4.5 The transfer figures in this table include inputs into the Council's Waste Transfer Station (WTS) and household waste and recycling centre (HWRC) which themselves are likely to involve double-counting of waste transferred between sites.

2.4.6 **Appendix E** includes a list of sites in Sandwell which are managing more than 10,000 tpa of waste. These include private operated sites and the sites managing the largest tonnages are Rabone Lane MRS (Sims Group) and the soil treatment centre (STC) at Edwin Richards Quarry (Waste Recycling group (Central) Ltd).

Table 2.3 Existing Waste Management Capacity, 2021 (tonnes per annum)[4]

Facility type		Sandwell
Metal Recycling Sites (MRS)		250,000
Transfer		157,000
Treatment	*Recycling*	318,000
	Recovery	158,000
Incineration		15,000
Total		**898,000**

Figures rounded to nearest 1,000 tonnes.
Totals may not sum due to rounding.

2.4.7 The waste management capacity for Sandwell in 2021 at LACW sites is shown in **Table** 2.4. Of the tonnages managed at the LACW sites nearly 66,000 tonnes were transferred through waste transfer stations (WTS) and under 6,000 tonnes were managed through the household waste recycling centre (HWRC).

Table 2.4 Existing Waste Management Capacity at LACW sites, 2021 (tonnes per annum)[5]

Facility type		Site name	Sandwell
Transfer	WTS	Eagle Transfer Hub	64,000
	HWRC	Shidas Lane Household Recycling Centre	6,000
	Depot and WTS	Taylors Lane Waste Transfer Station	1,000
Total			**71,000**

Figures rounded to nearest 1,000 tonnes
WTS: Waste Transfer Station
HWRC: Household Waste Recycling Centre

2.4.8 It should be noted that the 2021 'waste received' data only gives a snapshot of throughput at permitted sites and incinerators in that year, which may not be typical. An alternative estimate of operational capacity is the average (mean) annual throughput over the past five years 2017 – 2021 from the WDI (and Operational Incinerators schedule). These are the figures that will be used for the capacity projections (**Table 2.8**). The 5-year average (mean) throughput at permitted sites, including landfill and incinerators 2017 – 2021 gives a total capacity of around 6.1 mtpa.

2.4.9 The operational status and estimated void space for Sandwell landfill sites is provided in **Table 2.5**.

[4] EA WDI (2021)
[5] EA WDI (2021)

Table 2.5 Sandwell Landfill Sites – Operational Status and Estimated Void Space, End of 2021 (cubic metres)

Site Name	Facility Type	Authority	Operational Status, End of 2019	Average Input Rate 2017 – 2021 (tonnes)	Estimated Void Space Remaining, End of 2021 (m^3)	Permitted Landfill End Date
Edwin Richards Landfill Site	Non-Hazardous	Sandwell	Operational	205,000	5,594,000	21/02/2042

Source: Environment Agency Waste Data Interrogator (WDI) – 5-year average (mean) tonnages received 2017 – 2021, Environment Agency Remaining Landfill Capacity: England as at end 2021,
Note: the figures in the table have been rounded to the nearest 1,000 tonnes/ cubic metres

2.4.10 Edwin Richards Landfill is the only operational landfill site within Sandwell. Average inputs into Edwin Richards Landfill have fluctuated considerably over the past five years. Inputs in 2018 were much lower than inputs in all other years considered, suggesting that the average input rate is not likely to be representative of the input rate going forward.

2.4.11 Remaining void space at the Edwin Richards non-hazardous landfill was just over 4.8 mt at the end of 2021.

2.4.12 Dependant on annual inputs, the site may still have some operational void space remaining at the end of the plan period and beyond, with the permitted end date being 2042.

2.4.13 **Table 2.6** shows the estimated landfill capacity in Sandwell remaining at permitted landfill sites at the end of 2021. Using conversion factors to convert volume into weight, it is estimated that the total landfill capacity is sufficient to dispose of around 4.8 mt of non-hazardous waste.

Table 2.6 Landfill Capacity in Sandwell – Void space (cubic meters) and total capacity (tonnes) remaining at permitted sites at end of 2021

Site	Type	Authority	Estimated Void Space at end 2021 (m^3)	Estimated Total Capacity (tonnes)	Permitted End Date
Inert Only					
No permitted sites					
Non-Hazardous					
Edwin Richards	Non-Hazardous	Sandwell	5,594,000	4,755,000	21/02/2042
Total Non-Hazardous Void Space at end 2021			5,594,000	4,755,000	
Hazardous					
No permitted sites					

Source: Environment Agency Remaining Landfill Capacity: England, as at end 2021, void space converted to tonnes using the formula recommended in the former PPG10 Companion Guide (0.85 tonne = 1 cubic metre). All figures rounded to the nearest 1,000 tonnes. Totals may not sum due to rounding.

2.5 Specialist Waste Management Capacity

2.5.1 Specialist waste management capacity in Sandwell has been estimated from a range of sources and is summarised in **Table 2.7**. The level of confidence in estimates of specialist waste capacity from permitting data or specialist databases is considered to be high. However, confidence in estimates of capacity at exempt sites is "very low". Unfortunately, there was no publicly available information on Low Level Radioactive Waste (LLRW) management capacity in Sandwell. Further information on the data sources used to estimate Sandwell's specialist waste management capacity in 2021 are included in **Appendix B**.

2.5.2 Hazardous waste management capacity has been accounted for in the waste management capacity **Table 2.3** above, but the hazardous waste management capacity in **Table 2.8** is taken from the Hazardous Waste Interrogator (HWI) (2021) and provides visibility of the permitted site hazardous waste capacity within Sandwell. This is based on hazardous waste deposits in Sandwell, as reported by fate; the facility types are therefore categorised slightly differently. It must be noted that the hazardous waste proportions reported in the WDI and the HWI are slightly different.

2.5.3 The End of Life Vehicles (ELV) recycling and depollution facilities and WEEE treatment sites are also included within the MRS and Treatment categories, respectively, in **Table** 2.3 above.

2.5.4 There was estimated to be approximately 975,000 tpa capacity at specialist waste management sites (excluding wastewater treatment). Almost 780,000 tpa of this capacity was estimated to be available at exempt sites, approximately 35,000 tpa at End of Life Vehicles (ELV) and WEEE facilities, and just over 157,000 tpa at hazardous waste facilities.

2.5.5 The wastewater capacity relates to Maximum Permitted Daily Water Flow (DWF) at the one treatment facility in Sandwell (Birmingham & Black Country No. 2 (Ray Hall)) obtained from the Environment Agency 'Consented Discharges to Controlled Waters with Conditions' database and the Black Country Councils Water Cycle Study (May 2020), JBA Consulting. The maximum permitted DWF is estimated to be approx. 76,000 m^3/day at this site. **Table D7** in **Appendix D** shows the 'Load Entering' Sandwell Wastewater Treatment Facilities (p.e.), 2012-2020[6] and the data suggests that the quantity of wastewater treated at the specified plants has increased between 2012 and 2020.

2.5.6 There are no sludge treatment centres (STC) in Sandwell, but there are two near to it. There is a STC in Barnhurst (Wolverhampton), which has a capacity to treat approx. 73,000 tpa, it also has an energy recovery facility which is generating 0.6 MWe of electricity per annum and another at Roundhill (South Staffs), which has a capacity to treat 122,000 tpa and has an energy recovery facility which is generating 1 MWe of electricity per annum and a biomethane plant which is generating 750 m^3 of gas per hour. Bioresources Market Information published by Severn Trent in November 2016 under Ofwat guidelines confirms that Barnhurst and Roundhill have co-located Sludge Treatment Centres (STCs) for treatment of Secondary Activated Sludge. This information indicates that Barnhurst produces around 3,600 dry tonnes of solids (DTS) of sludge end product per annum, and that Roundhill produces around 2,400 DTS of sludge end product per annum.

[6] 2020 being the most recent year data is available

Table 2.7 Specialist Waste Management Capacity, 2021 (tonnes per annum unless otherwise specified)

Facility type		Sandwell
Agricultural waste	Exempt Sites (U10, U11, T24 and T25 exemptions)	5,000
Hazardous waste	Treatment	66,000
	Recovery	49,000
	Transfer	42,000
	Disposal*	9
	Other**	70
Low level radioactive waste (LLRW)	No publicly available information on facility capacities to treat LLRW	Not known
Construction waste exemptions	U1 and U3 exemptions	223,000
Disposal (D) exemptions	D1 to D8 exemptions	7,000
Storage (S) exemptions	S1 to S3 exemptions	250,000
Treatment (T) exemptions	T1 to T33 excluding T24 and T25 (Agricultural and food processing waste exemptions)	204,000
Use (U) exemptions	U2, U4 to U9 and U12 to U16 exemptions	92,000
Wastewater treatment	DWF (m3/d) ***	76,000
Wastewater sludge treatment	Tonnes	0
ELV recycling and depollution		28,000
WEEE treatment		7,000

Notes:
Figures rounded to nearest 1,000 tonnes.
Totals may not sum due to rounding.
*Includes landfill and incineration without energy recovery.
**Includes 'other' fate, rejected and long time storage.

2.6 Sandwell Baseline Total Capacity Estimate

2.6.1 **Table 2.8** summarises the total estimated baseline waste management capacity in Sandwell in 2021, including information on capacity at permitted landfills in **Table 2.6**. This excludes capacity at 'exempt' sites and specialist capacity (**Table 2.7**). To account for likely changes in operational capacity at the waste management sites, Sandwell capacity is based on 5-year average (mean) tonnages of 'waste received' at Permitted Sites and Operational Incinerators by Site Category, 2017-2021, as discussed in paragraph 2.4.8. Material legislative and collection approach changes have been minimal over this time

period, so a five-year average is a more reliable figure than using the longer 10-year average.

Table 2.8 Sandwell Baseline Waste Capacity Estimate, 2021 (tonnes per annum)

Capacity Type	Sandwell
Recycling and Recovery (annual throughput capacity, tonnes per annum)	
Incinerator	*11,000*
MRS	*384,000*
Treatment - Recycling	*370,000*
Treatment - Recovery	*157,000*
Recycling and Recovery Total	922,000
Treatment-Recycling – Inert/C&D only*	153,000
Transfer (annual throughput capacity, tonnes per annum)	
Transfer	394,000
Landfill (void space in cubic metres (m3) and total capacity in tonnes	
Inert Only – m^3	*0*
Inert Only – tonnes	*0*
Non-Haz – m^3	5,594,000
Non-Haz - tonnes	*4,755,000*
Hazardous – m^3	*0*
Hazardous – tonnes	*0*
Landfill Total – m3	5,594,000
Landfill Total – tonnes	4,755,000

Source: Landfill - Table 2.6. All figures rounded to the nearest 1,000 tonnes. Totals may not sum due to rounding. Includes capacity at permitted sites only. * This is the 5-year average throughput at permitted sites only. Treatment – Recycling sites that receive Inert/ C&D waste only or receive predominantly Inert/ C&D waste.

2.6.2 Based on this information, in 2021 the capacity of permitted waste sites in Sandwell was estimated to be:

- Recycling and Recovery – 922,000 tonnes per annum
- Transfer – 394,000 tonnes per annum
- Inert Landfill – 0 cubic metres/ 0 tonnes
- Non-Hazardous Landfill – 5.6 million cubic metres/ 4.8 million tonnes
- Hazardous Landfill – 0 cubic metres/ 0 tonnes

2.6.3 This gives a total baseline capacity of around 6.1 million tonnes.

2.6.4 More than a third of Sandwell's permitted Recycling and Recovery capacity (by tonnage) is at metal recycling sites (MRS). Whereas the Landfill capacity is a finite resource that will deplete over time, the other waste capacity will fluctuate and can go up or down as existing sites close or new sites come forward. Strictly speaking, Transfer sites (which include HWRCs) are part of the logistics chain for waste, so including the capacity of these sites means there will be a large element of double counting within the total capacity figure. However, this is probably balanced by excluding any allowance for capacity at 'exempt' sites and re-processors. More importantly, Transfer capacity needs to be included in the waste capacity projections because the new Local Plan will need to identify capacity gaps for all types of waste facility, including capacity for bulking and sorting waste.

2.6.5 The section on cross-boundary waste movements (**Section 2.8**) shows that a significant amount of waste from Sandwell is being exported. However, Sandwell is aiming to maintain 'net self-sufficiency' over the plan period, and in any case, there is no guarantee that capacity outside Sandwell will continue to be available throughout this period. The capacity available outside Sandwell has therefore not been factored into the total baseline capacity estimate.

2.7 Planned Waste Infrastructure Projects

Nationally Significant Infrastructure Projects

2.7.1 Responsibility for determining applications for NSIPs rests with the Planning Inspectorate (PINS). Details of development consents granted and current applications for NSIPs are published on the PINS website.

2.7.2 Projects identified on the NSIP website have been reviewed as part of this study There appear to have been no applications for energy from waste, hazardous waste or wastewater NSIPs in or near to Sandwell. There is however one NSIP in Lincolnshire (BAEF) listed in **Table 2.9**, which considering the capacity of the site, may need to source feedstock from a number of sources including from within the West Midlands.

Waste Infrastructure Projects Relevant to the Study Area

2.7.3 **Table 2.9** provides a schedule of waste infrastructure projects that are considered to be of relevance to the Study. This relevance is established in the following ways:

- It is located within Sandwell; or
- It is located within the area where cross boundary waste flows into and out of Sandwell have been identified in the waste baseline; or
- It is located outside this area but is of a size or nature that suggests a regional significance that could impinge upon Sandwell.

2.7.4 To identify potential sites, Authority Monitoring Report's, planning portals and/or waste needs assessments (where they exist) have also been looked at for Dudley MBC, Walsall Council, Wolverhampton City Council, Birmingham City Council, Coventry City Council, Solihull Metropolitan Borough Council (MBC), Shropshire Council, Telford & Wrekin Council, Staffordshire County Council, Warwickshire County Council and Worcestershire County Council.

Table 2.9 Waste Infrastructure Projects relevant to the study area by Authority and by Type

Authority	Facility Type	Project	Operator	Stage	Permitted capacity (tpa)	Comment
Dudley	HWRC	n/a	Dudley MBC or its Contractor	Pre-scoping	25,000	Council is considering replacing existing HWRC with new facility with c.25 ktpa operational capacity.
Dudley	Pyrolysis Plant	Bloomfield Road Pyrolysis Plant (formerly REWS Power Plant) (Tipton)	High Energy Fuels Ltd	Operational 2021	180,000	Pyrolysis plant within retained existing building (former concrete batching plant) at Bloomfield Road, Tipton, Dudley. Facility will be producing 'torrefied' wood pellets, synthetic gas and electricity from pyrolysis of waste biomass using technology patented by parent company REWS UK PLC. Planned capacity of 180,000 tpa of waste material (feedstock), namely wood and RDF sourced from adjacent waste processing facility operated by AB Waste and from the general market. Operator's website indicated that construction of the plant was complete at the end of 2019 and AB waste is now supplying 159,000 tpa. New permit determined 16/03/20207.
Sandwell	Energy from Waste Plant	Kelvin Energy Recovery Facility	Verus Energy Oak Ltd	Planning permission, construction started	395,000	Application for conventional energy from waste plant on part of the Giffords Recycling site, with a capacity to accept up to 395,000 tpa of imported pre-treated RDF submitted in 2017 (DC/17/61177). This is the latest in a series of permissions for energy from waste facilities on the same site. The previous scheme approved in April 2014 (DC/14/56920) – amended following original proposal (DC/10/52454) – was for a gasification plant with a capacity to receive up to 140,000 tpa of residual household, commercial and industrial waste, including some residual waste from the adjacent sanitary waste recovery facility (now operated by PHS). This was technically implemented before being superseded by the current, larger scheme. Planning permission was refused for

[7] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/874442/Permit_CP3836QX.pdf

Authority	Facility Type	Project	Operator	Stage	Permitted capacity (tpa)	Comment
						this by Sandwell MBC in June 2018 on the grounds of impacts on amenity of nearby residents from noise and impacts on highway safety. The application was approved by a Planning Inspector in September 2019 following an appeal against the refusal (APP/G4620/W/18/3216591). The Environment Agency issued a permit for the facility in July 2019 and the Inspector gave significant weight to this. Construction of the facility[8] commenced at the end of 2021 and is expected to take 3 years.
Walsall	HWRC	n/a	Walsall Council or its Contractor	Planning permission granted	65,000	In May 2022, the Middlemore Lane application (22/100) was granted planning permission (subject to conditions) for the Council to replace the existing HWRC at Merchants Way with a new facility with c.40 ktpa operational capacity. The Fryers Road application (22/0105) was also granted planning permission to demolish the existing HWRC and WTS at Fryers Rd, replacing them with a larger HWRC and relocating the WTS to Middlemore Lane. It will provide an improved HWRC facility with increased capacity to accept additional waste streams and up to 25,000tpa of waste, though "there will be no direct processing of waste on any part of the site and activities will be limited to basic sorting, storage and bulking of materials". Completion of both sites is estimated to be mid-2024.
Walsall	WTS	n/a	Walsall Council or its Contractor	Planning permission granted	161,000	Linking to the above Fryers Road application (22/0105) and Middelmore Lane application (22/100), planning permission was granted to replace the 100 ktpa WTS at Fryers Rd with a new facility with c.150 ktpa operational capacity at Middlemore Lane. The existing WTS at Fryers Rd will be demolished and relocated to a new WTS at Middlemore Lane.

[8] https://enfinium.co.uk/west-midlands-businesses-invited-to-learn-about-supply-chain-opportunities-during-the-construction-of-enfiniums-new-kelvin-waste-to-energy-facility/

Authority	Facility Type	Project	Operator	Stage	Permitted capacity (tpa)	Comment
						The proposal would see existing capacity being replaced with a maximum capacity of 125,000tpa for a newly located WTS, “with an additional capacity of 16,000tpa to futureproof the operations against future waste growth” as well as a “A small trader scheme located adjacent to the WTS accepting small amounts of commercial waste up to a capacity of 20,000tpa”, providing together an uplift of 66,000tpa WTS capacity in Walsall. Completion of the new WTS is estimated to be mid-2024.
Walsall	Energy from Waste Plant	3Rs (Fryers Road)	BH Energy Gap (Walsall) Limited	Un-implemented planning permission, planning permission for alternative scheme granted	436,000	Energy recovery project at Fryers Road, Bloxwich, which has been revised several times since 2013. Original proposal was for 300,000 tpa gasification plant burning RDF produced on-site from imported residual mixed municipal, commercial and industrial waste. Application submitted September 2019 (19/1172) for conventional ‘resource recovery and renewable energy production facility’ burning imported pre-treated/source segregated residual waste, including RDF. This has a significantly higher annual throughput than the previous gasification plant proposal (up to 458,000 tpa) and does not include on-site waste processing. Planning permission was granted (subject to conditions) in 2020 and the facility is planned to come online in 2027 (12 months until Notice to Proceed, 36 months to build-out) with a capacity of 436 ktpa.
Walsall	Pyrolysis Plant	REWS Power Plant (Bloxwich)	REWS UK PLC	Unimplemented CLOPUD	100,000	CLOPUD (Certificate of Lawful Proposed Use or Development) approved in September 2014 to use existing industrial unit as a pyrolysis plant for the processing of RDF prepared off-site, for the primary purposes of generating and exporting the manufactured clean gas directly to the grid (13/1343/LP). Website of REWS UK PLC, developer of pre-operational pyrolysis plant in Tipton, Dudley (see above) indicates they are looking to acquire this site as a new operational centre. Facility would be a pyrolysis plant

Authority	Facility Type	Project	Operator	Stage	Permitted capacity (tpa)	Comment
						producing bio-coal and syngas from waste feedstock prepared at the Tipton plant.
Coventry	Materials Recycling Facility (MRF)	Regional Materials Recycling Facility	TBC – project being led by Coventry City Council	local plan site allocation, planning permission granted	120,000 – 175,000	Feasibility Study carried out in 2017/18 into technical and economic viability of developing a Materials Recycling Facility (MRF) to serve Coventry City Council, neighbouring authorities (including Walsall Council) and local businesses. The MRF would be developed on land adjacent to the existing CSW (Coventry and Solihull Waste Partnership) EfW site, which is allocated for waste management use in the adopted Coventry Local Plan. Outcome of feasibility study was positive and detailed Business Case for the project was developed during 2018/19, based on a plant with a capacity of around 120,000 tpa with flexibility to increase to 175,000 tpa over a 20-year contract period. Coventry's Cabinet authorised officers to establish arms-length company ('AssetCo') between Coventry City Council and the Partner Authorities to progress the project on 27 August 2019. The indicative timetable identified for the project is for it to be fully commissioned by May 2023, and assuming a 20-year life, it would continue in operation up to 2043 therefore over the rest of the plan period and beyond. The planning application (FMES/2020/0427) was granted permission in 2021 subject to conditions. The Sherborne MRF expected to be open summer 2023.
Lincolnshire	ATT	Boston Alternative Energy Facility (BAEF)	Alternative Use Boston Projects Limited	Pre-application, DCO application Decision with the Secretary of State	1,000,000	Nationally Significant Infrastructure project (NSIP). Gasification facility using RDF as feedstock. The facility is expected to target MSW and C&I waste from conurbations (such as London and the West Midlands) because local arisings will not meet feedstock requirements. The DCO Examination period for BAEF commenced on Friday 8 October 20219. Once the Examining Authority has

[9] https://www.bostonaef.co.uk/2022/02/examination-commences-for-boston-alternative-energy-facility/

Authority	Facility Type	Project	Operator	Stage	Permitted capacity (tpa)	Comment
						made a recommendation to the Secretary of State, the Secretary of State will then have three months to make the decision whether to grant consent for the project. As of March 2023, a decision is yet to be made.
Lincolnshire	ATT	Waste to jet fuel project, Immingham	Velocys Plc	Planning permission granted	c.500,000	Gasification facility using MSW and RDF as feedstock and producing syngas which is converted to jet fuel. The facility is expected to target MSW and C&I waste from conurbations (such as London and the West Midlands) because local arisings will not meet feedstock requirements. There is a partnership between Velocys and British Airways with a target financial close of 2024. In June 2020, North East Lincolnshire Council formally granted planning permission (application reference DM/0664/19/FUL). Target commission date is 2027.
Solihull	IVC, biomass and wastewater treatment	n/a	Beechwood Recycling Ltd	Planning permission granted	32,500 municipal 56,500 C&I	In-Vessel Composting (IVC) Facility and Biomass Energy Facility for the composting and treatment of up to 45,000 tonnes per annum of comingled green and food waste and wood waste. In addition, a Wastewater Treatment Plant will process/treat up to 44 million litres of waste water per annum. Permission granted 2016.
Solihull	CD&E waste recycling	n/a	NRS Aggregates Ltd	Planning permission granted	100,000	Crushing, screening and washing of construction and demolition waste using fixed plant at Meriden Quarry. Planning permission granted 2018.
Solihull	CD&E waste recycling	n/a	CEMEX UK Operations Ltd	Planning permission granted	49,000	Proposed recycled aggregate facility in existing Berkswell Quarry - CD&EW. Permission granted 2018.
Staffordshire	MRF	n/a	Veolia Environmental Services	Planning permission granted	70,000	Additional capacity at existing MRF - increase the annual permitted tonnage from 49,000 tonnes per annum to 70,000 tonnes per annum. Permission granted 2017.

Authority	Facility Type	Project	Operator	Stage	Permitted capacity (tpa)	Comment
Staffordshire	Waste Transfer Station	n/a	Boulton Skip Hire Ltd	Planning permission granted	25,000 C&I 50,000 municipal	Change in the use of land, consisting of the development of a Waste Transfer station at Moorfields Industrial Estate. Permission granted 2017.
Staffordshire	Renewable energy facility	n/a	John Pointon and Sons Limited	Planning permission granted	83,000	Combined heat and power renewable energy facility using waste wood as a biomass fuel. Permission granted 2017.
Staffordshire	Renewable energy facility	n/a	Greener Composting	Planning permission granted	7,000	Biomass boiler facility at Manor Farm, Wall, Staffordshire. Permission granted 2018.
Staffordshire	Recycling facility	n/a	Site Clear Solution Limited	Planning permission granted	21,800	Retrospective application for recycling and storage facility for non-hazardous and hazardous waste (ref. CH.19/01/778 W). Permission granted 2019.
Staffordshire	Waste Transfer Station	n/a	Burntwood Road Sweepers Limited	Planning permission granted	25,000	Retrospective application for a waste transfer station for gully emptying and road sweeping. Permission granted 2019.
Staffordshire	Recycling facility	n/a	Rykneld Metals Ltd	Planning permission granted	25,000	Application (ref. ES.19/01/5020 W) for the extension of the metal recycling facility including the erection of a building for storage and treatment of wastes and the provision of 3 commercial units for light industrial use; erection of palisade fencing; steel gates; installation of weighbridge; and car parking. Permission granted 2020.
Staffordshire	Healthcare waste treatment	n/a	Stericycle	Planning permission granted	23,500	Change of use of existing industrial building to use as a healthcare waste treatment plant and transfer site and associated works at Units 40- 46 Mariner, Lichfield Road Industrial Estate, Tamworth. Permission granted 2020.

Authority	Facility Type	Project	Operator	Stage	Permitted capacity (tpa)	Comment
Staffordshire	Skip Hire and Recycling facility	n/a	Jumbo Holdings Ltd	Decision withdrawn	100,000	Application for a skip hire and recycling facility including the sorting, processing and storage of 100,000 tonnes of waste per annum. Decision withdrawn as of March 2023.
Staffordshire	Waste Transfer Station	n/a	Geocycle UK Ltd	Planning permission granted	125,000	Consultation from the Environment Agency in connection with an Environmental Permit application for a household, commercial and industrial waste transfer station by Geocycle UK Ltd at Yelsway Lane, Stoke-on-Trent Staffordshire. Permission granted in May 2022.
City of Stoke-on-Trent	Waste Treatment and Transfer	n/a	Sharpsmart Ltd	Planning permission granted	20 tpd	Change of use to a clinical waste treatment and transfer use, including installation of extraction flues and mezzanine floors (sui generis). Permission granted 2019.
City of Stoke-on-Trent	Inert Recycling facility	n/a	S.J. Walchester Ltd	Planning permission granted	75,000	Change of use to an inert waste recycling facility including erection of a waste storage building, waste processing machinery, two portacabin offices, weighbridges, 3m high concrete boundary wall and car parking (Part Retrospective). Permission granted 2020.
Warwickshire	Waste Transfer Station	n/a	FCC Environment Ltd	Planning permission granted	20,000	Bulking and transfer of green and bio-waste (food). Permission granted 2018.
Warwickshire	Composting facility	n/a	Veolia Environmental Services	Planning permission granted	40,000	Composting of green waste in open windrows and the chipping of wood. C&I waste. Permission granted 2018.
Warwickshire	MRF	n/a	Fortress Recycling Limited	Planning permission granted	25,000	Installation of sorting and handling plant to process dry mixed recycling. C&I waste. Permission granted 2017.

Authority	Facility Type	Project	Operator	Stage	Permitted capacity (tpa)	Comment
Warwickshire	EfW	Hams Hall energy Centre	Rolton Kilbride Limited	Planning permission granted	150,000	Renewable Energy Centre - waste management facility for the recovery of energy (heat and electricity) from non-hazardous residual waste using an Advanced Conversion Technology (gasification). C&I and municipal waste facility. Permission granted in 2017.
Worcestershire	Waste Transfer Site	n/a	T Edmunds	Certificate of Lawfulness of Existing Use or Development issued	Unknown	Transfer site for green waste. Ref. 18/000002/CL. Despatch date 07/04/2020. Lawful Development Certificate for an Existing Use issued.
Worcestershire	Biomass boiler	n/a	Go Greener Recycling	Planning permission granted	25,000 C&I 150,000 CDE&W	Biomass boiler and waste transfer station, Permission granted 2018.
Worcestershire	EfW	n/a	Mercia Waste Management	Planning permission granted	230,000	Additional capacity: increase the throughput of the EnviRecover Energy from Waste Facility from 200,000 to 230,000 tonnes per annum. Permission granted 2019.
Worcestershire	Waste Transfer Site	n/a	Chloros Environmental Ltd	Planning permission granted	24,000	Waste Transfer Station for Hazardous and Non-Hazardous Waste. Permission granted 2019.
Birmingham	WTS & HWRC	n/a	Veolia Environmental Services	Application registered. Awaiting decision	138,000 (WTS) 32,000 (HWRC)	Redevelopment of the waste management facility on Lifford Lane, Kings Norton, Birmingham to provide a replacement Household Waste Recycling Centre (HWRC) and Waste Transfer Station (WTS). The WTS will be designed to handle 138,000 tonnes per annum, whereas the HWRC will have an approximate capacity of 32,000 tonnes per annum. The application was registered in February 2023.
Birmingham	WTS & HWRC	n/a	Veolia Environmental Services	Planning permission granted	170,000 (WTS) 20,000 (HWRC)	Redevelopment of the waste management facility on Holford Drive, Perry Barr, Birmingham to provide a replacement Household Waste Recycling Centre (HWRC) and Waste

Authority	Facility Type	Project	Operator	Stage	Permitted capacity (tpa)	Comment
				(subject to conditions)		Transfer Station (WTS). The WTS will be designed to handle 170,000 tonnes per annum, whereas the HWRC will have an approximate capacity of 20,000 tonnes per annum. Planning permission was granted in April 2021 and is subject to conditions. The site is planned to reopen in spring 2023 but as of March 2023, the date has not been confirmed.

2.8 Cross-Boundary Waste Issues

Waste imports and exports

2.8.1 **Table 2.10** presents estimates of the volumes of hazardous and non-hazardous waste imported and exported from Sandwell in 2021. Imports have been calculated by using the EA WDI 2021 and waste received at permitted sites at Sandwell in 2021 by origin region. This includes waste received in Sandwell at facilities located in Sandwell. Exports of waste originating have been calculated by using the EA WDI 2021 and waste received at permitted sites in England. This identifies the locations of the sites, including those in Sandwell that received waste in 2021, whose origin was coded to Sandwell. Therefore, both estimates of imported and exported waste include the same fraction of waste from Sandwell. The 'Waste Received' data has been used as it is the most reliable data set to use when assessing cross-boundary movements of waste, although it does only record waste received at Environment Agency permitted sites and does not always record the origin of the waste beyond regional level, and in some cases does not record the origin at all.

2.8.2 Some of the waste arisings from Sandwell ends up in Wales. The Welsh WDI (WWDI) shows that approximately 8,000 tonnes of codeable waste from Sandwell was exported to Wales in 2021 (see **Appendix G**), largely metallic wastes. There is no equivalent data for Scotland or Northern Ireland.

2.8.3 Sandwell was estimated to be a net importer of non-hazardous waste in 2021 by approximately 200,000 tonnes. Non-hazardous waste imports were estimated to be around 1.15 mt and exports almost 0.59 mt. Nearly 0.35 mt of Sandwell's non-hazardous waste was received at facilities within Sandwell.

2.8.4 Sandwell was estimated to be a net importer of hazardous waste in 2021 by approximately 172,000 tonnes. Imports of hazardous waste were estimated to be c. 195,000 tonnes and exports c. 20,000 tonnes. Approximately 4,000 tonnes of Sandwell's hazardous waste were treated at facilities within Sandwell.

Table 2.1011 Waste imports to and exports from Sandwell, 2021 (tonnes)

	Imports to Sandwell sites (including waste of Sandwell origin)	Exports to permitted sites in England and Wales (inc. sites in Sandwell)	Sandwell waste arisings received at sites within Sandwell	Net imports
Non-hazardous waste	1,150,000	589,000	350,000	211,000
Hazardous waste	195,000	19,000	4,000	172,000
Total	**1,345,000**	**608,000**	**354,000**	**383,000**

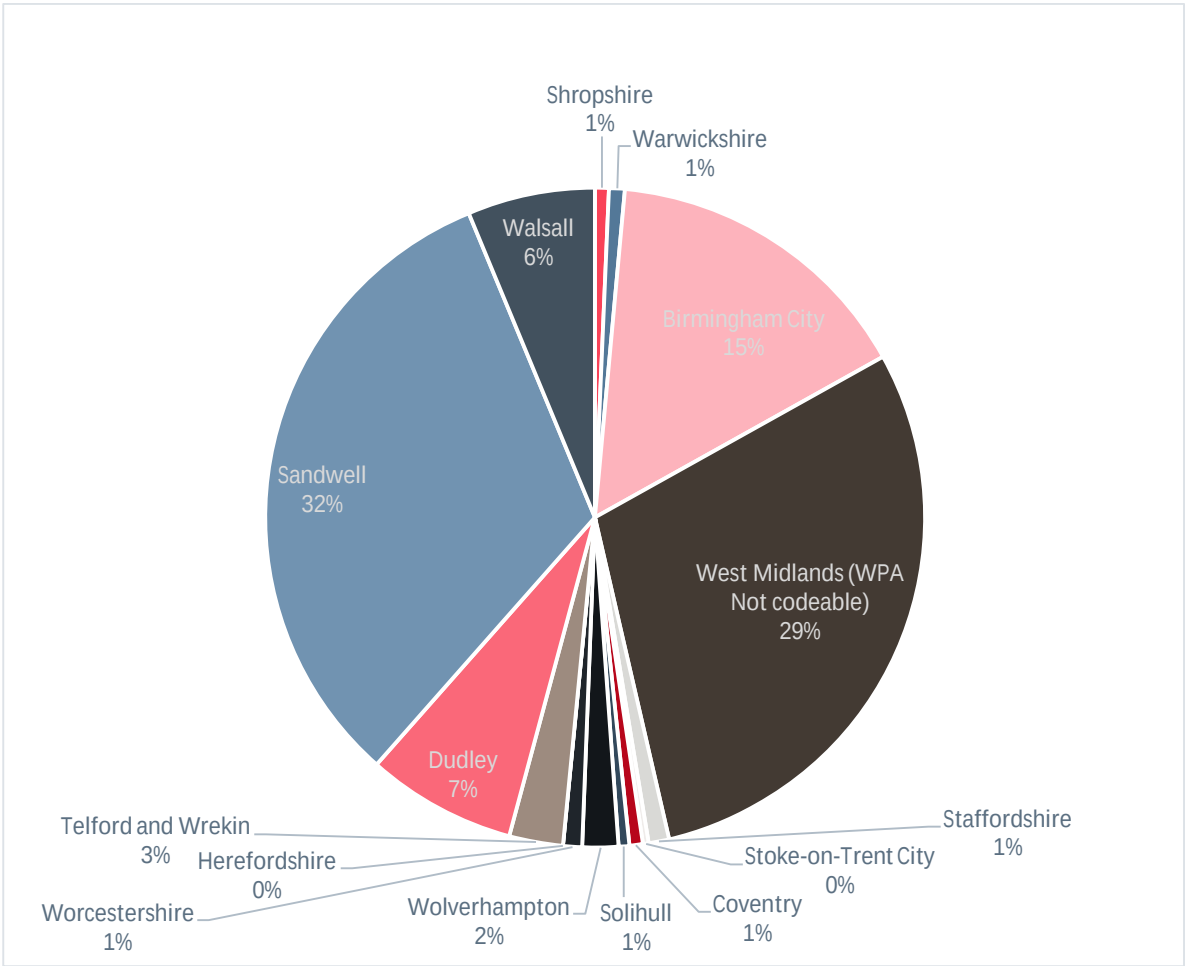
Notes:
Figures rounded to nearest 1,000 tonnes. Figures are for permitted sites only and exclude waste imported and exported to 'Storage' sites.
The exports from Sandwell to permitted sites in England and Wales will not align with the Sandwell waste arising figure in Table 2.1 as different sources and timelines have been used, as well as the inclusion of WPA non-codeable waste in Table 2.1 (see paragraphs 2.2.3 and 2.2.4).
Source: Environment Agency Waste Data Interrogator (WDI) 2021, Natural Resource Wales WDI (WWDI), 2021

2.8.5 Total imports to Sandwell permitted sites totalled just over 1.35 mt of which approximately 1.15 mt was non-hazardous and 195,000 tonnes was hazardous. Of this imported waste, approximately 354,000 tonnes originated within Sandwell as inter area transfer.

2.8.6 The import tonnages presented in **Table 2.1011** relate to the baseline year, 2021, which differ from the "Net imports of waste" tonnages in **Table 3.5** and **Table** 3.8, which are based on 5-year average tonnages of waste received at permitted sites and incinerators in Sandwell 2017-2021. The tonnages in **Table 3.5** have been used as the 'baseline' import arising figures for the waste capacity projections, because the latter figures use 5-year average waste received tonnages rather than the tonnages of waste received in 2021.

2.8.7 The total imports into Sandwell originating from the West Midlands region (excluding the waste originating in Sandwell) was 746,000 tonnes, representing 68% of the total waste received in Sandwell. Approximately 324,000 tonnes of this total was origin West Midlands – WPA Not Codeable. **Figure 2.2** shows the Waste Received at Permitted Sites in Sandwell in 2021, of which waste originated in the West Midlands Region (where known) and the underlying data can be found in **Appendix G**.

Figure 2.2 Waste Received at Permitted Sites in Sandwell in 2021: Waste Originating in the West Midlands Region (where known) by Origin WPA



Source: Environment Agency Waste Data Interrogator (WDI) 2021

2.8.8 **Table 2.12** shows the origin/region of country and waste management by site category of waste received at permitted waste management facilities in Sandwell. More than 80% of waste received at these facilities originated within the West Midlands. A further breakdown

of the waste can be found in **Appendix G** and it can be seen that more than 29.5% of the waste received in Sandwell was coded as being from the West Midlands (WPA not codeable), a proportion of which is likely to have arisen within Sandwell as well as other West Midlands authorities. Approximately 32% of the waste received in Sandwell was coded as being from Sandwell. More than 15% of the waste received in Sandwell was coded as being from Birmingham. Birmingham, Dudley and Walsall were the three largest importers of waste into Sandwell; importing 320,000 tonnes (29.1% of total waste). Outside of the West Midlands, East Midlands, the South West and East of England were the three largest importers of waste into Sandwell; importing 120,000 tonnes (9% of total waste). **Appendix G** provides a breakdown of waste imported in 2021 by Basic Waste Category and Region/ Country.

Table 2.12 Origin Region/ Country and Waste Management by Site Category of Waste Received in Sandwell, 2021 (tonnes)

Origin Region / Country	Landfill	MRS	Transfer	Treatment*	Total	%
East Midlands	2,000	13,000	6,000	23,000	44,000	3.3%
East of England	-	8,000	4,000	23,000	35,000	2.634%
London	-	1,000	-	7,000	8,000	0.623%
North East	-	8,000	-	8,000	16,000	1.2%
North West	-	9,000	3,000	13,000	25,000	1.7%
South East	-	6,000	2,000	22,000	30,000	2.3%
South West	70	11,000	2,000	26,000	40,000	3%
West Midlands	446,000	171,000	135,000	345,000	1,100,000	81. 6%
Yorks & Humber	-	14,000	1,000	14,000	29,000	2.1%
N Ireland	-	-	-	-	-	0.03%
Scotland	-	-	-	3,000	3,000	0.2%
Wales	-	7,000	3,000	6,000	15,000	1.1%
Outside UK	-	1,000	-	1,000	2,000	0.1%
Total	**447,000**	**250,000**	**157,000**	**491,000**	**1,345,000**	**100.00%**

Source: Environment Agency Waste Data Interrogator (WDI) 2021
*includes incineration figures
Note:
Figures rounded to nearest 1,000 tonnes. Totals may not sum due to rounding.

2.8.9 The cross-boundary movements in 2019, 2020 and 2021 are shown in **Appendix G**; they show a broadly similar pattern of inter- and intra- regional waste movements to that of 2021. With regards to imported waste, while just under 82% of the waste received at sites in Sandwell in 2021 was from within the West Midlands, this was 1% lower in 2020 (81%) and just under 75% in 2019, illustrating the intra-regional 'self-sufficiency', although a 3-year time series of data is too short to tell whether this is an actual trend or just fluctuation.

2.8.10 **Table D11** (**Appendix D**) summarises Black Country waste imports, by Site Category, including waste sent for incineration. Of the 1.3 mt of waste received at permitted sites in 2021, the biggest percentage (by tonnage) (35%) was received at Treatment sites, followed by Landfill sites (33%), MRS (19%), Transfer sites (12%), and incinerators (1%).

2.8.11 In 2021 nearly 608 kt of waste originating in Sandwell were exported to permitted sites in England and Wales; 589, 000 tonnes of this was non-hazardous and 19,000 tonnes was hazardous. The waste received at permitted facilities does not provide the fate of the waste exported, but it is possible to identify what type of facility the waste has been sent to in the respective region.

2.8.12 **Table 2.13** shows the waste management by site category at destination region.

Table 2.13 Destination region and waste management by site category of origin waste in Sandwell, 2021 (tonnes)

Destination	Incineration	Landfill	MRS	Transfer	Treatment	On/in Land	Total	%
East Midlands	-	-	7,000	1	19,000	-	26,000	4.3%
East of England	-	-	200	3	450	-	1,000	0.1%
London	-	-	-	-	-	-	-	0%
North East	-	-	20	-	2,000	-	2,000	0.4%
North West	1,000	4	100	300	1,000	-	3,000	0.4%
South East	300	-	10	-	300	-	1,000	0.09%
South West	-	-	58,000	1	15	-	58,000	9.5%
Wales	-	-	2,000	50	6,000	-	8,000	1.3%
West Midlands	58,000	227,000	49,000	103,000	64,000	3,000	505,000	83.1%
Yorkshire & Humber	3,000	-	2,000	1,000	1,000	-	7,000	1.1%
Total	**62,000**	**227,000**	**118,000**	**104,000**	**94,000**	**3,000**	**608,000**	**100.0 %**

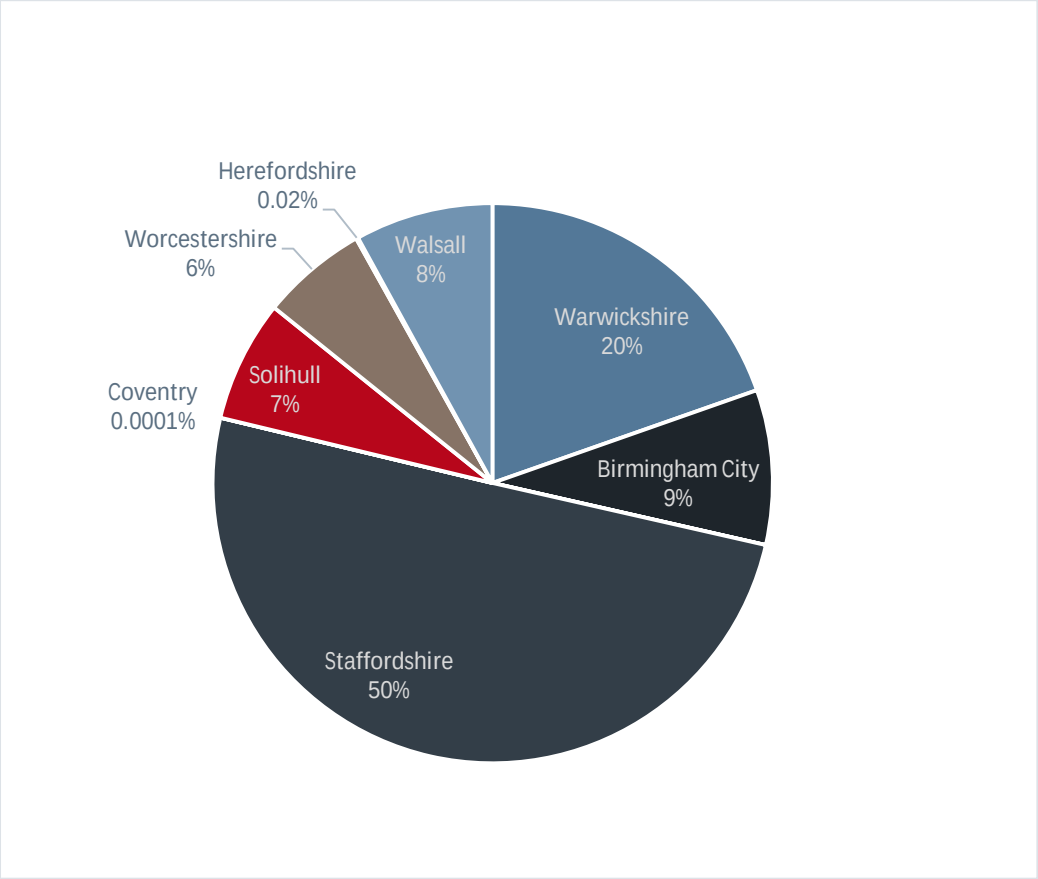
Source: Environment Agency Waste Data Interrogator (WDI) 2021 and Natural Resources Wales, Welsh Waste Data Interrogator (WWDI) 2021
Note: Totals may not sum due to rounding.

2.8.13 505,000 tonnes (~83%) of the waste was exported to facilities within the West Midlands. Of this, 79% (approx. 397,000 tonnes) was received at sites within the West Midlands metropolitan area (Birmingham, Coventry, Dudley, Sandwell, Solihull, Walsall, Wolverhampton) and 70.12% at sites in Sandwell. **Figure 2.3** shows the breakdown of waste received at permitted sites in the West Midlands, whose waste origin was Sandwell (the underlying data can be found in **Appendix G**).

2.8.14 The second largest export of waste to permitted sites from Sandwell was South West; they received 58,000 tonnes which represents 9.51% of exported waste. The third largest

export area was East Midlands, where permitted sites received 26,000 tonnes of waste originating from Sandwell, representing 2.75% of exported waste. **Appendix G** provides a breakdown of waste exported in 2021 by Basic Waste Category and Region/ Country.

Figure 2.3 Waste Received at Permitted Sites in the West Midlands in 2021 (tonnes), Waste Originating in Sandwell (where known) by Destination WPA



Source: Environment Agency Waste Data Interrogator (WDI) 2021

2.8.15 As mentioned, the origin of waste is not always specified in the returns to the Environment Agency, and this is not a requirement for waste permits. In 2021 324,000 tonnes of waste treated in facilities located in Sandwell were not allocated to any specific origin. This represents around 29.50% of all the waste recorded as originating in the West Midlands by tonnage where nearly all of this waste was non-hazardous. Some of the 324,000 tonnes waste will have almost certainly have arisen within Sandwell but there is no way of knowing how much or how and where it was managed, so it cannot be accounted for within the total Sandwell export figures above.

2.8.16 **Table D11** (**Appendix D**) summarises the waste export from Sandwell, by Site Category, including waste sent for incineration. Of the 608,000 tonnes of waste received at permitted sites in England and Wales and incinerators in England, in 2021, the biggest percentage (by tonnage) (37.5%) was received at Landfill sites, followed by MRS (19.5%), Transfer sites (17%), Treatment sites (15.5%), incinerators (10%) and On/In Land sites (0.5%).

2.8.17 A list of West Midlands sites outside Sandwell that received the largest tonnages of Sandwell waste during 2019 – 2021 can be found in **Appendix G**.

2.8.18 **Appendix G** also includes tables (G13-G15) showing the destination WPA of waste originating in Sandwell exported to the East Midlands for the period 2019-2021. There

appears to have been an overall increase in waste exported from Sandwell to the East Midlands between 2019 and 2021. A list of East Midlands sites that received the largest tonnages of waste from Sandwell during 2019 to 2021 can also be found in **Appendix G**.

2.8.19 **Appendix G** also includes tables (G16-G18) showing the destination WPA of waste originating in Sandwell exported to the South West for the period 2019-2021, due to the large tonnages that were sent to the South West in 2021. Tonnages of waste exported from Sandwell increased by about 350% between 2019 and 2021. Nearly all of the waste exported to the South West during 2019 to 2021 was received at just one site, as listed in **Appendix G**.

2.8.20 As shown in

2.8.21 **Table** 2.1011 and the data provided there were considerable movements of waste between Sandwell and the neighbouring local authorities; in 2021, 991,000 tonnes of waste was imported to permitted facilities within Sandwell and 608,000 tonnes of waste was exported from Sandwell to permitted facilities (including sites in Sandwell). The overall picture is that more than 80% of waste imported and exported from the Sandwell stays within the West Midlands region and the only other regions that receive more than 10,000 tonnes of Sandwell waste are the East Midlands and the South West. Exports outside the West Midlands are ~15% of total codable arisings. Waste flows within the West Midlands emphasises the interdependence that exists between the authorities within this region. This dependence on other authorities presents an opportunity in which to discuss and co-operate on the existing waste flows and what the possibilities there are for the future management of waste arisings within the West Midlands.

HWRC cross-border use

2.8.22 As HWRCs serve a user-defined catchment, the origin of deposits cannot be recorded, and it may be likely that users outside Sandwell catchment area are depositing waste at Sandwell HWRCs and increase the waste arisings that Sandwell must deal with. Inter-use of HWRCs by neighbouring authorities is an issue, and with housing growth predicted to carry on rising, the issue will only exacerbate in the future. Cross-border agreements are one way that councils could work together to provide residents from neighbouring authorities access to a closer HWRC, monitor inter-use and ensure operating costs are equally shared.

2.8.23 There are a number of other initiatives that can be taken to limit the amount of non-catchment area waste received at Sandwell's HWRCs, these include:

- Enforcement action - residents need permits or ID proving they live in-borough;
- Cross border agreements - formal agreement between neighbouring authorities for unlimited out of area resident access, usually includes a payment;
- Shared HWRC - HWRC developed by two adjoining authorities, serving specific catchment areas for use by residents from both authorities (although such a shared facility would not necessarily be reflected in captured waste data such as Waste Data Flow, which would attribute the data for that facility to the authority in which the facility is located); and
- Booking systems – residents have to book online to reserve a time slot to access the HWRC to deposit waste. Residents either have to create a council account or provide an address within the area to be able to book.

2.8.24 Sandwell Council introduced a booking system in July 2020 to maximise the number of people accessing the site, whilst also reducing waiting times and long queues following the re-opening of sites. They also acknowledged that it would stop people who do not live

in Sandwell visiting the facility and adding to the queue and extra costs to the Council and the contractor.

2.8.25 There are also a number of charging mechanisms which have been used by local authorities concerning cross-border use; these have previously included charges either being levied directly on out of area users (e.g. single level of charge, direct weighing charge or charges by waste type) or on the neighbouring authority, whereby a financial agreement is put in place. However, in June 2023 Defra announced that charges for depositing 'Do It Yourself' (DIY) waste at HWRCs should be abolished to allow householders to dispose of their waste in a responsible manner and encourage recycling.

Waste crime

2.8.26 Another concern for cross-border waste issues within Sandwell is waste crime and fly-tipping, as criminals do not recognise authority borders; the waste flows associated with this activity are hard to predict and plan for. In 2021/22 there were 11,564 incidents reported to the Council, which is a 11% increase on the previous 2020/21 figure when there were 13,330 fly tipping incidents reported within Sandwell[10]. All kinds of waste are fly tipped, the most common being household waste. Other wastes that are fly tipped include appliances like fridges and washing machines, mattresses, waste from building and demolition work, animal carcasses, vehicle parts and tyres. Hazardous wastes such as oil, asbestos sheeting and chemicals are also dumped illegally.

2.8.27 The benefits of reduced fly-tipping within Sandwell would include:

- Lower collection, disposal and investigation costs;
- Cleaner neighbourhoods and public areas; and
- Public satisfaction; fly-tipping and the cleanliness of neighbourhoods is a key concern for residents.

2.8.28 A partnership approach between the four Councils to enforce legal action against waste criminals, as well as co-operation with other responsible bodies (e.g. police, Environment Agency, Highways Agency, Network Rail), landowners and the public would be a worthy option for Sandwell to consider in trying to tackle fly-tipping. There are a number of other initiatives that Sandwell as a whole can consider to tackle fly-tipping, which include: use of technology and data intelligence to record and share information on fly-tipping incidents; local campaigns and communications across the community to help clear up neighbourhoods or other public areas, campaigns can also be combined with educational programmes; training members of the waste management and street cleaning crews to collect evidence and report fly-tipping incidents, incentives for those which lead to successful enforcement action; community sentences appropriate for some offenders could include mandatory involvement in neighbourhood clear ups undertaken under existing campaigns. Defra announced in early 2023 that grants totalling £775,000 would be given to help councils roll out a range of projects to tackle fly-tipping.

2.9 Key Issues for Delivery of Waste Infrastructure

2.9.1 There are a number of key issues for the delivery of waste infrastructure in Sandwell during the plan period to 2040/41 and beyond.

2.9.2 Housing and employment land demand are projected to increase as Sandwell's regeneration of the urban area progresses. The needs of new waste infrastructure need to be balanced with those of housing and employment for suitable development sites. The

[10] Fly-tipping incidents and actions taken, reported by local authorities in England 2012/13 – 2021/22, Defra

Authority should look to identify development sites for waste infrastructure but with priority placed upon the safeguarding of existing and allocated sites for continued use.

2.9.3 Ongoing emphasis on waste reduction and resource efficiency has seen waste per household decrease from a peak of 1,056 kilograms per household per year (kg/hh/yr) in 2006/07 to 983 kg/hh/yr in 2021/22 (a reduction of 7.5%). This has been driven by a range of factors including, but not limited to, household income, increased resource efficiency (such as lightweighting[11]) and changes in consumer habits and behaviours. Waste reduction and resource efficiency improvements could have a significant influence on future waste growth which is explored in the next section.

2.9.4 There are emerging changes in the need for different types of waste management capacity. Operational capacity of non-specialist waste management facilities in Sandwell was estimated to be c.5.7 mtpa in 2021 (6.1 mtpa when considering the 5-year average throughput as discussed in **Section 2.4.7**), in comparison to arisings of c.535,000 tonnes and imports of c.1.2 mt (c.1.75 mt in total). However, Sandwell is currently short of some types of capacity (e.g. active inert landfill space, household waste MRFs and composting facilities) and reliant on exporting these materials to other areas.

2.9.5 In addition, the way waste will be managed in future is expected to change significantly as the UK transitions towards a Circular Economy. The quantities of waste reused, recycled and composted are expected to increase significantly. Although the UK government did not adopt the EU 'Circular Economy Package' measures following Brexit, they published their own Circular Economy Package[12] which is predominantly the same as the EU CEP and includes targets such as sending no more than 10% municipal waste to landfill by 2035 and recycling 65% of municipal waste by 2035. Municipal waste recycling rates have plateaued, suggesting it will be a challenge to meet the higher municipal waste recycling targets, and it remains to be seen whether the actions identified in 'Our Waste, Our Resources' to reduce waste and eliminate difficult to recycle plastic waste will be effective. Waste and capacity projections in the next section provide information on potential future waste management capacity gaps under the 'Circular Economy' scenario and under alternative scenarios with lower recycling rates. If a national Deposit Return Scheme (DRS) is implemented within England, this will impact the tonnages of drinks containers (plastic, cans and glass) collected through kerbside waste services which needs to be considered, and the infrastructure that will need to be in place to deal with this stream.

2.9.6 The location of any new infrastructure would need to consider a range of factors from access to transport networks and waste producers to environmental constraints, such as proximity to sensitive receptors, and economic viability.

[11] Lightweighting is a concept that originated in the auto industry about manufacturing vehicles that are less heavy to achieve better fuel efficiency and reduce raw material use and costs. The term has also been used to describe the process of making packaging lighter or replacing it with lighter weight alternatives.
[12] https://www.gov.uk/government/publications/circular-economy-package-policy-statement

3. Projected Future Waste Capacity Requirements

3.1 The Purpose of this Chapter

3.1.1 The Sandwell Local Plan seeks to deliver significant development growth, which will increase the amount of waste produced requiring management. This chapter evaluates the implications for current management capacity to evaluate whether additional provision will be required over the Plan period and when this requirement is likely to arise.

3.2 Need for Other Development

Household Growth

3.2.1 The housing growth scenario used in the modelling for the purpose of this Study has been taken from the Strategic Housing Land Availability Assessment (SHLAA) and the housing supply figures. This identifies sufficient land to provide 10,963 additional homes by 2041.

3.2.2 For the ten years beyond the plan period (2040/41 to 2050/51) no housing figures have been identified for these years. However, the Study has used an estimation, assuming no more Green Belt releases but a continuation of urban house-building levels.

Housing Growth Scenario

3.2.3 This accommodates current local housing need up to 2041. This equates to:

- Actual net completions of 1,107 dwellings 2020/21 to 2021/22;
- A 'supply' for 10,963 net additional dwellings for the rest of the plan period 2022/23 to 2040/41, which equates to an average (mean) of 577 dwellings per annum; and
- A further 'supply' for 5,770 net additional dwellings for the next 10 years beyond the plan period 2040/41 to 2050/51 (assumed to be the same as the plan period pro rata), which equates to an average (mean) of 577 dwellings per annum.

3.2.4 The total housing supply under the baseline scenario is therefore 12,070 net additional dwellings 2020/21-2040/41 and 17,840 net additional dwellings 2020/21 to 2050/51.

3.2.5 **Table 3.1** shows the 5-yearly cumulative totals for the Plan Period 2020 to 2041 and the 10 years beyond the Plan Period 2041 to 2051.

3.2.6 It should be noted that the housing supply figures are updated annually as part of the SHLAA process. These supply figures are set against a slightly higher housing need, which is also updated annually. The Sandwell Borough Local Plan will, as far as possible, aim to provide a sufficient supply of sites to meet this need. Whilst the housing supply figures may change slightly due to annual updates, unless changes are more significant, it is not considered they will have a notable impact on the waste projections in this report.

Table 3.1 Housing Growth Scenarios (cumulative net housing need/growth (net dwellings) 2020 – 2051)

	Completions 2020 - 2022	Required 2022/23 - 2026/27	Required 2027/28 - 2031/32	Required 2032/33 – 2036/37	Required 2037/38 – 2040/41	Required 2041/42 – 2045/46	Required 2046/47 – 2050/51
Sandwell	1,107	3,992	6,877	9,762	12,070	14,955	17,840

Source: Sandwell Council

Employment Growth

3.2.7 The evidence base for the employment land policies primarily consists of a two stage Employment Development Need Assessment (EDNA) and the Black Country Employment Area Review (BEAR)[13].

3.2.8 The EDNA states that Sandwell has a baseline supply of employment land of 29ha.

3.2.9 Within the allocation, 74 ha is to be delivered from small sites / underutilised areas within existing employment areas. The Supply for Sandwell was identified to be an additional 28.1 ha.

3.2.10 For the ten years beyond the plan period (2041/42 to 2050/51) no employment land figures have been identified. A continuation of annual employment land allocation levels has been used for the purpose of this study.

3.2.11 The annualised employment land allocation within Sandwell, used within the Employment Growth Scenario, equates to:

- A total provision of 57.1 hectares for the period 2022/23 to 2040/41; and
- A further provision for 30.05 hectares for the period 2041/42 to 2050/51.

3.2.12 These provisions are shown in **Table 3.2**, as 5-yearly cumulative totals.

3.2.13 Whilst the employment supply figures may change slightly due to annual updates, unless changes are more significant, it is not considered they will have a notable impact on the waste projections in this report.

Table 3.2 Employment Growth Scenario (cumulative net employment need/growth (in hectares) 2022 – 2052)

	Required 2022/23 - 2026/27	Required 2027/28 - 2031/32	Required 2032/33 – 2036/37	Required 2037/38 – 2040/41	Required 2041/42 – 2045/46	Required 2046/47 – 2050/51
Sandwell	15.0	30.1	45.1	57.1	72.1	87.2

Source: Sandwell Council

3.3 Waste Projections

3.3.1 The waste projections for Sandwell are a function of waste growth projections and waste management scenarios. These have been informed by Sandwell and the Resources and Waste Strategy and incorporate differences in waste growth and recycling and recovery

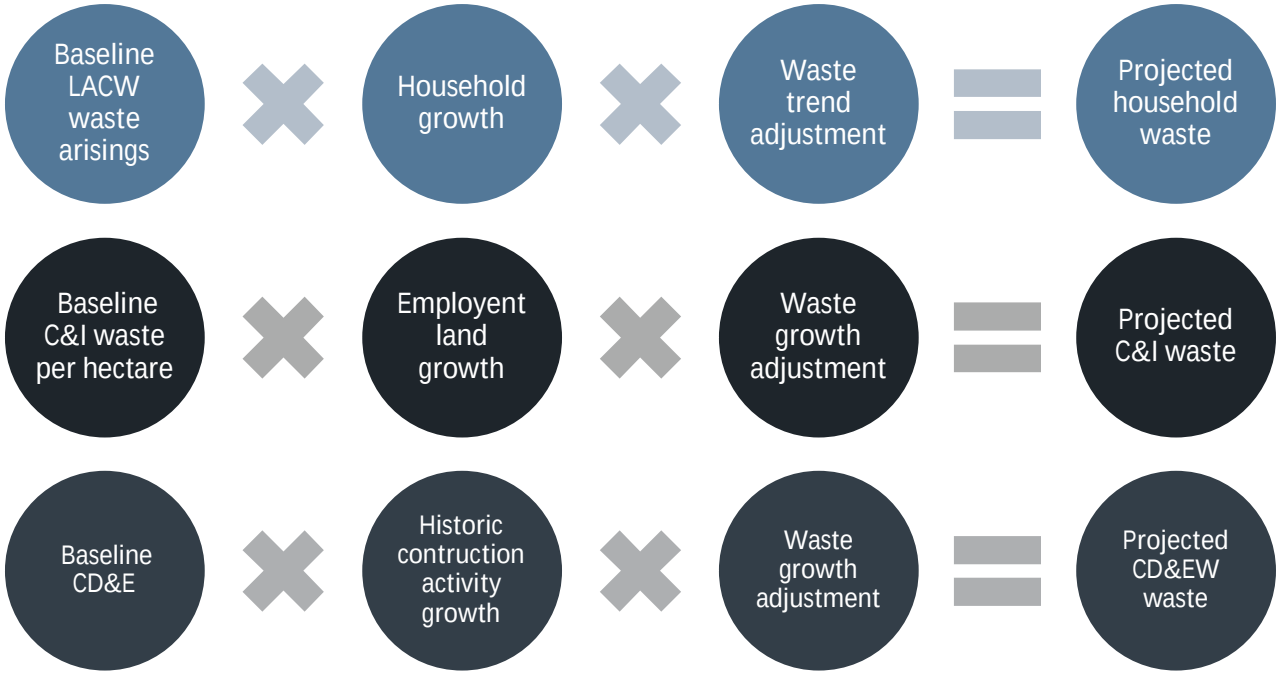
[13] Economy & Employment (dudley.gov.uk)

performance which may vary over the plan period. Using the available data, we have projected the waste growth over the plan period to inform the potential waste infrastructure that may be required in the future.

Waste Growth Projections

3.3.2 **Figure 3.1** provides an overview of the projection methodology for household, C&I and CD&E waste growth.

Figure 3.1 Waste growth projection methodology overview



3.3.3 The household waste growth rate has been estimated as a function of household growth over the plan period and changes in average household waste arisings to reflect waste prevention/reduction activities.

3.3.4 The C&I waste growth rate has been estimated as a function of employment land growth over the plan period and has included an adjustment to reflect recent national C&I waste trends.

3.3.5 The CD&E waste growth rate has been estimated from historic data on construction activity levels in the West Midlands; an index has been applied to account for the expected increases in the construction industry in Sandwell in the future.

3.3.6 The growth of hazardous waste and other waste streams/types was based on agreed growth rates which reflect the level of growth experienced by the C&I waste stream.

Household and C&I Waste Growth

3.3.7 Based on previous discussions held with the BCP housing, employment and centre groups as outlined in the 2020 and 2022 Black Country Waste Study reports, a set of baseline and alternative scenarios was agreed for the household waste projections based

on housing need, and the C&I waste growth projections based on employment land demand arising in Sandwell over the plan period and beyond.

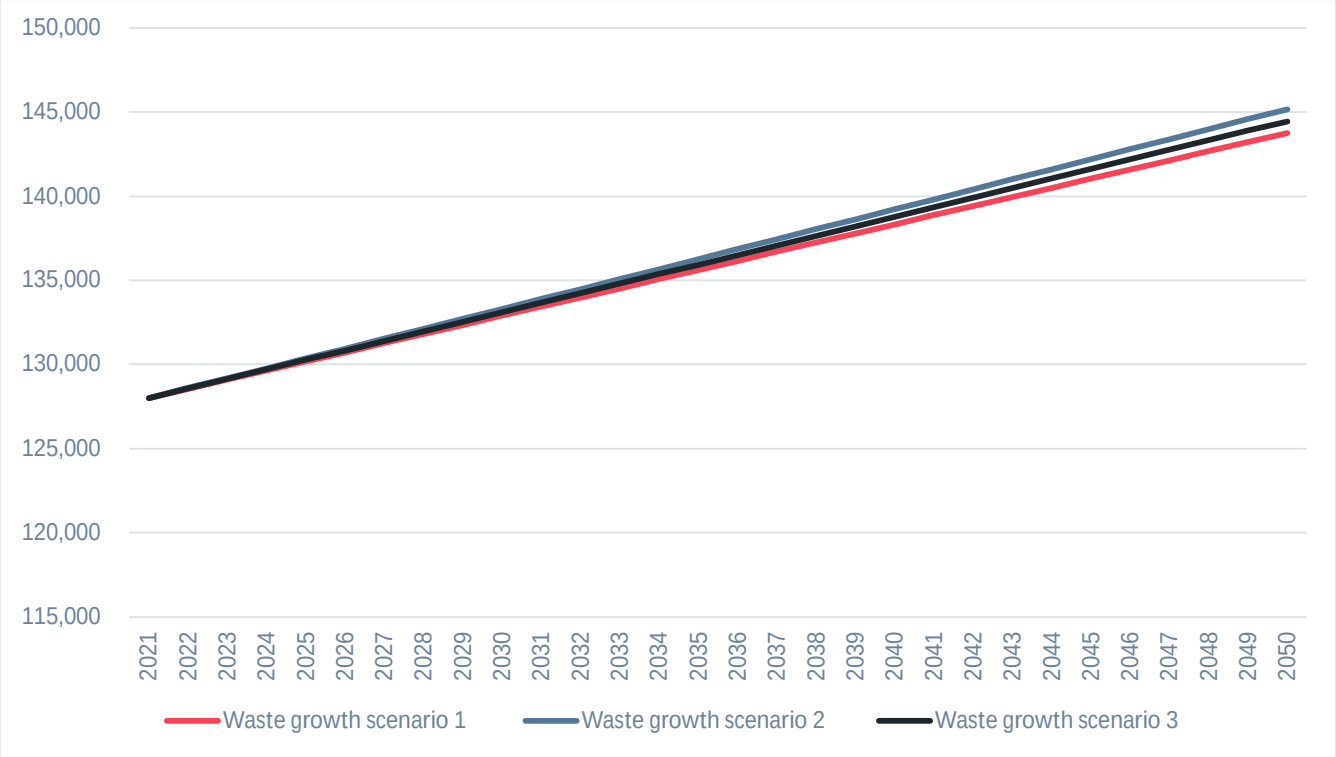
3.3.8 For household waste growth different housing growth scenarios were considered in conjunction with changes in the quantity of waste generated per household. The baseline and alternative waste reduction scenarios are shown in **Table 3.3.**

Table 3.3 Household waste per household reduction scenarios

	Household waste growth
Scenario 1	No change in household waste per household: household waste per household stays at existing levels
Scenario 2	Higher increase in waste per household: household waste per household increases by the equivalent of 0.34% every ten years in line with the observed trend between 2011/12 and 2021/22[14];
Scenario 3	Lower increase in waste per household: household waste per household increases by the equivalent of 0.17% every ten years. This level of waste growth if approximately half of the change observed between 2011/12 and 2021/22.

3.3.9 **Figure 3.2** illustrates the impact of household waste per household scenarios on household waste growth projections.

Figure 3.2 Household waste growth projections



[14] This study has used the household numbers from the Census data, for both 2011/12 and 2021/22 periods, as opposed to the ONS estimated household numbers used in previous studies. ONS advise the Census data is the best data source to use. Compared to previous reports, the trend now shows an increase in household waste per household as opposed to a decrease.

3.3.10 For C&I waste growth the employment land growth scenario was considered in conjunction with changes in the quantity of waste generated per hectare of employment land. The employment land growth and C&I waste growth scenarios are shown in **Table** 3.4.

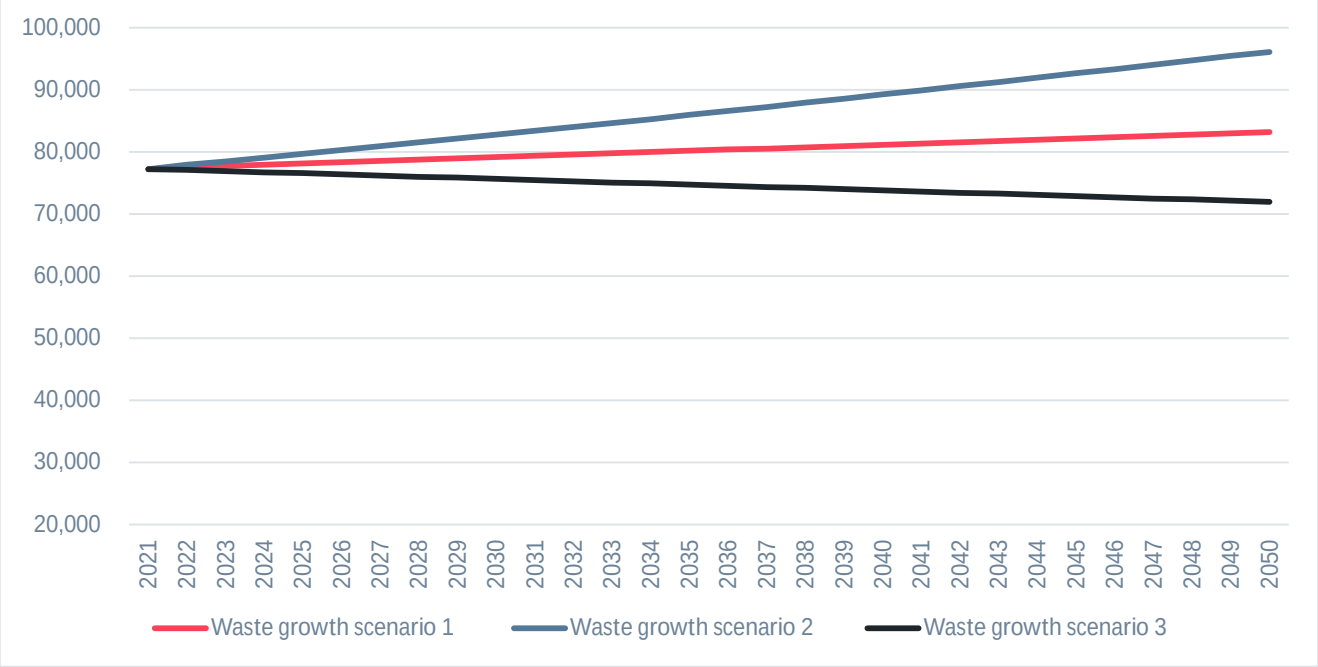
Table 3.4 C&I waste growth scenarios

	C&I waste growth
Scenario 1	No change in C&I waste per hectare.
Scenario 2	Increase in C&I Waste Generated Per Ha of Employment Land in line with national trend i.e. 0.5% increase every year.
Scenario 3	Reduction in C&I Waste Generated Per Ha of Employment Land, i.e. 0.5% reduction every year.

Note: England C&I arisings between 2017 and 2019 have been used to determine trends, in that C&I data from 2020 and 2021 showed a reduction in commercial waste, which would likely have been as a result of the pandemic and people working from home. The methodology used for England is based on that provided by Defra Science and Research Project EV0804, with a thorough review of the England methodology undertaken in 2017/18. Scenario 3 does not reflect recent trends but has been proposed to mirror recent consultations, with regards to greater emphasis on waste reduction, including business waste, in coming years.

3.3.11 **Figure 3.3** illustrates the impact of C&I waste generation per hectare scenarios on C&I waste growth projections.

Figure 3.3 C&I waste growth projections



3.3.12 Considering the proposed scenarios and the information and knowledge provided to us on the likelihood of each scenario, with the agreement of Sandwell, the following waste growth scenarios are to be used in the projections:

- Household waste: Sandwell housing growth combined with the Lower reduction in household waste per household waste growth scenario. Under this scenario household waste **increases** by 13% (0.4% p.a.) between 2021 and 2051.
- C&I waste: employment land growth combined with an increase in C&I waste per hectare waste growth scenario. Under this scenario C&I waste **increases** by 24% (0.7% p.a.) between 2021 and 2051.

Other Waste Growth

3.3.13 For the CD&E, agricultural and hazardous waste streams, one growth scenario has been used in the projections:

- CD&E: historic construction activity growth equivalent to an increase in construction activity (see paragraph 3.3.5). Under this scenario CD&E waste **increases** by approximately 169% (3% p.a.) between 2021 and 2051.
- Agricultural and hazardous waste streams were assumed to grow at the same rate as C&I waste and **increase** by 16% (0.5% p.a.) between 2021 and 2051.

Impact of imports and exports

3.3.14 **Table 3.5** shows that Sandwell currently imports approximately 1.6 mt of waste for management. Sandwell waste imports includes waste originating in Sandwell received at sites in Sandwell. Of the 1.6 mt, just over 354,000 tonnes is waste which has originated within Sandwell. Sandwell net imports of waste for management were over 1.2 mt in 2021. The figures in **Table 3.5** are different to those in **Table 2.1011** as the figures in **Table 3.5** are based on 5-year average tonnages of waste received at permitted sites and incinerators in Sandwell 2017-2021. Imports have been assumed to increase at the same rate as C&I waste and grow by 16% (0.5% p.a.) between 2021 and 2051.

Table 3.5 Net imports of waste for management in Sandwell (tonnes), 2017-2021 average inputs, by Site Category*

	Recycling	Recovery	Transfer	Disposal	Total
Imports of waste for management	754,000	168,000	394,000	256,000	**1,572,000**
Sandwell waste imports	31,000	2,000	95,000	226,000	**354,000**
Net imports of waste for management	723,000	166,000	299,000	30,000	**1,218,000**

*Based on 5-year average WDI inputs at permitted facilities and incinerators in Sandwell, 2017-2021. Sandwell waste import tonnages are taken from the 2021 WDI.
Note: includes waste for incineration, categorised under recovery. May not sum due to rounding.

3.3.15 The recycling and recovery imports of waste for management in **Table 3.5** are broken down as follows:

- Recycling: MRS (384,000) + Treatment-recycling (370,000) = **754,000 tonnes**
- Recovery: Incinerator (11,000) + Treatment-recovery (157,000) = **168,000 tonnes**

3.3.16 The recycling and recovery of Sandwell waste imports for management in **Table 3.5** are broken down as follows:

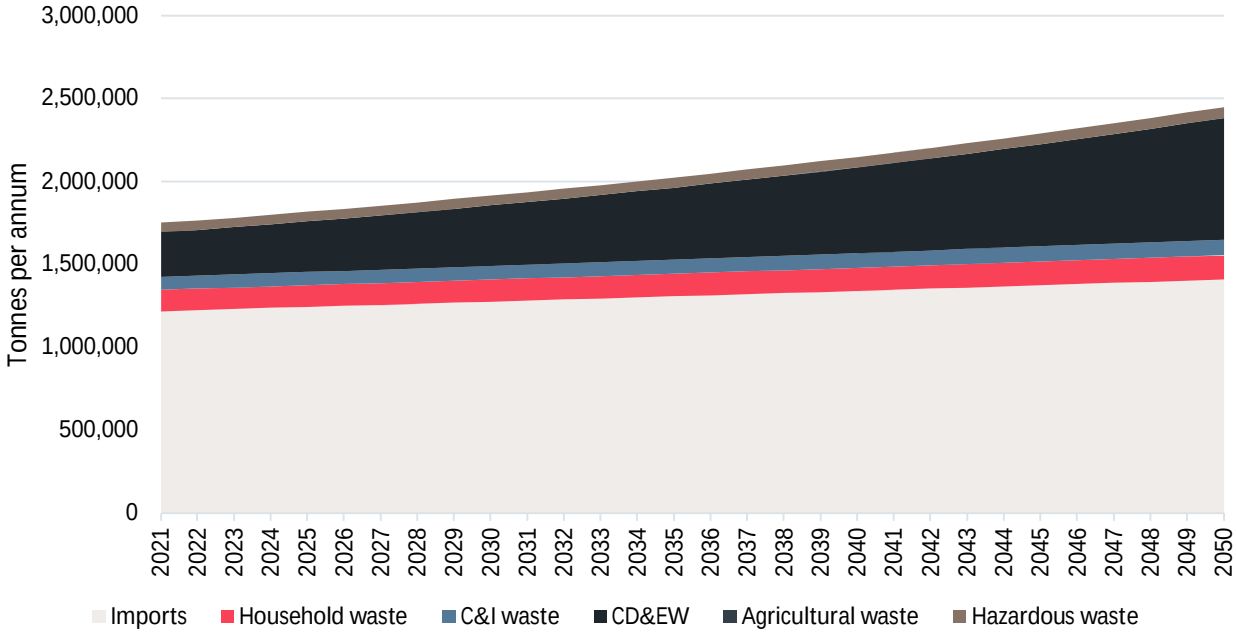
- Recycling: MRS (23,000) + Treatment-recycling (8,000) = **31,000 tonnes**

- Recovery: Incinerator (0) + Treatment-recovery (2,000) = **2,000 tonnes**

3.3.17 The recycling, recovery and transfer capacity figures in **Table 3.5** and the total disposal (landfill) capacity in **Table 2.6** have been used as the 2021 'baseline' for the waste capacity projections in **Table 3.8**.

3.3.18 **Figure 3.4** presents the waste projections for Sandwell between 2021 and 2051. The projected waste growth tonnages over the plan period by waste stream, from baseline date (2021) to the end date (2041) and at five-yearly intervals in between, are shown in **Table 3.6**. The quantity of waste Sandwell is projected to manage, increases from 1.8 mt in 2021 to 2.2 mt in 2041 (an increase of 26.5% or 1.2% p.a.). The underlying data tables for the waste growth projections up to 2051 are included within **Appendix H**.

Figure 3.4 Sandwell waste growth projections



Note: projection does not include waste managed at exempt sites or collected by retailer takeback and producer compliance schemes.

Table 3.6 Projected Waste Growth over the Plan Period by Waste Stream (tonnes)

Waste Stream	2021/22	2025/26	2030/31	2035/36	2040/41
Imports	1,218,000	1,242,000	1,274,000	1,306,000	1,339,000
Household	128,000	130,000	133,000	136,000	139,000
C & I	77,000	80,000	83,000	86,000	89,000
CD&E	273,000	306,000	364,000	434,000	517,000
Agricultural	30	30	30	30	35
Hazardous	57,000	58,000	59,000	61,000	62,000
Total	**1,752,000**	**1,816,000**	**1,913,000**	**2,023,000**	**2,147,000**

Figures may not sum due to rounding.

Waste Management Scenarios

3.3.19 The waste management scenarios are presented in **Table 3.7** and focus on the recycling performance to be achieved and by what year. Waste management scenario 2 for household and C&I waste is in line with the Circular Economy targets for re-use and recycling of municipal waste over the plan period 2021/22 – 2040/41 (i.e. 55% by 2025, 60% by 2030, 65% by 2035). This scenario assumes that the national Waste and Resources Strategy will incentivise re-use and recycling of household waste to a significant extent, whereas waste management scenario 3 will do so to a lesser extent.

3.3.20 A different set of assumptions have been applied to the CD&E stream, based on the construction waste targets set under the Waste Framework Directive (2009/98/EC), the management of current CD&E arisings and the likely targets to be set in the future. Article 11.2 of the WFD includes recycling targets that by 2020 a minimum of 70% (by weight) of non-hazardous CD&E, excluding naturally occurring material defined in category 17 05 04 in the List of Wastes, shall be prepared for re-use, recycled or undergo other material recovery (already achieved at a national level).

3.3.21 The current management of CD&E arisings show that this target was not met within the Black Country. However, as the EU commission introduced the Construction and Demolition Waste Management Protocol in October 2016, which is a set of non-binding guidelines to encourage the construction sector to recycle more and meet targets, it is likely that more ambitious and challenging targets will be set in due course (assuming UK legislation follows suit). The Resources and Waste Strategy acknowledges that although the construction sector has already made considerable progress in increasing resource efficiency, there is considerable scope for further improvement. The forthcoming revised Waste Prevention Programme will set out a number of actions for improving resource efficiency in the construction area, working with industry and other UK government departments. In the absence of any targets, WSP has assumed these to be as in **Table** 3.7.

3.3.22 The waste projections under each scenario over the Plan Period and the ten years beyond, up to 2051, by site category required to manage the waste are included within **Appendix H**.

Table 3.7 Waste Management Scenarios

	Household waste	C&I waste	CD&E waste
Waste management scenario 1 (WMS1): no change in recycling performance	No change in household waste recycling	No change in C&I waste recycling	No change in CD&E recycling
Waste management scenario 2 (WMS2): meet EU Circular Economy targets	65% household waste reuse, recycling and composting by 2035	65% C&I waste reuse, recycling and composting by 2035	c.85% CD&E recycling or recovery by 2030
Waste management scenario 3 (WMS3): progress towards EU Circular Economy targets	60% household waste reuse, recycling and composting by 2035	60% C&I waste reuse, recycling and composting by 2035	c.80% CD&E recycling or recovery by 2030

3.4 Potential Changes to Existing and New Capacity

3.4.1 Many of the changes expected to existing capacity and development proposals are well known through a combination of the terms of existing planning consents (e.g. time limitations), extant planning consents, ongoing applications, pre-application discussions and other local intelligence. These known factors are taken into account below.

3.4.2 The plans of the market are more difficult to know. Operators are constantly seeking to respond to changes in market demand and respond to market opportunities that may well not translate into firm proposals for some years although could emerge and be realised during the period of the new Plan. Market competition and commercial confidentiality issues mean that it is difficult for a Plan to anticipate the nature and scale of these.

Existing Capacity

3.4.3 Potential changes to existing waste capacity within Sandwell may arise from the possible projects being realised.

3.4.4 There are no current proposals for new materials recycling facilities (MRFs) in Sandwell. It is expected that Sandwell will continue to rely on MRF capacity outside the area for the management of dry recyclable household waste such as glass, metal, plastics, card and paper.

3.4.5 The existing landfill capacity will naturally diminish with Sandwell and wider region over the plan period and therefore existing disposal capacity is a concern. This is more so with the current inert landfill capacity estimate and will present a problem in the future.

3.4.6 There may be a potential reduction in capacity for Refuse Derived Fuel (RDF) exports in the EU, but in 2021 Sandwell did not export any RDF outside of the UK[15] making this less of a concern. Following the UK's departure from the EU, it may be that avenues to export this RDF will decrease but if the circular economy high recycling targets are implemented, it may be that RDF production decreases accordingly.

New Capacity

3.4.7 As previously outlined in **Table 2.9**, there is one energy recovery facility under construction in Sandwell (Kelvin Energy Recovery Facility being promoted by Verus Energy Oak in Sandwell). Progress on this site means that this site will be providing an additional recovery capacity of up to 395 ktpa over the Plan Period. As planning permission has been approved for this site, with the construction of the Facility having started in 2021 and timescales identified for delivery of the scheme, this future treatment capacity has been included within the projections.

3.4.8 The two other energy recovery facilities referenced in Table 2.9 (Bloomfield Road Pyrolysis Plant in Dudley and the 3Rs project at Fryers Road in Walsall) have the potential to accept waste from Sandwell over the Plan Period; however, as these sites fall outside Sandwell, this external capacity has not been included in the capacity projections.

3.4.9 Two planned EfW NSIPs in Lincolnshire have potential to source waste from Sandwell because local arisings would be insufficient. However, these projects are still in planning or pre-planning stages. One of the facilities (Boston Alternative Energy Facility) intends to use sea transport to transport most of the feedstock and the other facility is believed to favour rail transport. Sandwell may therefore need to access sea and/or rail transport infrastructure to exploit this planned capacity. Due to the uncertainty over whether these

[15] Based on R01 codes (includes RDF) exported outside the UK from Sandwell (WDI – waste removed)

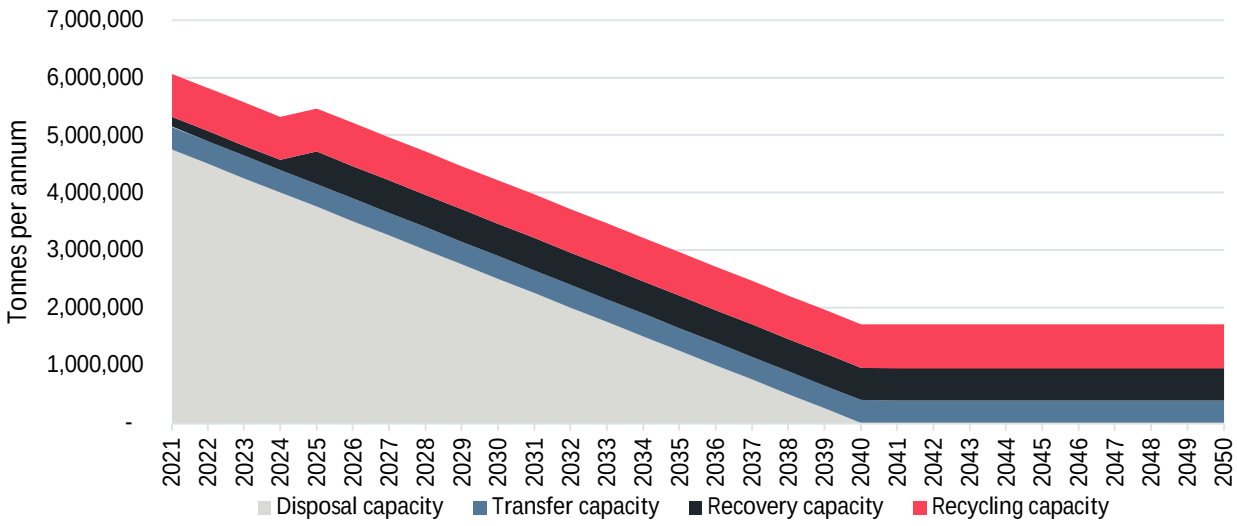
facilities will be constructed and whether Sandwell could access these facilities if they were, this capacity has not been included within the capacity projections.

3.4.10 The remaining infrastructure identified in **Table 2.9** is likely to have minimal impact on allocations within Sandwell as the larger developments are for waste streams which are restricted in the distance that they can be economically transported for treatment or disposal or are for relatively small quantities which suggest that the increases are to account for small scale local waste arisings. These potential waste infrastructure projects have therefore not been included within the projections.

Capacity Projections

3.4.11 Total waste management capacity within Sandwell is projected to decrease over the plan period from 6.1 mt at the start of 2021 (see paragraphs 2.6.1 – 2.6.3 and **Table 2.8**) to just over 1.7 mt at the end of the Plan period, as shown in **Figure 3.5**. This reduction in waste management capacity is driven by decreasing disposal capacity as the existing permitted landfill runs out of void space. The capacity for Recycling and Transfer, based on the evidence reviewed on possible future changes, is not anticipated to increase or decrease significantly over the plan period, but Recovery capacity increases significantly by approximately 395 mt (see paragraph 3.4.73.4.7). However, the future of some existing sites is uncertain. It is also difficult to predict where new Recycling, Recovery and Transfer facilities might come forward during the Plan Period, as this will be largely dependent on availability of suitable employment sites.

Figure 3.5 Capacity projections by site category Waste growth projection methodology overview



3.4.12 The projected waste capacity over the plan period by site category, from baseline date (2021) to the end date (2041) and at five-yearly intervals in between, is shown in **Table** 3.8. The underlying data tables for the waste capacity projections up to 2050/51 are included within **Appendix H**. It will be noted that the projections include capacity at Transfer sites. It is acknowledged that including this within the total capacity estimate will result in a significant element of double counting, because waste transfer plays only a minimal role in the process of managing waste. However, this is balanced by making no allowance for capacity at 'exempt' sites or re-processors within the capacity figure. The waste capacity projections also need to include Transfer capacity because we need to

identify possible ‘capacity gaps’ for all types of waste operation, including for sorting and bulking of waste.

Table 3.8 Projected Waste Capacity over the Plan Period by Site Category (tonnes)

Site Category	2021/22	2025/26	2030/31	2035/36	2040/41
Recycling	754,000	754,000	754,000	754,000	754,000
Recovery	168,000	563,000	563,000	563,000	563,000
Transfer	394,000	394,000	394,000	394,000	394,000
Disposal	4,755,000	3,755,000	2,505,000	1,255,000	5,000
Total	**6,071,000**	**5,466,000**	**4,216,000**	**2,966,000**	**1,716,000**

Source (2021 data): Environment Agency Waste Data Interrogator (WDI) – 5-year average (mean) tonnages received 2017 – 2021, Environment Agency Remaining Landfill Capacity: England as at end 2021. Figures may not sum due to rounding.

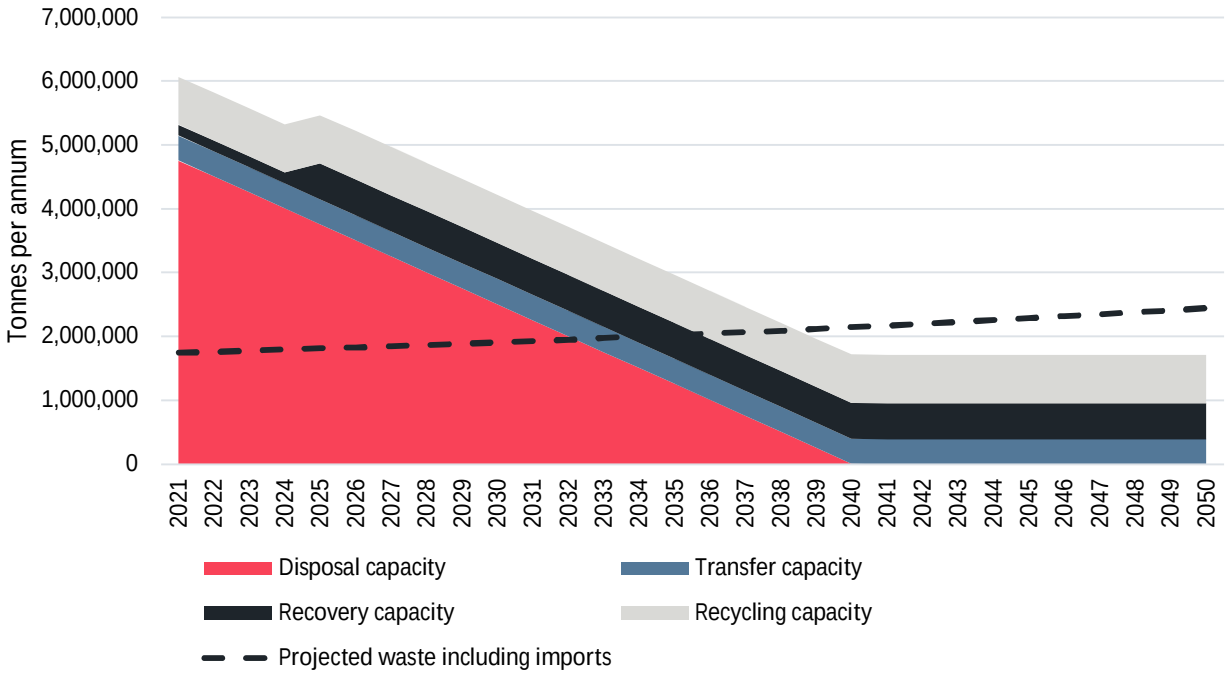
3.5 Waste Management Capacity Gaps

3.5.1 In order to determine future waste management capacity gaps, the waste projections developed in **Section 3.3** have been combined with the waste management capacity estimates adjusted to account for the expected changes to existing capacity and future capacity requirements.

Total waste projected to be managed in Sandwell

3.5.2 **Figure 3.6** compares projected waste growth over the plan period to the total waste management capacity within Sandwell. By 2041 it appears that there will not be sufficient waste management capacity in Sandwell to manage projected waste volumes including the material imported into the area. However, the way waste will be managed in future is likely to change significantly in order to increase recycling rates and support the transition towards a Circular Economy. The next sections examine whether Sandwell has the right types of waste management to manage projected waste volumes.

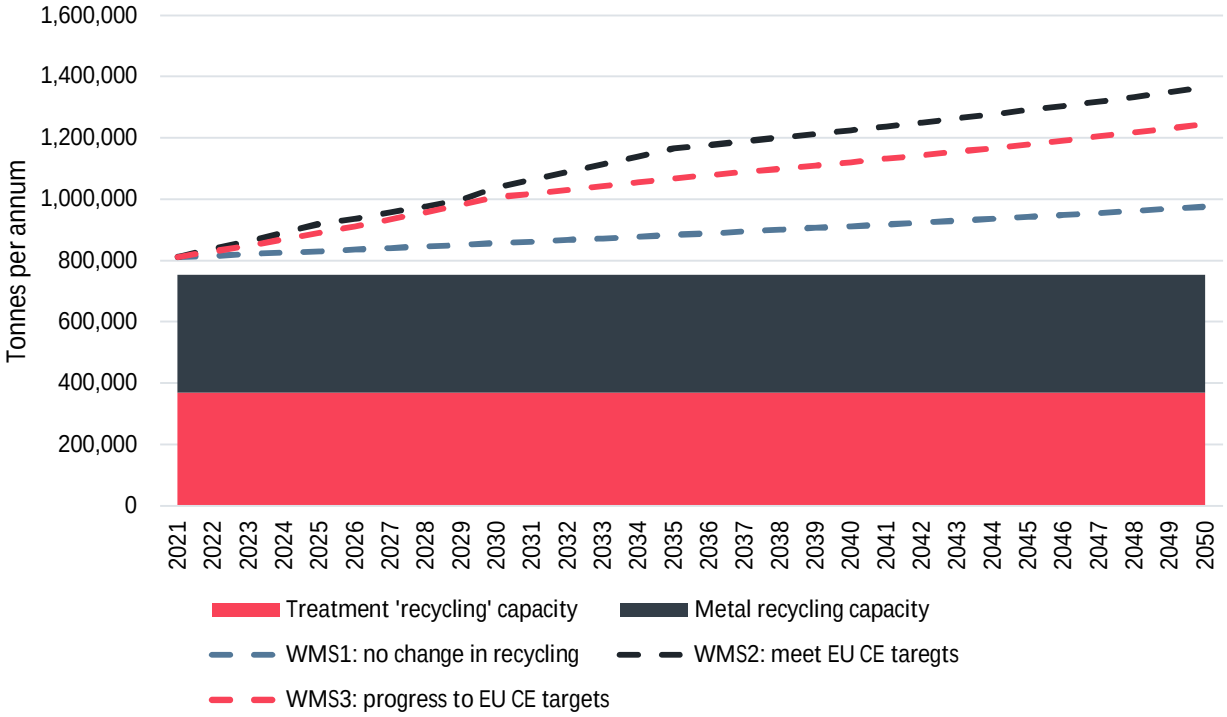
Figure 3.6 Total waste projected to be managed against projected capacity by site category



Reuse, recycling and composting projections

3.5.3 **Figure 3.7** compares the reuse, recycling and composting projections to recycling capacity estimates, by site type according to the waste management scenarios in **Table** 3.7.

Figure 3.7 Recycling waste management scenario projections against recycling and composting capacity by site category



3.5.4 Under the WMS2 option (meet EU CE targets) reuse, recycling and composting is projected to increase by approximately 626 kt, from 813,000 tonnes in 2021 to 1.4 mt in 2050/51. The majority of this increase is projected to be generated through increased recycling/composting of CD&E and imported waste with around 59,000 tonnes of additional household waste for recycling/composting.

3.5.5 At the start of the Plan Period there is not enough capacity across all three scenarios to manage the tonnages produced; there is a capacity deficit of approximately 59,000 tpa under all options. At the end of the Plan Period, there is a capacity gap of 472,000 tpa under WMS2 option, 367,000 tpa under WMS3 option, and 159,000 tpa under option WMS1. Beyond the Plan Period, up to 2051, there is a capacity gap of 611,000 tpa under WMS2 option, 492,000 tpa under WMS3 option, and 222,000 tpa under option WMS1.

3.5.6 About half of the recycling capacity within Sandwell is at Metal Recycling Sites (MRS) (approximately 384,000 tonnes). However, whilst metal recycling may increase in the future, it is not expected to be a major contributor to increased levels of recycling. Therefore, only a fraction of the material from increased recycling rates projected in WMS2 option and WMS3 option (progress towards EU CE targets) is likely to be managed at MRS. The majority of the increase in material for reuse, recycling and composting in future will need to be managed at MRF and organic waste facilities with transfer stations and reprocessors also playing a key role in the management of source-segregated recyclables.

3.5.7 Given that only a fraction of the increases in recycling projected in WMS2 option and WMS3 option is likely to be metal, the projection highlights that there is a risk of there being insufficient MRF capacity to manage CD&E, C&I and household recycling in future. In addition, Sandwell is currently reliant on MRFs outside the Authority area to manage over 13,000 tonnes of recycling from households[16].Sandwell may continue to be able to

[16] In 2021 Sandwell used Pure Recycling's facility in Warwickshire.

access this external capacity from 2023 onwards however, external reprocessor or MRF capacity may not be able to meet all of Sandwell's needs for household recycling capacity in the future; commercial or contractual influences may result in this capacity declining or becoming unavailable. It should be noted that some of the material recycling sites that sort and segregate material for re-use are permitted as Transfer sites, so their capacity is included under Transfer. It should be noted that some of the material recycling sites that sort and segregate material for re-use are permitted as Transfer sites, so their capacity is included under Transfer.

3.5.8 As stated in paragraph 2.4.2, the treatment category includes different types of treatment aimed at either recycling or recovering value from two very different and quite separate waste streams – CD&E waste and hazardous and non-hazardous waste. Analysis of waste received at Treatment – Recycling sites 2017 – 2021 in the WDI shows that just under half of the total 5-year average throughput was at sites that receive only Inert/ C&D waste or receive predominantly Inert/ C&D waste (see **Table 2.8**). In 2021, around 40% of this was received at a single site, the Network Rail ballast recycling facility at Bescot Sidings. However, these figures should be treated with extreme caution because they are only likely to represent a fraction of the Inert/ C&D waste recycling capacity available.

3.5.9 It is a moot point whether physical treatment of inert CD&E waste is a 'recycling' or a 'recovery' operation, it is probably a bit of both[17]. Very high 'recycling' rates of more than 90% are being claimed for non-hazardous construction and demolition waste by Defra and the Mineral Products Association (MPA)[18]. Establishing inert waste treatment capacity is further complicated by sites not being permitted in a consistent way. The WDI is only a partial guide to the CD&E recycling facilities that exist because they don't all have Waste Permits or Installation Permits, and those that do are split between the Treatment, Transfer and Landfill Site Categories. For example, while some sites processing inert waste are permitted as Physical Treatment sites and are included in the 'Treatment – Recycling' capacity, others are permitted as Inert Waste Transfer sites and are included in the Transfer capacity. On-site recycling at Landfill sites is typically covered by the Landfill permit, but the 'waste received' data does not distinguish between the waste recovered for re-use and the waste deposited in the landfill. Figures must therefore be interpreted with caution.

3.5.10 An evident capacity gap is that there is no composting capacity within Sandwell; there are no open windrow or In-Vessel Composting (IVC) facilities, and none are planned. The current open windrow capacity used by Sandwell to treat green waste is located in Solihull, Staffordshire and Shropshire and the Resources and Waste Strategy has proposed mandatory free garden waste collections (subject to consultation). As there are unlikely to be any locations in Sandwell with sufficient distance separation from 'sensitive receptors' to be able to provide them, Sandwell will continue to rely on composting capacity in other parts of the West Midlands to manage its green waste. Additional capacity may be required in future to manage increases in garden waste associated with housing growth.

3.5.11 It has been widely acknowledged[19] that increased food waste composting and recovery will be required to reach household and C&I recycling and composting rate targets. Following Defra's consultation on consistency in household and business recycling collections in England, The Environment Bill includes a requirement for separate collection of food waste from households and businesses by 2025. Currently there are no anaerobic digestion (AD) or IVC facilities for food waste in Sandwell. Although classified as a 'recovery' rather than a 'recycling' operation, AD is as an alternative method of recovering value from food waste which is considered environmentally better than composting and

[17] CIRIA Resource Efficiency Knowledgebase - The Efficient Use of Materials in Regeneration Projects, 13: Definitions
[18] Section 4 and Table 5, UK Statistics on Waste, 7 March 2019, Defra
[19] For example, in the EU's Circular Economy Package and the Waste and Resources Strategy,

other recovery options. It is likely that Sandwell will be able to access nearby capacity in the future, however, it will not be able to meet all of the Sandwell's needs for food waste treatment capacity in future. The introduction of separate food waste collections in Sandwell for household and C&I waste could generate between 10,000 - 35,000 tonnes for management by 2050/51.

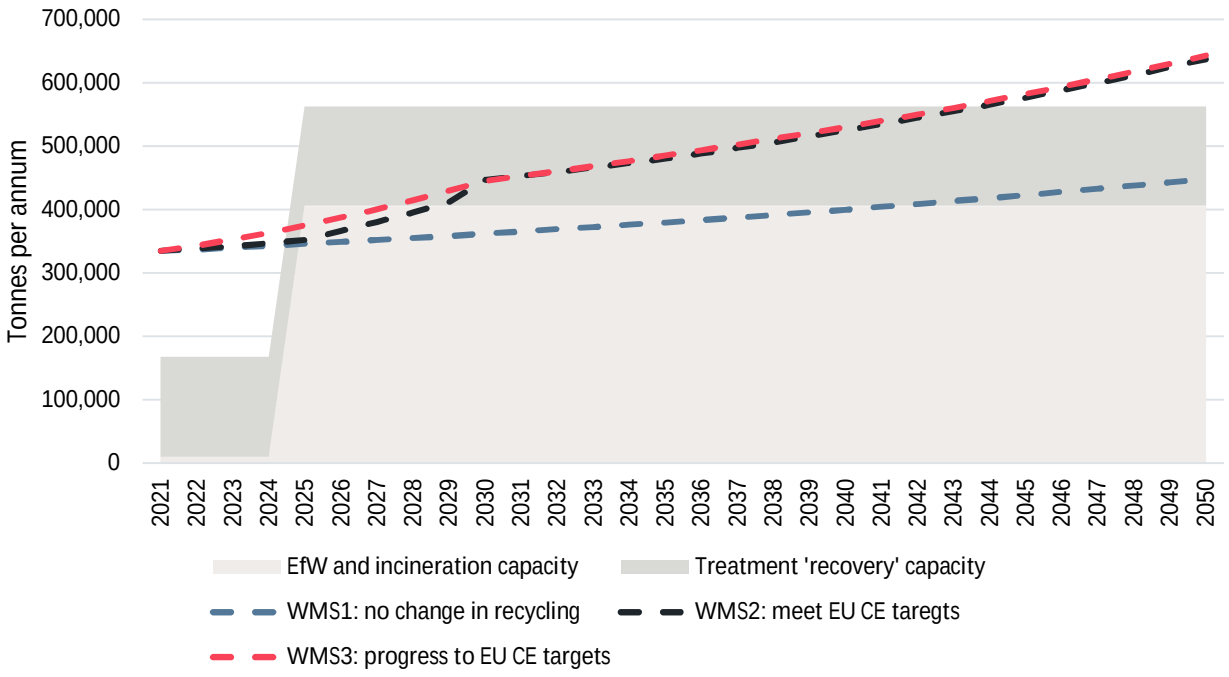
Recovery projections

3.5.12 **Figure 3.8** compares the waste recovery projections to the recovery capacity estimates, by site type according to the waste management scenarios in **Table 3.7**.

3.5.13 Under the WMS3 option material produced requiring recovery is projected to increase by 309,000 tonnes, from 335,000 tonnes in 2021 to 644,000 tonnes in 2050/51. Similarly, the projected increase in recovery under WMS2 is of 303,000 tonnes, from 335,000 tonnes in 2021 to 638,000 tonnes in 2050/51. At the start of the Plan Period there is not enough capacity across all scenarios to manage the tonnages produced, with a capacity deficit of 167,000 tpa, although extra capacity comes online in 2025 onwards (see paragraph 3.4.7). From 2025 till the end of the plan period, sufficient capacity is available under all options to treat the waste. At the end of the Plan Period, there is a capacity surplus of 37,000 tpa under WMS2 option, 32,000 tpa under WMS3 option and 162,000 tpa under WMS1 option.

3.5.14 Beyond the Plan Period, up to 2050/51, as tonnages increase a capacity gap becomes apparent under WMS2 and WMS3, being 75,000 tpa and 81,000 tpa, respectively, whereas under WMS1 there is a surplus capacity of 114,000 tpa.

Figure 3.8 Recovery waste management scenario projections against recovery and treatment capacity, by site category



3.5.15 As mentioned in paragraph 3.5.9, it is unclear whether physical treatment of inert CD&E waste is a 'recycling' or a 'recovery' operation. A significant proportion of the capacity for recovery of this type of waste in Sandwell is at small sites/ temporary operations due to the difficulty of locating this away from 'sensitive receptors.' There are also very few quarries and landfills in the Sandwell where this type of operation can take place. As there

will be planned housing and employment growth over the plan period, the majority of the increase in waste requiring recovery is projected to be achieved through increased recovery of CD&E waste. It is important that additional recovery facilities are capable of managing projected increases in CD&E waste in the future.

3.5.16 The recovery and treatment of household waste is projected to decrease by over 36,000 tonnes in WMS2 to meet the 65% recycling target. This would make Sandwell less reliant on EfW capacity to manage its household waste however there would still be a requirement for over 43,000 tonnes of EfW to manage household waste in 2050/51. Sandwell has a long-term contract allowing them to send residual household waste to the Four Ashes EfW in Staffordshire until the end of the plan period.

3.5.17 The one energy recovery project (identified in **Table 2.9** and paragraph 3.4.7) will contribute towards meeting some of the capacity requirement of the scenarios modelled over the Plan Period.

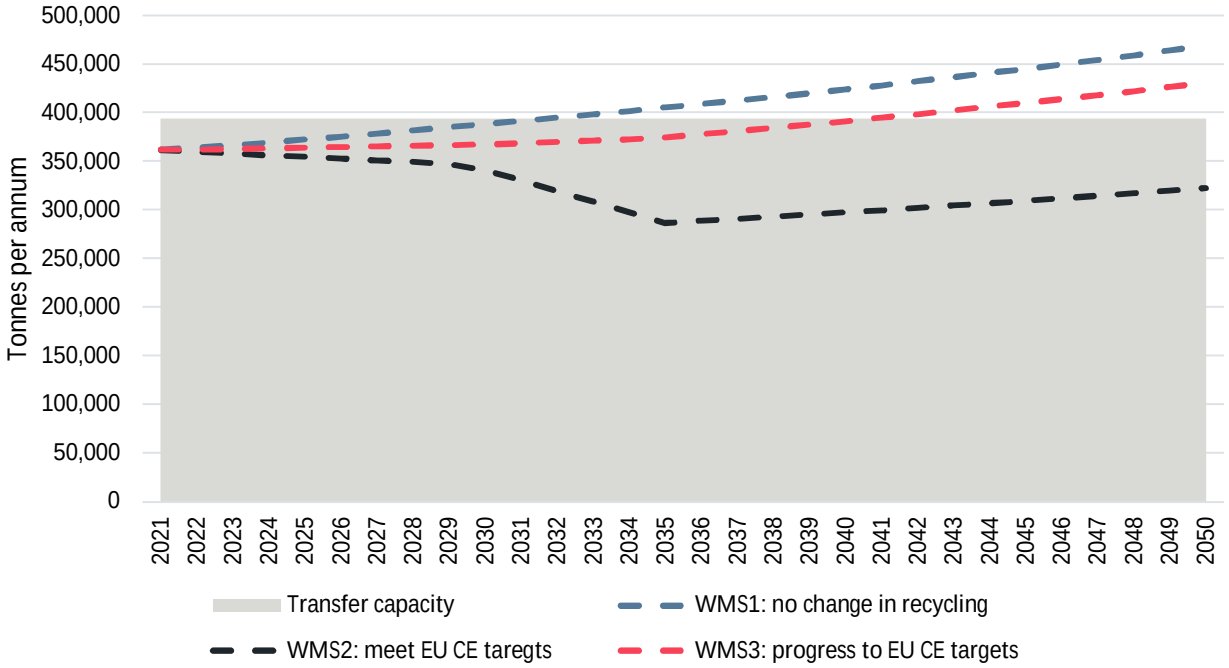
Transfer projections

3.5.18 **Figure 3.9** compares the waste transfer projections to the waste transfer capacity estimates. Sandwell appears to have sufficient transfer capacity to manage its own arisings and imports over the plan period, with surplus requirements across the period and beyond for WMS2 option as more waste is diverted for recycling to meet 2030 targets. There is however insufficient capacity from 2032 onwards under WMS1 option and from 2041 under WMS3. This is linked to the imported waste tonnages and the transfer profile not changing under WMS1.

3.5.19 The decrease in waste transfer projections at the start of the plan period under WMS2 are related to a rise in waste being sent to recycling and recovery operations to meet 2030 targets. However, if waste is sent externally to be managed then transfer capacity within Sandwell will still be considerably utilised.

3.5.20 At the end of the Plan Period (2040/41), it is apparent that Sandwell will have insufficient transfer capacity across the WMS1 option, with a capacity deficit of 30,000 tpa. A capacity surplus of 96,000 tpa and 3,000 tpa is projected for the WMS2 and WMS3 options, respectively. Beyond the Plan Period, up to 2050/51, there is a capacity gap of 75,000 tpa under WMS1, 37,000 tpa under WMS3, and a surplus of 72,000 tpa under WMS2.

Figure 3.9 Transfer waste management scenario projections against transfer capacity



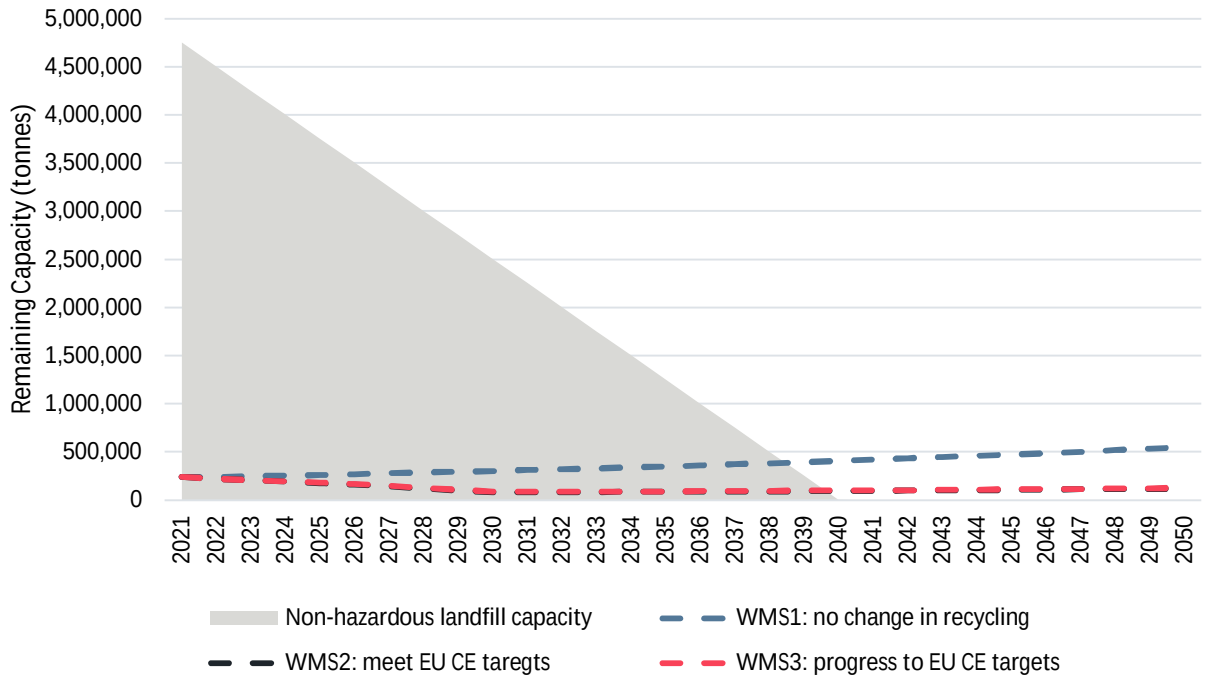
Disposal projections

3.5.21 **Figure 3.10** compares the waste disposal projections to the waste management capacity for disposal, by site type. The graph shows the remaining total landfill capacity versus the annual waste arisings for disposal. The landfill capacity takes into account only permitted landfill sites within Sandwell, as of the end of 2021. It does not consider the remaining void space of external West Midlands landfills; it is thought Sandwell will be able to continue to access this capacity, but little is known about arrangements at these landfills and they therefore have not been included.

3.5.22 It is assumed that infilling of internal inert landfill capacity was complete by the end of 2018 so inert only landfill capacity is zero throughout the plan period and beyond. It should be noted however, that non-hazardous landfills can and do accept inert wastes. There is also a lack of hazardous landfill capacity in Sandwell. There is one operational non-hazardous landfill; Edwin Richards which still has a large void space as of the end of 2021 (see **Table 2.6**) and it is assumed the infill rate will be 250,000 tpa based on recent annual inputs. It is projected to still have some operational void space remaining up to year 2038 of the plan period.

3.5.23 The graph shows that under all waste management scenario options, there is sufficient non-hazardous landfill capacity until 2038, but at the end of the Plan Period there is not enough capacity to dispose of waste. At the start of the Plan Period, there is a capacity surplus of 4,500,000 tpa under all waste management scenario options, but as the landfill void space is filled in, at the end of the Plan Period, there is a capacity gap of 403,000 tpa under WMS1, 93,000 tpa under WMS2, and 98,000 tpa under WMS3. By 2050/51 there will be a capacity gap of 554,000 tonnes to dispose of the waste under WMS1, 122,000 tonnes under WMS2, and 128,000 tonnes under WMS3. Under the WMS2 option and WMS3 option increasing recycling rates result in less waste going for disposal with a smaller gap in disposal capacity. The disposal capacity gap will be bridged by infilling the existing landfill voids more slowly than the current projected annual fill rate or increased use of disposal sites outside of Sandwell.

Figure 3.10 Disposal waste management scenario projections against disposal capacity by site category



Sandwell's waste capacity gaps

3.5.24 To summarise, the 'capacity gaps / surpluses' at the 'baseline' date (2021), as well as the likely gaps by the end of the Plan Period (2041) and at 5-yearly intervals in between, for each site category, are shown in **Table 3.9**. These capacity gaps are if the available waste capacity is in line with the capacity projections and no additional capacity is provided. The position at the start of the plan period is the same for all scenarios as this is the baseline, i.e. current status. The underlying data tables for the waste capacity gaps up to 2050/51 are included within **Appendix H**.

Table 3.9 Projected Capacity Gaps/Surpluses under each WMS over the Plan Period, by Site Category (tonnes)

Site Category	2021/22	2025/26	2030/31	2035/36	2040/41
Recycling:					
WMS1	-59,000	-77,000	-103,000	-130,000	-159,000
WMS2	-59,000	-165,000	-286,000	-413,000	-472,000
WMS3	-59,000	-137,000	-254,000	-315,000	-367,000
Recovery:					
WMS1	-168,000	217,000	200,000	182,000	162,000
WMS2	-168,000	210,000	115,000	82,000	37,000
WMS3	-168,000	187,000	117,000	77,000	32,000

Site Category	2021/22	2025/26	2030/31	2035/36	2040/41
Transfer:					
WMS1	32,000	22,000	6,000	-11,000	-30,000
WMS2	32,000	40,000	53,000	108,000	97,000
WMS3	32,000	30,000	27,000	20,000	3,000
Disposal:					
WMS1	4,512,000	3,489,000	2,199,000	902,000	-404,000
WMS2	4,512,000	3,576,000	2,420,000	1,166,000	-93,000
WMS3	4,512,000	3,570,000	2,413,000	1,161,000	-98,000

Figures may not sum due to rounding.

3.5.25 **Table 3.9** shows us that the ***waste management capacity gaps over the Plan Period are more apparent for recycling sites*** under WMS option 2 and 3 as more waste is sent for recycling in line with government targets. There is also a ***capacity deficit for recovery sites up until 2025*** over all three options, more so for WMS3; ***however, after 2025 extra recovery capacity comes online and there is no longer a recovery deficit***. Given the internal increase in waste sent for recycling, and the reduced requirement on waste sent for recovery, it is expected that waste imported for recovery to be slightly higher under WMS2 than WMS3. Under WMS3 the internal demand for recovery capacity is higher with less waste sent for recycling, but the recovery projections for C&D waste are higher under WMS2 option. There is ***sufficient disposal capacity over most of the plan period*** under all three options, in particular under WMS2 and WMS3 as less waste is sent for disposal. From 2039 onwards however, WMS1 has a disposal deficit closely followed by WMS2 and WMS3 in 2040.

3.5.26 Housing growth will put pressure on existing household waste management capacity, and as this is largely managed outside Sandwell under current contractual arrangements this is an important focus going forward. Sandwell may also need to accommodate some of the waste capacity requirements of other waste planning authorities, especially as they are a net importer of waste, putting greater pressure on an already saturated waste management infrastructure capacity.

3.5.27 There are limited options for residual waste disposal with few quarries in Sandwell likely to come forward for restoration by infilling with inert or non-hazardous waste during the Plan Period. There are also limited options for CD&E waste recycling and organic waste treatment; there are no composting or anaerobic digestion facilities within the area.

3.5.28 In order to achieve ‘net self-sufficiency’ Sandwell would be expected to provide for extra waste capacity of the types it can in theory accommodate (e.g. re-use, recycling, MRS, energy recovery, waste treatment, inert and non-hazardous landfill) to make up for the types of waste capacity it cannot accommodate because of being a largely built-up area (e.g. composting, AD, hazardous landfill).

4. Planning policy review and recommendations

4.1 Purpose of this Chapter

4.1.1 In seeking to deliver significant development growth the Sandwell Local Plan will need to set out how any resulting increase in the amount of waste produced is to be managed as well as set out how any additional waste management capacity requirements can be met. This chapter seeks to review the Draft BCP waste policies and provides recommendations as to how these can be adapted for use in the Sandwell Local Plan.

4.2 Draft BCP waste policies – review and recommendations

4.2.1 The Draft BCP (Regulation 18) contains five waste policies as follows:

- Policy W1 – Waste Infrastructure – Future Requirements;
- Policy W2 – Waste Sites;
- Policy W3 – Preferred Areas for New Waste Facilities;
- Policy W4 – Locational Considerations for New Waste Facilities; and
- Policy W5 – Resource Management and New Development.

4.2.2 Commentary and recommendations on each of the policies above is provided below.

4.2.3 Policy W1 sets out the overall strategy and principles for waste management and the types of waste development that will support this. It also identifies how much new waste management capacity is likely to be needed to support planned levels of housing and growth over the plan period, and to help the BCP strategic priority of meeting the Black Country's resource and infrastructure needs. It is recommended a similar policy is included in the Sandwell Local Plan.

4.2.4 Policy W2 seeks to safeguard and retain the capacity of existing waste facilities in order to maintain the existing waste management capacity and address the need of meeting the Black Country's resource and infrastructure needs. Given that Sandwell is a predominantly urban area, in order to support the planned levels of house and growth over the plan period whilst also meeting resource and infrastructure needs, it is important that existing waste management facilities are safeguarded to maintain existing waste management capacity. It is recommended that a similar policy is included in the Sandwell Local Plan.

4.2.5 Policy W3 sets out that the preferred areas for new waste management facilities are the allocated Local Employment Areas. The updated waste needs assessment for Sandwell (as detailed in Chapters 2 and 3 of this report) has identified an increased need for recycling capacity in order for Sandwell to achieve 'net self-sufficiency'. It is recommended that a similar policy is included in the Sandwell Local Plan and in addition, where appropriate, seek to agree a Duty to Cooperate with the other BCAs to account for the fact Sandwell is a net importer of waste.

4.2.6 It should be noted however, that policy protection in the Draft BCP for new and existing waste management facilities is provided not only by waste policies W2 and W3 but also through the Draft BCP employment policies Policy EMP1 (Providing for Economic Growth

and JOBs) and Policy EMP3 (Local Employment Areas). Notably, Policy EMP3 safeguards Local Employment Areas for a number of uses including scrap metal, timber and construction premises and yards, and waste collection, transfer and recycling uses as set out in Policy W3. It is recommended therefore that the Sandwell Local Plan includes similar policies to EMP1 and EMP3.

4.2.7 Policy W4 sets out the locational considerations for new waste facilities. It steers waste management facilities towards the most suitable locations where they are likely to generate maximum benefits in terms of co-location, provide supporting infrastructure for other uses, and minimise potential harmful effects on the environment and local communities. It is recommended a similar policy is included in the Sandwell Local Plan.

4.2.8 Policy W5 sets out how managing material resources, including waste, should be dealt with in new development. It is recommended a similar policy is included in the Sandwell Local Plan.

Bibliography

As well as setting out the documents referred to in this report, the following sets out a bibliography of the key background documents which have informed the Black Country Waste Study Update 2023. This is not intended to be an exhaustive list. The document and web links (where appropriate) were up-to-date at the time the updated report was written in July 2023 but may be subject to change.

Document Title	Web Link (where available)
European and National Policy and Legislation on Waste	
Directive 94/62/EC on packaging and packaging waste (PPW Directive)	http://ec.europa.eu/environment/waste/packaging/index_en.htm
Directive 1999/31/EC on the landfill of waste (Landfill Directive**)**	http://ec.europa.eu/environment/waste/landfill_index.htm
Directive 2000/53/EC on end of life vehicles (ELV Directive)	http://ec.europa.eu/environment/waste/elv/index.htm
Directive 2006/66/EC on batteries and accumulators and waste batteries and accumulators (Batteries Directive)	http://ec.europa.eu/environment/waste/batteries/index.htm
Directive 2008/98/EC on waste (Waste Framework Directive)	http://ec.europa.eu/environment/waste/framework/
The List of Wastes (England) Regulations 2005 (SI 2005 No. 895)	http://www.legislation.gov.uk/uksi/2005/895/contents
The Waste (England and Wales) Regulations 2011 (SI 2011 No. 988) and 2012 and 2014 Amendment Regulations	http://www.legislation.gov.uk/uksi/2011/988/contents/made http://www.legislation.gov.uk/uksi/2012/1889/contents http://www.legislation.gov.uk/uksi/2014/656/contents/made
Directive 2012/19/EU on waste electrical and electronic equipment (WEEE Directive)	http://ec.europa.eu/environment/waste/weee/index_en.htm
Waste Management Plan for England (December 2013), Defra (N.B. to be reviewed following publication of “Our Waste, Our Resources” in December 2018, but this did not happen in 2019 and it remains to be seen when this will take place - see below)	https://www.gov.uk/government/publications/waste-management-plan-for-england
National Planning Policy (NPP) for Waste (October 2014), CLG (N.B. to be reviewed following publication of “Our Waste, Our Resources” in December 2018, but this did not happen in 2019 and it remains to be seen when this will take place - see below)	https://www.gov.uk/government/publications/national-planning-policy-for-waste

Document Title	Web Link (where available)
National Policy Statements (NPS) for Nationally Significant Infrastructure Projects (NSIPs): • Renewable Energy (EN-3) (July 2011) • Waste Water (March 2012) Hazardous Waste (June 2013)	https://www.gov.uk/government/publications/national-policy-statements-for-energy-infrastructure https://www.gov.uk/government/publications/national-policy-statement-for-waste-water https://www.gov.uk/government/publications/hazardous-waste-national-policy-statement
The Clean Growth Strategy: Leading the Way to a Low Carbon Future (October 2017), HM Government	https://www.gov.uk/government/publications/clean-growth-strategy
Industrial Strategy White Paper - Industrial Strategy: Building a Britain Fit for the Future (November 2017), HM Government	https://www.gov.uk/government/publications/industrial-strategy-building-a-britain-fit-for-the-future
Parliamentary Environmental Audit Committee: Chinese Waste Import Ban Inquiry (launched January 2018) [20]	https://www.parliament.uk/business/committees/committees-a-z/commons-select/environmental-audit-committee/inquiries/parliament-2017/chinese-waste-import-ban-17-19/
A Green Future: Our 25 Year Plan to Improve the Environment (January 2018), HM Government	https://www.gov.uk/government/publications/25-year-environment-plan
Freight Study Call for Evidence (January 2018), National Infrastructure Commission (Interim report expected Autumn 2018)	https://www.nic.org.uk/our-work/freight-study/
European Commission – Closing the Loop: An EU Action Plan for the Circular Economy (Circular Economy Action Plan) (December 2015) and Circular Economy Package (July 2018)[21]	http://ec.europa.eu/environment/waste/target_review.htm http://ec.europa.eu/environment/circular-economy/ https://www.letsrecycle.com/news/latest-news/european-parliament-approves-circular-economy-package/
Our Waste, Our Resources: A Strategy for England and Evidence Annex (December 2018), Defra	https://www.gov.uk/government/publications/resources-and-waste-strategy-for-england

[20] Concerns about the import ban were previously reported in the press, but Defra seems to have been unaware of the problem until late in 2017. See Let's Recycle 28 September 2017 (https://www.letsrecycle.com/news/latest-news/trade-bodies-call-for-urgent-action-on-china/), MRW 2 November 2017 (https://www.mrw.co.uk/latest/gove-admits-ignorance-over-impact-of-china-import-ban/10024976.article) and Resource 15 January 2018 (https://resource.co/article/eac-launches-special-inquiry-effects-china-waste-ban-12351). Further bans are proposed and there are indications that all waste imports could be banned eventually. See MRW and Let's Recycle 20 April 2018 (https://www.letsrecycle.com/news/latest-news/further-chinese-import-restrictions-announced/, https://www.mrw.co.uk/latest/china-to-ban-imports-of-a-further-32-waste-materials/10030299.article) and MRW 28 June 2018 (https://www.mrw.co.uk/latest/indications-emerge-of-a-complete-ban-on-china-waste-imports-by-2020/10032579.article)

[21] The Circular Economy Action Plan was adopted by the EU in 2015 and the Circular Economy Package came into force in July 2018. The Circular Economy Package amends six Directives on waste: the Packaging and Waste (PWW) Directive (94/62/EC), Landfill Directive (1999/31/EC), End of Life Vehicles (ELV) Directive (2000/53/EC), Batteries Directive (2006/66/EC), Waste Framework Directive (2008/98/EC) and Waste Electrical and Electronic Equipment (WEEE) Directive (2012/19/EU). The amendments include changes to the definition of 'municipal' waste, changes to the definition of recycling construction and demolition waste (though the target of 70% by 2020 remains the same), higher targets for recycling of 'municipal' waste (60% by 2025 and 65% by 2030), and a lower maximum target for 'municipal' waste landfilled (no more than 10% by 2030). The European Commission adopted a report on the implementation of the Circular Economy Action Plan in March 2019. The Final Circular Economy Package key documents include reports on chemicals and plastics.

Document Title	Web Link (where available)
National Planning Policy Framework (NPPF) (February 2019), CLG – paragraph 4 and 3. Plan-Making paragraphs 15 – 27 [22]	https://www.gov.uk/government/publications/national-planning-policy-framework--2
UK Position on Shipments of Plastic Waste to Malaysia (7 June 2019), British High Commission, Kuala Lumpur	https://www.gov.uk/government/news/uk-position-on-shipments-of-plastic-waste-to-malaysia
WRAP Market Knowledge Portal – Plastic (2019)	https://www.wrap.org.uk/content/plastic
House of Commons Library Briefing Paper: Brexit and the Environment, 8 August 2018	https://researchbriefings.parliament.uk/ResearchBriefing/Summary/CBP-8132
Environment Bill 2019 – 2020 N.B. This Bill was originally introduced to Parliament in October 2019 but fell because it failed to complete its progress before Parliament was dissolved ahead of the December 2019 General Election. It was subsequently re-introduced to Parliament in January 2020.	https://services.parliament.uk/bills/2019-20/environment.html
Environment Bill Policy Statement 30 January 2020, Defra	https://www.gov.uk/government/publications/environment-bill-2020/30-january-2020-environment-bill-2020-policy-statement
House of Commons Library Briefing Paper: Analysis of the Environment Bill 2019 (October 2019) N.B. An updated briefing paper will accompany the Environment Bill 2020.	https://researchbriefings.parliament.uk/ResearchBriefing/Summary/CBP-8712
Waste Good Practice Guidance	
CL:AIRE SUBR:IM (Sustainable Urban Brownfield Management) Bulletins 2006 – 2011	https://www.claire.co.uk/information-centre/cl-aire-publications
Making Space for Waste: Designing Waste Management in New Developments (2010), Association of Directors of Environment, Economy, Planning & Transport (ADEPT)	https://www.adeptnet.org.uk/documents/making-space-waste-designing-waste-management-new-developments
Definition of Waste: Development Industry Code of Practice Version 2 (March 2011), Contaminated Land Applications in Real Environments (CL:AIRE)	https://www.claire.co.uk/projects-and-initiatives/dow-cop
Guidance on Applying the Waste Hierarchy (June 2011), Defra	https://www.gov.uk/government/publications/guidance-on-applying-the-waste-hierarchy
Guidance on Applying the Waste Hierarchy to Hazardous Waste (November 2011), Defra	https://www.gov.uk/government/publications/guidance-on-applying-the-waste-hierarchy-to-hazardous-waste

[22] The revised NPPF was amended in February 2019 following changes to the 'standard method' for calculating housing need, which were consulted on late in 2018. It was further amended in June 2019 to remove paragraph 209 (a) on shale gas extraction following a successful legal challenge. The NPPF does not cover waste, but paragraph 4 cross-refers to the National Planning Policy for Waste (2014). The NPPF advice on Plan-Making also applies, and confirms that strategic policies should cover waste management (paragraph 20 b)).

Document Title	Web Link (where available)
Recycled Aggregates: Guidance for Producers and Purchasers (April 2016), John Barritt Consulting Ltd	http://www.johnbarritt.co.uk/recycled-aggregates-guidance/
Guidance on the Legal Definition of Waste (August 2012) and Updated Version of Part 2 (May 2016), Defra	https://www.gov.uk/government/publications/legal-definition-of-waste-guidance
Valuation of mineral-bearing land and waste management sites (2nd edition, April 2016), Royal Institution of Chartered Surveyors (RICS) professional guidance, global	http://www.rics.org/uk/knowledge/professional-guidance/guidance-notes/valuation-of-mineral-bearing-land-and-waste-management-sites-2nd-edition/
Register Your Waste Exemptions (online guidance covering exemptions for Using Waste, Treating Waste, Disposing of Waste and Storing Waste), Environment Agency	https://www.gov.uk/guidance/register-your-waste-exemptions-environmental-permits
Guidance for Preparing a Waste Evidence Base for Local Plans (Draft) (May 2018), West Midlands Resource Technical Advisory Body (RTAB)	Not currently available online.
End of Waste Quality Protocols (Environment Agency) 2010 - 2016: Non-Packaging Plastics Recycled Gypsum from Waste Plasterboard Biodiesel Aggregate from Waste Steel Slag Processed Cullet from Flat Glass Tyre-Derived Rubber Materials Anaerobic Digestate Processed Fuel Oil (PFO) Bio-methane from Waste Aggregates from Inert Waste Poultry Litter Ash (PLA) Compost Pulverised Fuel Ash (PFA) and Furnace Bottom Ash (FBA)	https://www.gov.uk/government/collections/quality-protocols-end-of-waste-frameworks-for-waste-derived-products
Waste and Resources Action Programme (WRAP) online guidance: Food Waste Reduction Recycling and Reprocessing Sustainable Electricals Sustainable Textiles	http://www.wrap.org.uk/food-waste-reduction http://www.wrap.org.uk/collections-and-reprocessing http://www.wrap.org.uk/sustainable-electricals http://www.wrap.org.uk/sustainable-textiles
Construction Industry Research and Information Association (CIRIA) online guidance: Resource Efficiency Knowledgebase (developed by WRAP between 2002 and 2014) Regeneration and Contaminated Land	https://www.ciria.org/Resources/REK/Resource_Efficiency_Knowledgebase_.aspx https://www.ciria.org/CIRIA/Topics/Regeneration_and_contaminated_land/Topic_overviews/Regeneration_and_contaminated_land.aspx?hkey=42ca2967-93bc-468c-8d24-616472007e1f N.B. Need to register on the CIRIA website to access these documents

Document Title	Web Link (where available)
National Planning Practice Guidance (NPPG) – Waste ('living' guidance) CLG[23]	https://www.gov.uk/guidance/waste
Waste Data and Research	
Survey of Arisings and Use of Alternatives to Primary Aggregates in England, 2005: Construction, Demolition and Excavation Waste (February 2007), Capita Symonds and WRc plc for Department for Communities and Local Government	http://webarchive.nationalarchives.gov.uk/20120919181503/http://www.communities.gov.uk/publications/planningandbuilding/surveyconstruction2005
Survey of Arisings and Use of Alternatives to Primary Aggregates in England, 2005: Construction, Demolition and Excavation Waste (February 2007), Capita Symonds and WRc plc for Department for Communities and Local Government	http://webarchive.nationalarchives.gov.uk/20120919181503/http://www.communities.gov.uk/publications/planningandbuilding/surveyconstruction2005
Study into Commercial and Industrial Waste Arisings (April 2009), ADAS for East of England Regional Assembly N.B. Estimated Arisings for individual waste planning authorities in the West Midlands using this methodology were calculated by the West Midlands Resource Technical Advisory Body (RTAB), however, there were concerns about the appropriateness of the methodology for the West Midlands	https://apps.warwickshire.gov.uk/api/documents/WCCC-680-172
Commercial and Industrial Organic Waste Arisings – a Gap Analysis (June 2009), Waste and Resources Action Programme (WRAP)	http://www.wrap.org.uk/content/commercial-and-industrial-organic-waste-arisings-%E2%80%93-gap-analysis
Overview of Demolition Waste in the UK (December 2009), Construction Resources & Waste Platform (CRW)	http://www.wrap.org.uk/sites/files/wrap/CRWP-Demolition-Report-2009.pdf
Construction, demolition and excavation waste arisings, use and disposal for England 2008 (April 2010), Capita Symonds Ltd and Alfatek Redox (UK) Ltd for Waste and Resources Action Programme (WRAP) N.B. Withdrawn in 2015 when a new methodology was introduced – see Digest of Waste and Resource Statistics below.	https://www.gov.uk/government/statistics/construction-and-demolition-waste

[23] Most of this was produced in October 2014 at the same time as the National Planning Policy for Waste and there have only been minor changes since then. Wastewater treatment is covered by separate NPPG on Water: https://www.gov.uk/guidance/water-supply-wastewater-and-water-quality

Document Title	Web Link (where available)
Commercial and Industrial Waste Survey 2009 (May 2011), Jacobs for Defra N.B. Withdrawn in 2015 when a new methodology was introduced – see Digest of Waste and Resource Statistics below. This has itself since been superseded by the current methodology introduced in February 2018 – see below.	https://www.gov.uk/government/statistics/commercial-and-industrial-waste-generation-and-management
Energy from Waste: A Guide to the Debate (February 2014) (revised edition), CLG and Defra	https://www.gov.uk/government/publications/energy-from-waste-a-guide-to-the-debate
Resource Management: a catalyst for growth and productivity (February 2015), Defra	https://www.gov.uk/government/publications/resource-management-a-catalyst-for-growth-and-productivity
Resource Efficient Use of Mixed Wastes: Construction and Demolition Waste Management in United Kingdom V2 – September 2015 (Revised 27/01/16), BIO by Deloitte in partnership with BRE, ICEDD, VTT, RPS and NOVA University of Lisbon	http://ec.europa.eu/environment/waste/studies/mixed_waste.htm
National Infrastructure Delivery Plan 2016 – 2021 (March 2016), HM Government	https://www.gov.uk/government/collections/national-infrastructure-plan
Proceedings of the Institution of Civil Engineers (ICE) Volume 169, Issue 2 (April 2016), Construction Materials	https://www.icevirtuallibrary.com/toc/jcoma/169/2 N.B. Only editorial and abstracts of articles are available to non-subscribers
The Retail Industry's Contribution to Reducing Food Waste (December 2016), British Retail Consortium	https://brc.org.uk/news/2016/the-retail-industrys-contribution-to-reducing-food-waste
Restructuring Trends, 'Waste Not Want Not: The Changing Face of the UK Waste Sector' (undated but probably 2016), PWC	https://www.pwc.co.uk/services/business-recovery/insights/restructuring-trends/waste-not-want-not-changing-face-uk-waste-sector.html
The Hospitality and Food Service Agreement: Taking Action on Waste (final report) (January 2017), Waste and Resources Action Programme (WRAP)	http://www.wrap.org.uk/content/hospitality-and-food-service-agreement-taking-action-waste
Household Food Waste in the UK, 2015 (January 2017), Waste and Resources Action Programme (WRAP) [24]	http://www.wrap.org.uk/content/household-food-waste-uk-2015-0
Designing Buildings Wiki: Improving Construction and Demolition Waste Data (online resource updated March 2017), BRE Buzz (Building Research Establishment)	https://www.designingbuildings.co.uk/wiki/Improving_construction_and_demolition_waste_data
Residual Waste Infrastructure Review (12th Edition) (August 2017), Eunomia	http://www.eunomia.co.uk/reports-tools/residual-waste-infrastructure-review-12th-issue/ N.B. it is necessary to register on the Eunomia website to download reports

[24] WRAP have announced that they are updating the household food waste estimates in 2018 – see CIWM Journal 04/07/18: https://ciwm-journal.co.uk/wrap-to-update-household-food-waste-arising-estimates/

Document Title	Web Link (where available)
Mind the Gap 2017 – 2030: UK Residual Waste Infrastructure Capacity Requirements' (August 2017), SUEZ	http://www.sita.co.uk/news/suez-publishes-latest-uk-waste-treatment-capacity-forecasts/
The Reality Gap (2017) (August 2017), Biffa	https://www.biffa.co.uk/media-centre/publications/
Congestion, Capacity, Carbon: Priorities for National Infrastructure: Consultation on a National Infrastructure Assessment, Modelling Annex and Modelling Annex Data (October 2017), National Infrastructure Commission [25]	https://www.nic.org.uk/our-work/national-infrastructure-assessment/ https://www.nic.org.uk/supporting-documents/congestion-capacity-carbon-modelling-annex-october-2017 / https://www.nic.org.uk/supporting-documents/congestion-capacity-carbon-modelling-annex-data-october-2017/
Fly-Tipping Statistics for England 2016 to 2017 (October 2017), Defra	https://www.gov.uk/government/statistics/fly-tipping-in-england
ENV24: Fly-Tipping Incidents and Actions Taken in England (October 2017) Defra	https://www.gov.uk/government/statistical-data-sets/env24-fly-tipping-incidents-and-actions-taken-in-england
UK Residual Waste: 2030 Market Review (November 2017), Tolvik Consulting for ESA	http://www.esauk.org/esa_reports/
On a Voyage of Recovery: A Review of the UK's Resource Recovery from Waste Infrastructure (December 2017), Phil Purnell (in Sustainable and Resilient Infrastructure)	https://www.tandfonline.com/doi/full/10.1080/23789689.2017.1405654
Waste Beyond Recycling (January 2018), Cory Riverside Energy roundtable information sheet	https://www.ice.org.uk/knowledge-and-resources/information-sheet/heating-up-enthusiasm-for-energy-from-waste
Waste Beyond Recycling (January 2018), Cory Riverside Energy roundtable information sheet	https://www.ice.org.uk/knowledge-and-resources/information-sheet/heating-up-enthusiasm-for-energy-from-waste
Digest of Waste and Resource Statistics, 2018 Edition (May 2018), Defra N.B. The figures for C&I waste 2010 -2014 published in this report and in earlier reports for 2015 – 2017 were updated in February 2018 using a revised methodology – see above	https://www.gov.uk/government/collections/digest-of-waste-and-resource-statistics
Annual Waste and Resource Management Review – 2018 (May 2018), Grant Thornton (N.B. based on 2017 data)	https://www.grantthornton.co.uk/insights/annual-waste-and-resource-management-review-2018/

[25] National Infrastructure Assessments to be produced every five years, will be considering pressures on solid waste and wastewater infrastructure in England over the long-term, up to 2050 (pp 8-10, 23, 29, 34). The main priority identified for waste infrastructure is the need to reduce carbon emissions (pp 7, 13, 16-17, 40 and Chapter 4) – it is not identified as a priority issue for city-regions or to support housing (Chapters 2 and 3). The first National Infrastructure Assessment was published in July 2018 (see below).

Document Title	Web Link (where available)
An economic assessment and feasibility study of how the UK could meet the Circular Economy Package recycling targets (May 2018), Ricardo Energy & Environment for Environmental Services Association (ESA)	http://www.esauk.org/esa_reports/
Save the Oceans – Stop Recycling Plastic (June 2018), Mikko Paunio for The Global Warming Policy Foundation (GWPF) [26]	https://www.thegwpf.org/new-report-recycling-plastic-waste-is-making-ocean-litter-worse/
Energy for the Circular Economy: An Overview of Energy from Waste in the UK (June 2018), Environmental Services Association (ESA)	http://www.esauk.org/esa_reports/
National Infrastructure Assessment (July 2018), National Infrastructure Commission (NIC) [27]	https://www.nic.org.uk/publications/national-infrastructure-assessment-2018/
The Packaging Recycling Obligations (July 2018), National Audit Office (NAO) [28]	https://www.nao.org.uk/report/the-packaging-recycling-obligations/
Competition and Markets Authority (CMA): Ausurus Group/ Metal & Waste Recycling Merger Inquiry Final Report (August 2018) [29]	https://www.gov.uk/cma-cases/european-metal-recycling-metal-waste-recycling-merger-inquiry
Written Evidence Submitted to HM Government Exiting the EU Committee: Sectoral Reports 12: Electricity Market including Renewables and 14: Environmental Services (21 December 2018)	https://www.parliament.uk/business/committees/committees-a-z/commons-select/exiting-the-european-union-committee/publications/

[26] Challenges received wisdom about 'recycling' of MSW (particularly waste plastics) and the 'circular economy' and concludes that incineration is the best way to deal with mixed MSW, environmentally as well as economically. The conclusion that energy from waste is currently the optimum technology for mixed MSW is broadly consistent with the findings of the recent ESA report. While the recent National Audit Office (NAO) report draws similar conclusions about the environmental impact of exporting plastics for 'recycling,' the GWPF report recommends incineration rather than better regulation and improved access to recycling technologies, because it assumes that the current difficulties with plastics recycling are insurmountable.

[27] This advocates improving recycling capacity in England, particularly for plastics, and recommends higher recycling targets (65% of all 'municipal' waste and 75% of plastic packaging by 2030) rather than increasing energy from waste capacity as advocated by the ESA and others, clearer labelling of plastics, restricting use of hard-to-recycle plastics by 2025, and separate collection of food waste from households and businesses for anaerobic digestion by 2025 (see pages 9 - 10, 33 – 35, 45 - 48). However, the assessment has not considered wastewater in detail because of a "lack of reliable data" (see page 86). The 'significant' data gap for commercial and industrial waste is also identified in the assessment (see page 107).

[28] Concludes that the government has failed to face up to the underlying problems around recycling of packaging, particularly for plastics, because the data collected on recycling is not robust so recycling rates may have been over-estimated. There has also been heavy reliance on out-sourcing the problem by exporting much of this waste, giving rise to risks of fraud and error. Recommends reforming the system for data collection to improve understanding of recycling performance and government intervention to incentivise recycling as part of the forthcoming UK Waste and Resources Strategy.

[29] This relates to proposed merger of Metal & Waste Recycling Ltd (MWR) and European Metal Recycling (EMR). CMA concluded that the merger would harm the choices available to suppliers (such as car breakers) that supply shredder feed in the South East of England, and car manufacturers that sell large volumes of scrap metal through tendered contracts in the West Midlands and the North East of England. However, CMA did not find that competition would be weakened in the general buying (not via a tendered contract) and selling of general scrap metal. The merger was therefore approved subject to a 'divestment package' requiring EMR to sell five of the sites it bought from MWR, including the Cradley Metal Recycling Centre in Sandwell.

Document Title	Web Link (where available)
ENV18: Local Authority Collected Waste: Annual Results Tables (December 2018), Defra	https://www.gov.uk/government/statistics/local-authority-collected-waste-management-annual-results
District Heat Networks in the UK – Potential, Barriers and Opportunities (2018), Energy Technologies Institute (ETI)	https://www.eti.co.uk/insights/district-heat-networks-in-the-uk-potential-barriers-and-opportunities
From Waste to Resource: A UK Mineral Products Industry Success Story (February 2019), Mineral Products Association (MPA) [30]	https://mineralproducts.org/19-release18.htm http://mineralproducts.org
ENV23: UK Statistics on Waste – Statistical Release (7 March 2019), Defra and Government Statistical Service	https://www.gov.uk/government/statistics/uk-waste-data
Waste Management for England 2017 (updated March 2019), Environment Agency [31]	https://www.gov.uk/government/publications/waste-management-data-for-england
The Tipping Point (March 2019), D S Smith [32]	https://www.dssmith.com/recycling/insights/recycling-tipping-point
Environment Agency Waste Data Interrogators and Hazardous Waste Interrogators	https://data.gov.uk/data/search?q=waste+data+interrogator
National Infrastructure Planning – Planning Inspectorate: Projects	https://infrastructure.planninginspectorate.gov.uk/projects/
Royal Institution of Chartered Surveyors (RICS) UK Market Surveys: RICS UK Residential Market Surveys (monthly) RICS UK Commercial Market Surveys (quarterly) RICS UK Construction and Infrastructure Surveys (quarterly) RICS/ RAU UK Rural Land Market Surveys (half-yearly)	https://www.rics.org/uk/news-insight/research/market-surveys/
Development Plans for Waste	
West Midlands Metropolitan Area	
Black Country Core Strategy (2006 - 2026) (adopted February 2011)	http://blackcountrycorestrategy.dudley.gov.uk/
Black Country Core Strategy Review: Issues and Options Consultation Report (July 2017)	http://blackcountrycorestrategy.dudley.gov.uk/

[30] The data underpinning this report was gathered by the MPA to challenge Defra's previous figures on recovery of construction and demolition waste which assumed much lower rates of recovery and higher rates of disposal to landfill. As a result of this, the construction and demolition waste recovery figures in the latest (2019) government statistical release on waste have been adjusted to take account of the data provided by the MPA.
[31] This is the latest summary of waste data for England by the Environment Agency on throughput at regulated sites.
[32] Research report by D S Smith on the state of recycling infrastructure in the UK. D S Smith have a depot in Willenhall, Walsall. Examines factors that affect the UK's ability to improve recycling rates, such as challenges of new consumer behaviours (e.g. online shopping) which have increased the amount of waste packaging produced, public confusion about what can and cannot be recycled, and economic pressures on local councils coupled with recent Chinese import restrictions. Recommendations are aimed at government but have implications for councils: appointment of dedicated recycling minister, statutory recycling targets at national/ local authority level, prioritisation of separate collections, universal labelling of packaging materials, and putting 'circular economy' at the heart of the national budget.

Document Title	Web Link (where available)
Solihull Local Plan: Shaping a Sustainable Future (adopted December 2013)	http://www.solihull.gov.uk/resident/planning/appealsenforcement/planmaking/ldf/localplan
Solihull Local Plan Review: Draft Local Plan (December 2016) and Draft Local Plan Supplementary Consultation (January 2019) [33]	http://www.solihull.gov.uk/lpr
Birmingham Development Plan 2031 (adopted January 2017)	http://www.birmingham.gov.uk https://www.birmingham.gov.uk/directory_record/1360/environment_and_sustainability
Coventry Local Plan 2018 (adopted December 2017)	http://www.coventry.gov.uk/localplan
West Midlands – Other	
Waste Core Strategy for Worcestershire – Adopted Waste Local Plan 2012 - 2027 (adopted November 2012)	http://www.worcestershire.gov.uk/info/20015/planning_policy_and_strategy/311/waste_core_strategy
Staffordshire and Stoke-on-Trent Joint Waste Local Plan (2010 – 2026) (adopted March 2013)	https://www.staffordshire.gov.uk/environment/planning/policy/thedevelopmentplan/wastelocalplan/wasteLocalPlan.aspx https://www.staffordshire.gov.uk/environment/planning/policy/thedevelopmentplan/wastelocalplan/Waste-Local-Plan-document-library.aspx
Warwickshire Waste Core Strategy – Adopted Local Plan 2013 - 2028 (adopted July 2013)	Not currently available online – links on Warwickshire County Council website are all broken. Walsall MBC have a PDF of adopted plan and can provide it on request.
Shropshire Local Development Framework – Adopted Core Strategy (adopted February 2011)	https://shropshire.gov.uk/planning-policy/local-planning/core-strategy/
Shropshire Site Allocations and Management of Development (SAMDev) Plan 2006 – 2026 (adopted October 2015)	https://shropshire.gov.uk/planning-policy/local-planning/samdev-plan-2006-2026/the-plan/
Shropshire Local Plan Partial Review 2016 – 2036 N.B. The review is being carried out in stages – the third stage consultation on Preferred Sites ran until February 2019.	https://shropshire.gov.uk/planning-policy/local-planning/local-plan-partial-review-2016-2036/
Telford & Wrekin Local Plan 2011 – 2031 (adopted January 2018)	http://www.telford.gov.uk/info/20172/planning_policy_and_strategy/1229/telford_and_wrekin_local_plan_2011-2031
Herefordshire Minerals and Waste Local Plan (MWLP) – Draft Plan (January 2019)	https://www.herefordshire.gov.uk/consultations/article/10112/draft_minerals_and_waste_local_plan_consultation_2019
East Midlands	

[33] Supplementary Consultation was about updated housing need, housing settlement strategy and site allocations, and did not affect the waste policy.

Document Title	Web Link (where available)
Derby and Derbyshire Waste Local Plan (adopted March 2005)	https://www.derbyshire.gov.uk/environment/planning/planning-policy/minerals-waste-development-framework/minerals-and-waste-planning-policy.aspx
Derby and Derbyshire Waste Plan (in preparation) (N.B. includes Derby City but does not include Peak District National Park)	https://www.derbyshire.gov.uk/environment/planning/planning-policy/minerals-waste-development-framework/waste-plan/waste-plan.aspx [34]
Leicestershire and Leicester Waste Development Framework – Core Strategy & Development Control Policies up to 2021 (adopted October 2009)	https://www.leicestershire.gov.uk/environment-and-planning/planning/minerals-and-waste-local-plan/policy-documents
Leicester Local Plan Consultation Draft – Emerging Options (July 2017)	https://consultations.leicester.gov.uk/sec/local-plan/
Leicestershire Minerals and Waste Local Plan (MWLP) 2019 (adopted September 2019) (N.B. does not include Leicester City)	https://www.leicestershire.gov.uk/environment-and-planning/planning/minerals-and-waste-local-plan/issues-consultation
Northamptonshire Minerals and Waste Local Plan (adopted July 2017)	http://www3.northamptonshire.gov.uk/councilservices/environment-and-planning/planning/planning-policy/minerals-and-waste-planning-policy/Pages/update-of-the-adopted-minerals-and-waste-local-plan.aspx
Nottinghamshire and Nottingham Replacement Waste Local Plan Part 1: Waste Core Strategy (adopted December 2013)	http://www.nottinghamshire.gov.uk/planning-and-environment/waste-development-plan/adopted-waste-local-plan
Nottingham Local Plan Part 2: City Land and Planning Policies Document (LPPD) – Submission (April 2018) [35]	https://www.nottinghamcity.gov.uk/planning-and-building-control/planning-policy/the-local-plan-and-planning-policy/
Rutland Local Development Framework – Core Strategy (adopted July 2011)	https://www.rutland.gov.uk/my-services/planning-and-building-control/planning/planning-policy/local-plan/
Rutland Local Plan Review 2016 – 2036 – Consultation Draft Plan (July 2017), additional consultation published August 2019	https://www.rutland.gov.uk/my-services/planning-and-building-control/planning/planning-policy/local-plan-review/
Black Country Local Plans – SADs and AAPs	
Sandwell Site Allocations and Delivery DPD (adopted December 2012)	http://www.sandwell.gov.uk/info/200275/planning_and_buildings/676/site_allocations_and_delivery_development_plan_document/1
Bilston Corridor Area Action Plan (AAP) including Bilston Neighbourhood Plan (adopted September 2014)	https://www.wolverhampton.gov.uk/planning/planning-policies/area-action-plans-aaps

[34] Link to Derbyshire Partnership Forum website is broken and there is currently nothing about the plan on the Derbyshire Partnership Forum website.
[35] Does not include specific waste policies, but policies address waste in support of adopted Waste Core Strategy. The examination took place in 2018 and the Inspector's report was published in January 2019.

Document Title	Web Link (where available)
Stafford Road Corridor Area Action Plan (AAP) (adopted September 2014)	https://www.wolverhampton.gov.uk/planning/planning-policies/area-action-plans-aaps
Wolverhampton City Centre Action Plan (AAP) (adopted September 2016)	https://www.wolverhampton.gov.uk/planning/planning-policies/area-action-plans-aaps
Dudley Borough Development Strategy (DBDS) DPD (adopted January 2017)	http://www.dudley.gov.uk/resident/planning/planning-policy/local-plan/devstrat/
Walsall Site Allocation Document (SAD) 2019 (adopted February 2019)	https://go.walsall.gov.uk/site_allocation_document
Walsall Town Centre Area Action Plan (AAP) 2019 (adopted February 2019)	https://go.walsall.gov.uk/walsall_town_centre_area_action_plan
Black Country Authorities' Monitoring Reports	
Dudley Authorities' Monitoring Reports (AMRs)	http://www.dudley.gov.uk/resident/planning/planning-policy/local-plan/annual-monitoring-report
Sandwell Authorities' Monitoring Reports (AMRs)	http://www.sandwell.gov.uk/downloads/download/441/annual_monitoring_reports
Walsall Authorities' Monitoring Reports (AMRs)	https://go.walsall.gov.uk/environment/planning/planning_policy/local_plans/annual_monitoring_report
Wolverhampton Authorities' Monitoring Reports (AMRs)	http://www.wolverhampton.gov.uk/article/2406/Annual-Monitoring-Report
Black Country Plan	
Draft Black Country Plan 2039 (Regulation 18) Consultation Document (August 2021)	https://blackcountryplan.dudley.gov.uk/t2/p5/
Waste evidence	
Black Country Waste Study: Review of the Evidence Base for Waste to support Preparation of the Black Country Plan (March 2020), Wood	https://blackcountryplan.dudley.gov.uk/t2/p4/t2p4f/
Black Country Core Strategy – Existing Evidence	
Waste Evidence	
Waste Treatment Facilities and Capacity Study: West Midlands Region: Final Report (May 2007), SLR	http://www.solihull.gov.uk/Resident/Planning/appealsenforcement/planmaking/ldf/evidencebase
West Midlands Landfill Capacity Study – 2009 Update: Study Report (June 2009), Scott Wilson	http://www.solihull.gov.uk/Resident/Planning/appealsenforcement/planmaking/ldf/evidencebase
The Regional Approach to Landfill Diversion Infrastructure (July 2009), DTZ and SLR for Advantage West Midlands	https://www.sustainabilitywestmidlands.org.uk/resources/west-midlands-waste-landfill-diversion-strategy/

Document Title	Web Link (where available)
West Midlands Commercial and Industrial Waste - Opportunities for Recycling and Recovery (May 2010), Waste and Resources Action Programme (WRAP)	http://www.wrap.org.uk/content/west-midlands-commercial-and-industrial-waste-%E2%80%93-opportunities-recycling-and-recovery
Black Country Core Strategy Waste Planning Study (May 2009), Atkins	http://blackcountrycorestrategy.dudley.gov.uk/t4/p1/f/
Black Country Core Strategy Waste Background Paper 2 and Appendices (February 2010), and Black Country Core Strategy Waste Monitoring Update (June 2010), Black Country Authorities	http://blackcountrycorestrategy.dudley.gov.uk/t4/p1/f/
West Midlands Renewable Energy Capacity Study (March 2011), SQW, Maslen Environmental and CO2 Sense for Advantage West Midlands	http://www.sqw.co.uk/files/7813/8694/8739/21.pdf N.B. Data Sheets for Black Country Authorities are not currently available online, but can be provided on request
Waste Planning and Management Trends in the West Midlands to 2011/12 (July 2013), West Midlands Resource Technical Advisory Body (RTAB)	https://www.westmidlandsiep.gov.uk/resources
Birmingham Waste Capacity Study 2010 (February 2010), Enviros Consulting Ltd and Birmingham Waste Capacity Study Update 2014 (June 2014), Jacobs	https://www.birmingham.gov.uk/downloads/download/388/waste_capacity_study_2010
Walsall Site Allocation, CIL Deliverability and Viability Study (September 2015), DTZ – Part 2 and Appendices 2a – 2c cover the employment land portfolio, and Part 3 and Appendix 3 consider potential waste sites	https://go.walsall.gov.uk/evidence#DeliveryViability
Waste Planning and Management Trends in the West Midlands to 2013/14 (November 2015), West Midlands Resource Technical Advisory Body (RTAB)	https://www.westmidlandsiep.gov.uk/resources
Environmental Evidence	
Black Country Strategic Flood Risk Assessment (SFRA) (February 2009), Jacobs	http://blackcountrycorestrategy.dudley.gov.uk/t4/p1/c/
Ford Brook Strategic Flood Risk Mapping: Final Report (July 2009), Halcrow Group Limited	http://blackcountrycorestrategy.dudley.gov.uk/t4/p1/c/
Black Country Water Cycle Study and Scoping Surface Water Management Plan (September 2009), Scott Wilson	http://blackcountrycorestrategy.dudley.gov.uk/t4/p1/c/
Black Country Historic Landscape Characterisation (2010), Wolverhampton City Council	http://archaeologydataservice.ac.uk/archives/view/blackcountry_hlc_2009/
Birmingham and Black Country Local Nature Partnership: State of the Environment Dashboard (September 2015)	https://www.bbcwildlife.org.uk/LNP

Document Title	Web Link (where available)
Urban Capacity Evidence	
Black Country Urban Capacity Review (December 2019), Black Country Authorities	https://blackcountryplan.dudley.gov.uk/t2/p4/t2p4c/
Employment Land / Economic Development Evidence	
Sandwell Employment Sites Identification Study Draft Report (June 2011), GVA	http://www.sandwell.gov.uk/downloads/file/3273/employment_sites_identification_study_-_draft_report
Black Country Strategic Economic Plan (SEP) (March 2014), Black Country Local Enterprise Partnership (LEP)	https://www.blackcountrylep.co.uk/about-us/plans-for-growth/strategic-economic-plan/
The Black Country and South Staffordshire Sub-Regional High Quality Employment Land Study: Stage 1 Report (November 2014) and 2014/15 Stage 2 Report (August 2015), Warwick Economics & Development Ltd (WECD)	https://www.sstaffs.gov.uk/planning/the-evidence-base.cfm
Walsall Site Allocation, CIL Deliverability and Viability Study (September 2015), DTZ – Part 2 and Appendices 2a – 2c consider potential employment sites	https://go.walsall.gov.uk/evidence#DeliveryViability
Residential and Employment Sites Viability Assessment for the Dudley Borough Development Strategy (October 2015), Dudley MBC	http://www.dudley.gov.uk/resident/planning/planning-policy/local-plan/devstrat/susapp/
Dudley Strategic Employment Land Review 2016, Dudley MBC	http://www.dudley.gov.uk/resident/planning/planning-policy/local-plan/devstrat/susapp/
Walsall Employment Land Review March 2016 (Updated April 2017), Walsall Council	https://go.walsall.gov.uk/evidence#LandForIndustry
West Midland Combined Authority Strategic Economic Plan (SEP): Making our Mark (June 2016), West Midlands Combined Authority	https://www.wmca.org.uk/what-we-do/strategy/
Black Country 2017 Strategic Economic Plan (SEP) (Draft as at March 2017), Black Country Local Enterprise Partnership (LEP)	https://www.blackcountrylep.co.uk/about-us/plans-for-growth/strategic-economic-plan/
Black Country Economic Development Needs Assessment (EDNA): Stage 2 Report (August 2021), Warwick Economics & Development Ltd (WECD)	https://blackcountryplan.dudley.gov.uk/t2/p4/t2p4b/
Black Country Employment Area Review (BEAR) (July 2021), Black Country Authorities	https://blackcountryplan.dudley.gov.uk/t2/p4/t2p4b/
Housing Need Evidence	
The Black Country and South Staffordshire Strategic Housing Market Assessment (SHMA) (June 2017), Peter Brett Associates	http://blackcountrycorestrategy.dudley.gov.uk/t2/p3/

Document Title	Web Link (where available)
Greater Birmingham and Solihull LEP / Black Country Strategic Housing Needs Study (March 2017), Peter Brett Associates	http://blackcountrycorestrategy.dudley.gov.uk/t2/p3/?assetdet13950554=314260
Black Country and South Staffordshire Strategic Housing Market Assessment Part 2 – Objectively Assessed Need for Affordable Housing (June 2017), HDH Planning and Development Ltd and Peter Brett Associates	http://blackcountrycorestrategy.dudley.gov.uk/t2/p3/?assetdet13950554=314260
Greater Birmingham Housing Market Area (HMA) Strategic Growth Study and Appendices (February 2018), G L Hearn and Wood	http://blackcountrycorestrategy.dudley.gov.uk/t2/p3/?assetdet13950554=314260
Town Centre Evidence	
Black Country Centres Study (November 2009), GCA Grimley	http://blackcountrycorestrategy.dudley.gov.uk/t2/p1/
Wolverhampton City Centre Retail Update Study, Vols. 1 and 2 (December 2014), Hollis Vincent	http://blackcountrycorestrategy.dudley.gov.uk/t2/p1/
West Bromwich Town Centre Health Check (June 2015), WYG	http://blackcountrycorestrategy.dudley.gov.uk/t2/p1/
Walsall Town Centre Demand Study & Development Sites Assessment (September 2015), DTZ	https://go.walsall.gov.uk/aap_evidence#Ddv
Walsall Local Centres Study (April 2017), Walsall Council	https://go.walsall.gov.uk/evidence#ShoppingServices
Transport Evidence	
PRISM: Black Country Joint Core Strategy Transport Technical Document Report (July 2009), PRISM Joint Application Team	http://blackcountrycorestrategy.dudley.gov.uk/t4/p1/h/
West Midlands Strategic Transport Plan: Movement for Growth (June 2016), West Midlands Combined Authority	https://www.tfwm.org.uk/strategy/movement-for-growth/
West Midlands Freight Strategy (December 2016), Transport for West Midlands	https://www.tfwm.org.uk/strategy/freight-highways/
Midlands Connect Strategy: Powering the Midlands Engine (March 2017), Midlands Connect	https://www.midlandsconnect.uk/publications/
Midlands Connect: Freight (Narrative Report) (April 2017), Jacobs and Midlands Connect: Freight (Strategy Overview) (April 2017), Midlands Connect	https://www.midlandsconnect.uk/publications/

Document Title	Web Link (where available)
National Productivity Investment Fund (NPIF) bid: Walsall Economic Growth and Infrastructure Package (June 2017), Walsall Council [36]	https://www.tfwm.org.uk/strategy/freight-highways/ https://www.gov.uk/government/news/government-invests-350-million-improving-local-roads
West Midlands Rail Limited Single Network Vision – Version 1 June 2017, West Midlands Rail	http://www.westmidlandsrail.com/strategy/
Movement for Growth: 2026 Delivery Plan for Transport (September 2017), Transport for West Midlands	https://www.tfwm.org.uk/strategy/movement-for-growth/
West Midlands Transport Plan 2017-18, West Midlands Combined Authority and Transport for West Midlands	https://www.tfwm.org.uk/strategy/movement-for-growth/
Network Rail Strategic Business Plan 2019-2024: Comprehensive High Level Summary (February 2018)	https://www.networkrail.co.uk/who-we-are/publications-resources/strategicbusinessplan/#downloadall
17/0870: Planning Application for M6 Junction 10 Improvements – approved by Walsall Council on 8 May 2018	https://go.walsall.gov.uk/NewsDetails/m6-junction-10-improvements-get-green-light http://planning.walsall.gov.uk/swift/apas/run/wphappcriteria.display
Midlands Connect: Our 2018/19 Priorities (May 2018)	https://www.midlandsconnect.uk/publications/
Midlands Connect Long-Term Midlands Motorway Hub Study: Summary Report (June 2018), Midlands Connect	https://www.midlandsconnect.uk/publications/
Midlands Connect and RIS2: Turning Evidence into Investment: Our Five Priorities for the Midlands from Highways England's Road Investment Strategy 2 (2020 – 2025) (March 2019)	https://www.midlandsconnect.uk/publications/ris2-priorities/
High Speed 2 Railway Line (HS2)	https://www.hs2.org.uk/
M54/ M6 Link Road	https://highwaysengland.co.uk/projects/m54-to-m6m6-toll-link-road/
West Midlands Interchange (Four Ashes SRFI)	http://www.westmidlandsinterchange.co.uk/
BCCS Sustainability Appraisal and HRA	
Sustainability Appraisal of the Black Country Core Strategy – Scoping Report (February 2017) and Sustainability Appraisal of the Black Country Core Strategy Review 2016 – 2036: Issues and Options Report – Regulation 18 Report (June 2017), Lepus Consulting	http://blackcountrycorestrategy.dudley.gov.uk/t2/p4/

[36] In 2017 a number of bids for funding were submitted for transport improvements in the West Midlands under the National Productivity Investment Fund (NPIF), which were co-ordinated by the West Midlands Combined Authority. The decision was announced in October 2017 and the Walsall package was the only Black Country bid to be awarded any funding. The Lichfield Southern Bypass (Final Phase) submitted by Staffordshire County Council was also awarded funding.

Document Title	Web Link (where available)
J15: Habitats Regulations Assessment of the Joint Black Country Core Strategy – Screening Report and Appendices (June 2010), UE Associates	https://blackcountryplan.dudley.gov.uk/t1/p1/
J16: Habitats Regulations Assessment of the Joint Black Country Core Strategy – Appropriate Assessment (June 2010), UE Associates	https://blackcountryplan.dudley.gov.uk/t1/p1/

Appendix A
Glossary of Terms

Term	Meaning / Definition
AD	Anaerobic Digestion
AMR	Annual Monitoring Report
ATT	Advanced Thermal Technology
BCAs	Black Country Authorities
BCCS	Black Country Core Strategy
BCP	Black Country Plan
BEAR	Black Country Employment Area Review
BMW	Biodegradable Municipal Waste
CD&E	Construction, Demolition and Excavation (waste)
CEP	Circular Economy Package
C&I	Commercial and Industrial (waste)
DEFRA	Department of Environment, Food and Rural Affairs
DTS	Dry Tonnes of Solid
DWF	Daily Water Flow
EA	Environment Agency
EDNA	Employment Development Need Assessment
EfW	Energy from Waste
ELV	End of Life Vehicles
EP	Environmental Permit
EWC	European Waste Catalogue
HWI	Hazardous Waste Interrogator
HWRC	Household Waste and Recycling Centre
IVC	In Vessel Composting
LACW	Local Authority Collected Waste
LLRW	Low Level Radioactive Waste
LOW	List of Waste
MBC	Metropolitan Borough Council
MRF	Material Recycling Facility

Term	Meaning / Definition
MRS	Metal Recycling Site
MSW	Municipal Solid Waste
mt	Million Tonnes
mtpa	Million Tonnes Per Annum
MWMS	Municipal Waste Management Strategy
NOMIS	National Online Manpower Information System
NSIP	Nationally Significant Infrastructure Project
PINS	Planning Inspectorate
RDF	Refuse Derived Fuel
RTAB	Regional Technical Advisory Board
SAD	Site Allocation Document
SNRHW	Stable Non-Reactive Hazardous Waste
STC	Sludge Treatment Centre
tpa	Tonnes Per Annum
UA	Unitary Authority
WCA	Waste Collection Authority
WDA	Waste Disposal Authority
WDF	Waste Data Flow
WDI	Waste Data Interrogator
WEEE	Waste Electrical and Electronic Equipment
WFD	Waste Framework Directive
WMS	Waste Management Scenario
WPA	Waste Planning Authority
WTS	Waste Transfer Station

Appendix B
Waste Data Sources – Sandwell

Appendix C
C&I and CD&E Waste Data – Sandwell

Appendix D
Waste Arisings, Management & Capacity Data Tables – Sandwell

Appendix E
Sites within Sandwell managing more than 10,000 tpa

Appendix F
Trends in Arisings 2017-2021 – Sandwell

Appendix G
Waste Imported and Exported by Basic Waste Category and Region/County, 2019-2021 – Sandwell

Appendix H
Waste Growth and Capacity Projections – Sandwell

wsp.com