

Resource Futures & Sacks Consulting

Waste Evidence Base Report for Telford and  
Wrekin Council

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# Waste Evidence Base Report for Telford and Wrekin Council

Prepared for: Telford and Wrekin Council

RF contract No: 2529

September 2015



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File name: 2015-08-27 Telford Wrekin Waste Evidence Report UPDATED v1.docx

Version: v5

Status: confidential

Date: 03/09/15

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## Executive summary

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The Telford & Wrekin Shaping Places Local Plan is currently under preparation and will contain the strategy for managing all waste arising in Telford and Wrekin,

This report forms the evidence base for the waste policies of the Local Plan. It sets out the way in which waste is managed at present, and options for how this will be carried out in the future. It is a background document for the planning process and does not replace the Council's Waste Strategy for the management of Local Authority Waste.

The amount of waste to be managed is categorised into types according to the way in which it is managed as follows:

- Inert Waste – this is material that does not decay or degrade such as rubble and waste brick and tile;
- Non-hazardous Waste – this comprises waste that is not hazardous but that can decay and biodegrade. It is made up of a wide range of materials;
- Hazardous Waste – this is waste that can pose a danger to the environment or to human health due to the concentration or quantity of hazardous material in the waste.

Data on waste arisings varies greatly in quality, depending on how it is managed and therefore how it is measured. Local Authority Collected Waste is measured accurately by the collection authority (the Council) and information on this waste stream is good. Waste collected from businesses is not measured as accurately and the data on how much waste arises from this source is much poorer. The waste policies in a Local Plan therefore need to be sufficiently flexible to respond to a range of requirements in terms of waste management capacity and the number of sites required to provide this capacity.

Imports into Telford & Wrekin to landfill are currently significant, but these are likely to reduce when new residual treatment facilities in neighbouring areas come into operation.

Different scenarios for the amount of waste arising in Telford & Wrekin over the Plan area have been developed in order to understand the amount of waste management capacity required. The capacity of existing waste management facilities is assessed and the quantity of additional capacity calculated. The maximum additional capacity required is shown as the capacity gap in the table below:

	<b>Annual capacity for capacity gap calculations (tonnes pa)</b>	<b>Maximum Capacity Requirement in 2030/31 (tonnes pa) from Table 21</b>	<b>Capacity Gap (tonnes pa)</b>
Organic treatment capacity – anaerobic digestion	0	59,000	59,000
Organic treatment capacity - composting	38,000	27,000	-
MRF capacity	30,850	185,200	154,350
Total transfer capacity	160,000 rising to 250,000 in 2019	185,000 (Recyclables) 116,500 (Residual))	-
Residual recovery capacity	Landfill only	116,500	116,500

There is sufficient capacity for the treatment of organic garden waste by composting in the plan area and new capacity of this type is not required. However, additional capacity for the treatment of food waste using either anaerobic digestion or in-vessel composting will be required if the authority is to be self-sufficient in this respect. There is capacity for the treatment of food waste at a nearby facility in Staffordshire, but this will not be sufficient to meet the total requirement from Telford & Wrekin as well as the existing requirement from Staffordshire.

There is a significant shortfall in capacity for managing recyclable materials. Although some recycling activity usually takes place at transfer stations, it is difficult to assess the extent of this

and efforts will be required to increase the level of separation and sorting of waste materials at Community Recycling Centres and other transfer stations. Additional capacity of approximately 156,150 tonnes pa for sorting and transfer of recyclable material from both LACW and C&I sources will be required during the Plan period and to a significant extent this will be delivered through the new facility at Hortonwood. The extent to which this provides sufficient capacity will need to be monitored throughout the Plan period.

There is no recovery capacity for residual treatment in the plan area at present. The management of Local Authority Collected Waste is to be carried out by Veolia who have access to residual waste treatment facilities with significant capacity in neighbouring local authority areas (section 5.3). These facilities are likely to be sufficient until the end of the Plan period although consideration should be given as to whether additional residual waste management treatment capacity may be required at that time. A decision would then need to be made as to whether such capacity should be developed within Telford & Wrekin, or whether capacity in other nearby facilities could still be used. Initial discussions with the relevant waste planning authorities and then operators of these facilities indicate that there is no barrier to the use of these facilities for the management of waste from Telford & Wrekin. If sufficient capacity were not available in nearby facilities, a residual waste treatment facility would need to be developed within Telford & Wrekin. Under the "High" scenario, the total quantity of non-hazardous waste to be treated at a residual facility is 116,500 tpa and under the "Low" scenario, the total quantity is 94,500 tpa. These quantities are comparable to the capacity of the facility at Battlefields in Shropshire and a similar sized facility would be required.

The report concludes that the Authority should implement the following actions:

- Safeguard all existing waste management facilities, including organic treatment facilities, transfer and sorting facilities and landfill sites.
- Seek to increase capacity for anaerobic digestion, in-vessel composting, recycling and re-use within Telford & Wrekin. In particular the planned improvements to the Community Recycling Centres could contribute to this. Additional capacity for sorting and bulking recycling may also be required and sites for these uses should be identified.
- Carry out negotiations with authorities where residual waste treatment facilities are located and with operators of those facilities in order to ensure there is sufficient capacity for residual waste treatment and disposal for the development of a deliverable waste management development planning document. A site for a residual waste management facility should be identified within the Plan area if capacity outside the authority cannot be made available.
- Liaison with neighbouring authorities over the use of sorting and transfer facilities should also take place to ascertain the extent to which there is scope for sharing or more intensive use of facilities.
- Produce a Sites Document as part of the Shaping Places Local Plan which identifies possible sites for new transfer stations and residual treatment facilities. A site of approximately 2 hectares will be required for the treatment of food wastes. Depending on the availability of residual waste treatment capacity outside the plan area, if a site is required for the treatment of residual mixed waste, this will need to extend to approximately 2 hectares.

Waste Policies in the Telford & Wrekin Shaping Places Local Plan should include the following elements:

- 1) Existing waste management facilities should be safeguarded for the management of waste arising in Telford & Wrekin in the long term in order that the Authority can take responsibility for the management of the waste arising within its area.
- 2) Planning permission for new waste management facilities will be granted if they contribute to promoting the management of waste further up the waste hierarchy and in particular to meeting targets of recycling and composting 70% of non-hazardous waste arising.

- 3) Policies will be included to cover the requirements for new sites for waste management and the design of new development.

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## 1. Introduction

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### 1.1. Purpose of this Report

The Telford & Wrekin Shaping Places Local Plan is currently under preparation. Shaping Places will set out the strategy for future development of the plan area, including the amount of new housing required and where it should be located; the amount and location of new employment land, the protection and improvement of town centres and open space and the provision of new infrastructure.

The Local Plan will also contain the strategy for managing all waste arising in Telford and Wrekin, including the following waste streams:

- Inert Waste – material that does not decay or degrade such as rubble and waste brick and tile;
- Non-hazardous Waste – waste that is not hazardous but that can decay and biodegrade. It is made up of a wide range of materials;
- Hazardous Waste – waste that can pose a danger to the environment or to human health due to the concentration or quantity of hazardous material in the waste.

For the purposes of data collection, waste is categorised by its source as follows:

- Local Authority Collected Waste (LACW) – this is the waste which the Local Authority has a legal responsibility to collect. It includes the waste collected from households, street sweepings and waste from Community Recycling Centres. It also includes any trade waste collected on behalf of the Local Authority. This collection may be contracted to a third party as is the case in Telford & Wrekin. A new contract has been entered into with Veolia for collection, treatment and disposal of Local Authority Collected Waste for twenty-four years from 2014 with some services starting in 2014 and all services having been phased in by 2019. The contract includes new transfer and Community Recycling Centre infrastructure and the use of pre-existing treatment and disposal facilities outside the borough.
- Commercial and Industrial Waste (C&I) – this is the waste produced by businesses which is collected by private companies and disposed of to “merchant facilities” using short-term contracts. Surveys of C&I waste do not include waste management and recycling businesses to avoid double counting.
- Construction, Demolition and Excavation Waste (CDEW) – this is waste arising from the construction and demolition industries, including excavation during construction activities, It is made up of mainly inert materials such as soils, stone, concrete, brick and tile. There are also non-inert elements in this waste stream such as wood, metals, plastics, cardboard and residual wastes.

There are also other waste streams which are measured separately because they are potentially damaging to the environment and human health. These comprise Hazardous Wastes and radioactive wastes. These generally arise in small quantities but require careful management because of the potential risks they pose.

This report forms part of the evidence base for the waste policies of the Local Plan. It sets out the way in which waste is managed at present, and options for how this will be carried out in the future. The report also sets out the policy context and requirements that must be met by Telford & Wrekin Council in its Waste Planning policies. It does not replace the strategy for managing the waste collected by the Council, although it takes into account the plans and actions of the Local Authority Waste Management team.

The report is made up of the following sections as follows:

- Baseline data regarding the current and historic arisings of waste by waste stream in Telford & Wrekin;
- Forecasts of future waste arisings by waste stream, with scenarios
- Current waste management capacity within the authority and also other facilities that could be taken into consideration for the management of waste arising within Telford & Wrekin;
- Scenarios for the future management of waste during the Plan period.

## **1.2. Policy Context**

The waste management policies in the Local Plan will need to comply with Government policy as follows:

- European Waste Framework Directive 2008
- EU Review of Waste Policy and Legislation 2014
- Planning Act 2008
- Localism Act 2011
- National Planning Policy Framework (2012)
- Waste Management Plan for England 2013 (and predecessor documents)
- Planning Policy Statement 10 "Planning for Sustainable Waste Management"

There are also a number of National Policy Statements (NPS) that will need to be taken into account such as the NPS on Hazardous Waste.

### **1.2.1. European Waste Framework Directive 2008 and Review of Waste Policy**

Article 28 of the Waste Framework Directive 2008 sets out the requirement for each Member State to produce a Waste Management Plan. This Plan must set out an analysis of the current waste management situation and sufficient information on the locational criteria for site identification and on the capacity of future disposal or major recovery installations. These locational criteria are contained in the Local Plans or Waste Plans of local authorities in the UK. The Telford & Wrekin Local Plan will form part of the UK's Waste Management Plan and will need to contain identified sites and / or criteria for the location of waste management facilities in order to meet the requirements of the Directive.

A recently published Review of Waste Policy and Legislation by the EU has introduced a range of higher targets for recycling and the phasing out of landfilling organic and recyclable materials. This Review means that facilities for the management of waste in accordance with these new targets will be required and should be planned for as part of the Local Plan.

## 1.2.2. National Context

### ***Localism Act 2011***

The Localism Act 2011 gave the responsibility for strategic planning back to local authorities acting individually. However, section 110 of the Localism Act prescribes the “Duty to Co-operate” between local authorities in order to ensure that they work together on strategic issues such as waste planning. The duty is “to engage constructively, actively and on an on-going basis” and must “maximise the effectiveness” of all authorities concerned with plan-making. For matters such as waste planning, it is therefore important that local authorities can show that they have worked together in exchanging information and reaching agreement on where waste management facilities will be built. Developing a joint evidence base can be a key element of this work and meeting regularly with officers from other authorities through the West Midlands Resource Technical Advisory Body is an important aspect of this co-operation.

However, engagement is not an end in itself. The objective is to develop a Local Plan that is deliverable for all parties. In the context of planning for waste management, it is necessary to understand waste flows between local authority areas and to ensure that all local plans take account of these flows. If a facility in one Waste Planning Authority Area can easily manage imports from another WPA Area, then neither Waste Plan is destabilised by such imports. If however, a facility that has historically been used by another WPA Area does not have capacity to handle continuing imports, or is closing, then alternative provision must be sought.

At the time of writing this report, initial contact has been made with the two Waste Planning Authorities from which there have been significant imports of waste in the past. These waste movements are likely to be reversed in the future, given the limited lifetime of the landfill sites and changes in waste disposal strategy in Telford & Wrekin and the new facilities that are currently under development in those neighbouring authorities. Further discussions will be required with a wider range of authorities during the course of the development of the Local Plan.

### ***Landfill Tax***

The landfill tax was introduced in 1996 to discourage the use of landfill as a disposal option for biodegradable waste. Since its introduction, it has gradually been increased through the landfill tax escalator from a level of £7 per tonne to £72 per tonne in the year 2013/14 and £80 per tonne in 2014/15.. This progressive increase has created incentives to develop alternative disposal and treatment facilities by making them relatively competitive. However, these steep increases in real terms have now ceased and policy is now to increase landfill tax only in line with the Retail Price Index. This is in the context that there now may be sufficient residual waste treatment capacity in England and Wales. This is an area for debate, since the availability of residual waste treatment is partly dependent on the distance that needs to be travelled to access these facilities.

## 1.3. Regional Context

Regional planning was abolished by the Localism Act 2011. However, the Regional Spatial Strategy for the West Midlands was published in 2008 and contains some useful background information for waste planning. The West Midlands RTAB (Resource Technical Advisory Body on Waste) comprising waste planning officers from all the constituent waste planning authorities continues to meet and exchange information to support joint working. This joint working enables the constituent authorities to develop a broad consensus around the capacity required at a greater than local authority level, but each Waste

Planning Authority still needs to meet its own requirements to manage the waste arising within its own area.

Telford & Wrekin as a Waste Planning Authority forms part of a wider grouping of authorities and exchanges of waste amongst which must be taken into account when planning for new facilities. Within the area of this wider grouping there are a significant number of waste management facilities both operational and due to come into operation in the near future. These must be taken into account when assessing the amount of waste management capacity available to manage the arisings within the Plan area.

A significant number of residual waste treatment facilities have been granted planning permission in England and Wales in recent years. Some analyses of waste arisings and capacity conclude that there is now sufficient residual waste treatment capacity, in particular Defra's report on Forecasting 2020 waste arisings and treatment capacity 2013. This issue is discussed further in section 5.3 but it should be noted that new facilities over a certain size will not be economic to develop within Telford & Wrekin if sufficient waste is not available to ensure that they are viable. Planning for new facilities and making land available for such facilities could therefore be ineffective. Those facilities that come forward first will then be able to agree contracts for the management of both municipal and commercial waste arising in the locality.

This report therefore examines what facilities are available to manage the waste arising in Telford & Wrekin within the Plan area and considers what additional facilities are required. It also takes into account those facilities located Telford & Wrekin which might have sufficient capacity to manage waste arising in the Plan area, subject to contractual arrangements and discussions between Waste Planning Authorities.

## 1.4. Local Context

Telford & Wrekin became a Unitary Authority in 1998 and at this time took over the Waste Planning Authority functions from Shropshire County Council. The current policies for waste management date from the Shropshire and Telford & Wrekin Joint Structure Plan 1996 to 2011. The quantity and type of waste arising has changed significantly since this time and new information is therefore required to support the waste management policies in the new Shaping Places Local Plan.

The current Development Plan is made up of the following documents:

### **Core Strategy Development Plan Document (2007)**

This document and its policies set out the strategic spatial vision and development strategy for the area to 2016.

**Central Telford Area Action Plan:** Adopted in March 2011, this provides the planning strategy and policies for Telford Town Centre and its immediately adjoining areas.

**Wrekin Local Plan (saved policies):** This document provides detail that is not present in the Core Strategy. Certain policies of this plan were formally "saved" in 2007, recognising that they were consistent with up-to-date national policy.

**Shropshire and Telford & Wrekin Minerals Local Plan 1996-2006 (saved policies):** Certain policies of this joint plan were formally saved in 2007.

**The Shropshire and Telford & Wrekin Joint Structure Plan 1996 to 2011:** This was adopted in 2002 and contained policies on the overall strategy for the development of the Plan area including policies on waste and minerals.

All “saved policies” were saved in 2007 until 2013 when the Order that revoked the Regional Strategy for the West Midlands also revoked all saved policies. There is therefore now an urgent need to develop new waste policies as part of the Shaping Places Local Plan.

Telford & Wrekin is a relatively small geographic area with a diverse mixture of urban and rural land. There are a range of waste management facilities within the Authority’s boundaries, including landfill sites, treatment facilities and transfer stations. There are no residual waste treatment facilities at present, but a number of strategic facilities are currently under development in adjoining authorities, which could have sufficient capacity to manage an element of the residual waste from Telford & Wrekin. The availability of these facilities for the treatment of waste originating in Telford & Wrekin will have to be ascertained as part of the process of liaison between waste planning authorities under the Duty to Co-operate.

Since Telford & Wrekin is a Unitary Authority, it is responsible for both collection and disposal of Local Authority Collected Waste. In two-tier authorities, the District Council is responsible for waste collection and the County Council is responsible for waste disposal. Telford & Wrekin Council has entered into a contract with Veolia for both waste collection and disposal, which includes operation of the Community Recycling Centres. This will involve a new purpose built CRC and waste transfer station at the Hortonwood industrial estate and improvements to the existing Halesfield CRC site. The CRC site at Granville is not covered by the contract with Veolia and its operation will be subject to review between 2014 and 2019. The existing CRC at Ketley will be closed by 2019 and replaced by a new site adjacent to the new Hortonwood transfer station.

The Council’s Municipal Waste Management Strategy 2005-202 contains a range of policies that need to be taken into account in developing the Waste Planning policies for the Council. In particular, it contains the following targets for the management of household waste:

- To recycle and compost a minimum of 30% of household waste by 2009
- To recycle and compost a minimum of 40% of household waste by 2010
- To recycle and compost a minimum of 45% of household waste by 2015

## 2. Sources of Data

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### 2.1 WasteDataFlow

Data on waste arisings varies greatly in quality, depending on how it is managed and therefore how it is measured. Waste that is collected by Local Authorities is measured accurately for a number of reasons, largely relating to the targets that were set for Local Authority performance in terms of reducing the amount of waste that was sent to landfill. Performance indicators for the amount of waste sent for recycling and composting also meant that measurements of the amount of waste handled needed to be gathered. Although these performance indicators are no longer in use, the data is still an important tool for Local Authority Waste Managers. Providing the information remains a statutory requirement as it informs on progress towards meeting national targets.

These measurements are collated through the WasteDataFlow system which is managed by Defra. Accurate information on the amount of waste collected by the Waste Management Department of Telford & Wrekin Council is therefore available for a number of past years.

## **2.2 Waste Data Interrogator (WDI)**

The Waste Data Interrogator is a database produced by the Environment Agency from records submitted by the operators of waste management facilities that operate under the Environmental Permitting system. Such operators submit regular returns containing data on the quantity, type and source of waste that is managed by their permitted facilities and this information is collated by the Environment Agency.

The quality of this database has improved significantly over the years and the Environment Agency makes considerable efforts to clean and quality assure the data. However errors can still enter the system if the original data provided by operators is inaccurate. A new electronic method of submitting data to the EA has recently been launched, known as the Electronic Duty of Care or EDoC. It is hoped that the ability to enter information on hand-held devices on site rather than on paper copies will improve the quality and timeliness of the data. However, EDoC is a voluntary system and many operators have not yet taken up the opportunity to use it.

The main drawback of the Waste Data Interrogator is that it only contains information on the waste that is managed by facilities that require a Permit. A significant quantity of waste is managed in facilities that are exempt from Permitting, because the operation involved is regarded as low risk. Most inert waste is therefore processed at exempt facilities and therefore very little information is available for this type of waste. Material that is “back-hauled” such as cardboard from supermarkets may also never be taken to a “waste management facility” as such, but rather go straight to a re-processor. This waste does not feature in the WDI, although arguably it is being managed sustainably and does not pose a risk to the environment or human health and therefore does not need significant regulation by the Environment Agency.

The WDI useful to assess the throughput of individual waste management facilities and also to understand the origin of waste managed at particular facilities in terms of geographical location.

## **2.3 Waste management officers**

Local authority waste management officers in Waste Collection Authorities are the source of the information in WasteDataFlow. Officers in both Collection and Disposal Authorities also possess extensive information on the facilities used for the management of Local Authority Collected Waste. There is no equivalent single source of information for waste collected from the business sector.

## **2.4 Other research**

Waste that is generated by businesses and collected by private waste management companies is not systematically measured or collated for public use. The information on Commercial & Industrial waste arisings therefore comes from surveys that have been carried out at intervals over the years. The surveys that are available are as follows:

- 1) Strategic Waste Management Survey for England, Environment Agency (2002/3)
- 2) Survey of C&I Waste Arisings in the North West, for the North West RTAB (2006)

- 3) Survey of C&I Waste Arisings in the North West. Environment Agency (2009)
- 4) C&I Survey for England, Defra (2009)
- 5) Scottish Business Waste Survey, SEPA (2011)
- 6) Survey of Industrial & Commercial Waste in Wales, Natural Resources Wales (2012)

These surveys have the drawback that they use slightly different methodologies and it is therefore not easy to make direct comparisons between them.

There have also been a number of studies of the existing and future waste management capacity in England. A report from Defra in 2013 concluded that there was sufficient residual waste management capacity in England and that further Government investment was therefore not required to bring forward additional capacity to meet the requirements of the Waste Framework Directive<sup>1</sup>.

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<sup>1</sup> <https://www.gov.uk/government/publications/forecasting-2020-waste-arisings-and-treatment-capacity>

### 3. Assessing the Quantity of Waste Arising

#### 3.1 Local Authority Collected Waste – Current Arisings

Information from WasteDataFlow provides the management route for quantities of waste collected by local authorities, including the type of treatment used. This refers to all Local Authority Collected Waste (LACW) and includes all waste and recycling streams collected by local authorities and includes:

- Kerbside collected household waste and recycling
- Community Recycling Centre waste and recycling
- Street cleansing, sweepings and litter
- Bring recycling banks
- Bulky waste collections from householders
- Commercial waste and recycling collections carried out by the local authority.

The overall quantity of LACW arising in the Telford & Wrekin area has reduced over recent years in common with national trends. The reasons for this are not fully understood but are likely to include the following factors:

- Economic recession;
- Resource efficiency by retailers and manufacturers, including the use of lighter-weight packaging;
- Environmental education of householders and the wider public to encourage waste reduction.

However this reduction has plateaued in the most recent year for which data is available as shown Table 1 and Figure 1.

**Table 1: Historic Quantities of Local Authority Collected Waste in Telford and Wrekin**

Year	2009/10	2010/11	2011/12	2012/13	2013/14
Total collected (tonnes)	89,446	88,680	85,991	82,111	82,204
Total recycling (tonnes)	35,064	37,157	35,402	33,633	34,446
Total residual (tonnes)	54,382	51,523	50,589	48,479	47,758
LACW recycling rate	39.20%	41.90%	41.17%	40.96%	41.90%

**Figure 1: Historic Total Quantities of Local Authority Collected Waste in Telford and Wrekin**

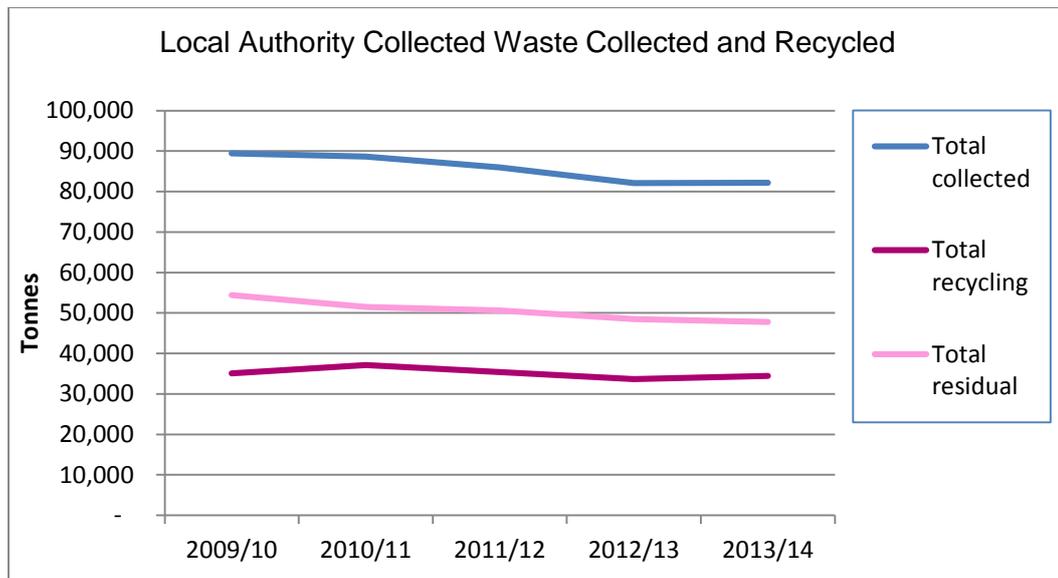


Table 2 shows the total quantity of dry recyclables and organic waste collected through kerbside collections and from Community Recycling Centres:

**Table 2: Historical Local Authority Collected Waste Arisings in Telford and Wrekin – Kerbside and Community Recycling Centres**

Year	2009/10	2010/11	2011/12	2012/13	2013/14
<b>Total Kerbside Collection</b>	<b>57,568</b>	<b>58,813</b>	<b>58,401</b>	<b>58,760</b>	<b>57,755</b>
Total Kerbside Recycling	23,900	25,982	25,385	25,220	23,365
Kerbside Dry	10,950	12,557	12,547	11,453	8,989
Kerbside Green	12,941	13,268	12,726	13,767	14,376
Kerbside Residual	33,668	32,832	33,016	33,540	34,390
<b>Total CRCs</b>	<b>23,087</b>	<b>20,889</b>	<b>20,219</b>	<b>16,198</b>	<b>17,139</b>
Total CRCs Recycling	9,974	10,200	9,710	8,090	10,774
<i>CRC recycling rate</i>	<i>43.20%</i>	<i>48.83%</i>	<i>48.02%</i>	<i>49.94%</i>	<i>62.86%</i>
Green waste only	2,238	1,920	1,719	1,324	1,416
CRC dry recycling	7,736	8,280	7,991	6,766	9,358
<b>Total dry recycling</b>	<b>18,686</b>	<b>20,837</b>	<b>20,538</b>	<b>18,219</b>	<b>18,347</b>
<b>Total green waste</b>	<b>15,179</b>	<b>15,188</b>	<b>14,445</b>	<b>15,091</b>	<b>15,792</b>

The CRC recycling rate in Table 2 includes rubble separated for recycling. There was an increase in rubble recycling from 2012/13 to 2013/14 of approximately 1,000 tonnes per annum. A small additional quantity

of waste is also collected from street sweepings, which causes a slight discrepancy between the totals in Tables 1 and 2.

## 3.2 Commercial and Industrial Waste

Ascertaining the quantity of commercial and industrial (C&I) waste arisings is more problematic in comparison to LACW arisings (Section 3.1). This is because C&I waste arisings are not recorded systematically in the way that LACW arisings are recorded through WasteDataFlow. Instead it is necessary to estimate arisings of C&I waste with reference to national surveys which have been published in recent years in England, Wales and Scotland. Relevant aspects of these surveys and the methodology applied for estimating C&I waste arisings in Telford and Wrekin are discussed below.

### 3.2.1 Defra, Survey of Commercial and Industrial Waste Arisings 2010 – final results<sup>2</sup>

The results presented in the Defra report are based on the combination of results from the Survey of Commercial and Industrial Waste Arisings for 2009 combined with data from the North West of England Commercial and Industrial Waste Survey for 2008/9, published in March 2010.

The main survey questioned 6,005 businesses between June and October 2010. The data was mainly collected through face-to-face and telephone interviews, additional data was gathered from the Environment Agency (Pollution Prevention & Control data) and from company head offices (corporate data).

Business sectors covering agriculture, mining, construction & demolition were excluded from the study. The justification given is that these businesses generate large tonnages, much of which is inert, e.g. quarry spoil or rubble, and managed within the boundaries of the site in which they arise.

Overall, the C&I waste arisings in England were found to have decreased by an estimated 19.9mt, from 67.9mt to 48.0mt between 2002/3 and 2009, a decrease of 29%. Over the same period the total business population rose by over 10%. The results are tabulated across twelve business sectors and, ten different types of waste and a single non-waste category giving a total of 132 data points.

The precision for the total waste arisings figure was 7.6% at a 95% confidence interval. The report further provides tabulated data for the type of management method, e.g. landfill, for each sector's waste.

The data provides national and regional data, including the West Midlands, but not specific figures for Telford and Wrekin.

### 3.2.2 Natural Resources Wales, Survey of Industrial & Commercial Waste Generated in Wales 2012<sup>3</sup>

The purpose of this study was to produce information on the quantities, origins (by industry sector and geographic region), and fate (management method) of C&I and construction and demolition (C&D) wastes generated by businesses in Wales in 2012.

Data was collected from 1,540 business sites of differing sectors and sizes throughout Wales between July 2013 and December 2013 using a structured interview process and developed questionnaire. The data was grossed up using population data to regional and national level in Wales.

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<sup>2</sup> <https://www.gov.uk/government/publications/commercial-and-industrial-waste-generation-and-management>

<sup>3</sup> <http://naturalresourceswales.gov.uk/our-work/policy-advice-guidance/waste-Policy/industrial-and-commercial-waste-generated-wales/?lang=en#>

The following were excluded from the survey:

- businesses involved in agriculture, forestry & fishing, mining or quarrying, and construction;
- businesses involved in waste management and recycling (to avoid potential double counting);
- wastes produced by sewerage treatment; and,
- construction and demolition wastes (surveyed using a different survey methodology and questionnaire - work is reported separately).

Analysis of this data concluded that in 2012 Welsh industrial and commercial sectors generated an estimated 3.7 million tonnes of waste split 55%:45% between industrial and commercial businesses. These results were found not to be significantly different to the previous 2007 results. The results are tabulated across 25 C&I economic sectors and ten types of waste, resulting in 250 data points.

The precision for the total waste generated was +/- 7.9% at 90% confidence. The report further provides tabulated data for the type of management method, e.g. landfill, for each sector's waste.

### 3.2.3 SEPA, Statistical Analysis of Scotland Business Waste Survey Data for 2010, January 2012<sup>4</sup>

Prior to 2011, SEPA collected data on the wastes produced by businesses by directly surveying businesses. A representative sample of businesses was surveyed in the years 2004 and 2006 using online and/or paper questionnaires. After verifying the returns, the data were statistically analysed to provide estimates of the types and quantities of waste produced by all businesses in Scotland. The data for 2004 and 2006 were extrapolated to produce estimates for 2005, 2007, 2008, 2009 and 2010.

The survey excludes some categories of waste, listed in Table 3.

**Table 3: Excluded economic sectors from Scottish C&I waste arisings estimates**

SIC 2007	Description
1	Crop and animal production, hunting and related service activities
2	Forestry and logging
41-43	Construction

The total waste arisings from commercial and industrial businesses in Scotland were estimated to be 6.50 million tonnes in 2010. This included 4.70 million tonnes of commercial waste and 1.80 million tonnes of industrial waste.

Results prior to 2011 are tabulated across 23 business sectors and 51 waste categories (including splits be hazards and non-hazardous waste), giving 1,173 data points and offering a more detailed picture of waste composition than the equivalent English or Welsh data sets. The precision on the total national estimate for 2010 waste arisings was +/-11.5% at 90% confidence.

### 3.2.4 Selection of dataset for estimating C&I waste arisings

In order to gain as much insight as possible into future C&I waste arisings in Telford and Wrekin SEPA's Statistical Analysis of Scotland Business Waste Survey Data for 2010 was selected.

Whilst the SEPA 2010 data is not the latest dataset available, the reporting is detailed enough to allow accurate alignment with ONS business data and also provides a detailed split of waste types. In particular, several waste categories are divided into 'hazardous' and 'non-hazardous'. Given that, in general,

<sup>4</sup> [http://www.sepa.org.uk/waste/waste\\_data/commercial\\_industrial\\_waste/business\\_waste\\_arisings.aspx](http://www.sepa.org.uk/waste/waste_data/commercial_industrial_waste/business_waste_arisings.aspx)

hazardous waste is more expensive to handle, store and treat/dispose than non-hazardous waste, this is a useful distinction to be able to make.

As SEPA's later 2011 survey merged previously separately reported economic sectors into ten broad categories and used 33 waste categories – providing less than 30% of the data points that the 2010 survey provides, it was not used.

### 3.2.5 Commercial and industrial waste estimation methodology

The approach used to estimate C&I waste arisings by economic sector and by waste type in Telford and Wrekin in 2013 was to:

- derive average tonnages of wastes per Scottish-located business for each economic sector reported,
- then multiply the average tonnages by the number of 'local units' (sites that belong to an enterprise) in each corresponding economic sector in Telford and Wrekin in 2013.

The formula used was:

$$\frac{\text{Scottish C\&I waste in a particular sector, 2010 (tonnes)}}{\text{No. of Scottish local units in the corresponding sector, 2010}} \times \text{No. of Telford \& Wrekin local units in the corresponding sector, 2013}$$

Standard Industrial Classification (SIC) codes provided the common nomenclature to align In order for this approach to be successful it is necessary to align the Scottish and Telford & Wrekin economic sectors to each other.

### 3.2.6 Baseline estimate for C&I arisings in Telford and Wrekin

By using SEPA 2010 survey report data, the headline estimate of business waste in Telford and Wrekin in 2013, excluding agriculture, quarrying & mining and construction is 205,000 tonnes, of which 13,440 tonnes (6.6%) is hazardous. According to the Waste Data Interrogator, agricultural waste arising in Telford & Wrekin in both 2011 and 2012 was less than 1,000 tonnes. However, the anaerobic digestion facility at Harper Adams did import some agricultural waste from other authorities.

Broken down by economic sector the 'retail, wholesale and waste scrap' sector is the largest producer of waste (estimated 57,430 tonnes), the next largest being the 'chemicals' sector at 23,100 tonnes, as illustrated in Figure 2 below.

When calculating estimates of the arisings of the types of waste for Telford and Wrekin it was found that the waste category 'household and similar wastes' was the dominant category – over 400% larger than the second-largest category. In order to derive more useful figures this estimate was divided by a typical household waste composition analysis and distributed to other waste categories by best-fit from its description, as illustrated in Figure 3.

An overall visual representation of waste types and their origin is presented in Figure 4.

Figure 2: Estimated waste arisings in Telford and Wrekin by business sector, 2013

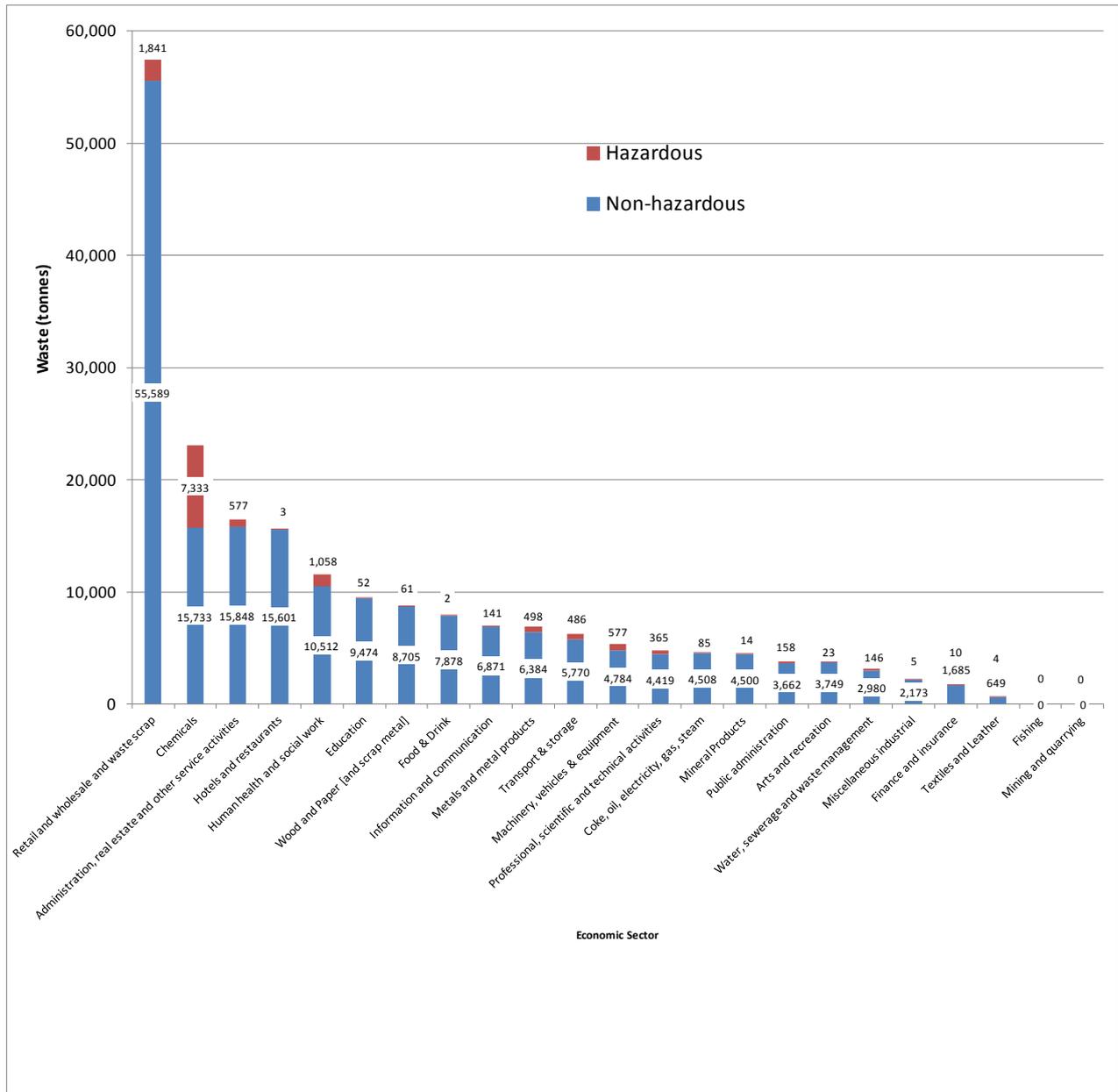


Figure 3: Estimated waste arising in Telford and Wrekin by waste type, 2013

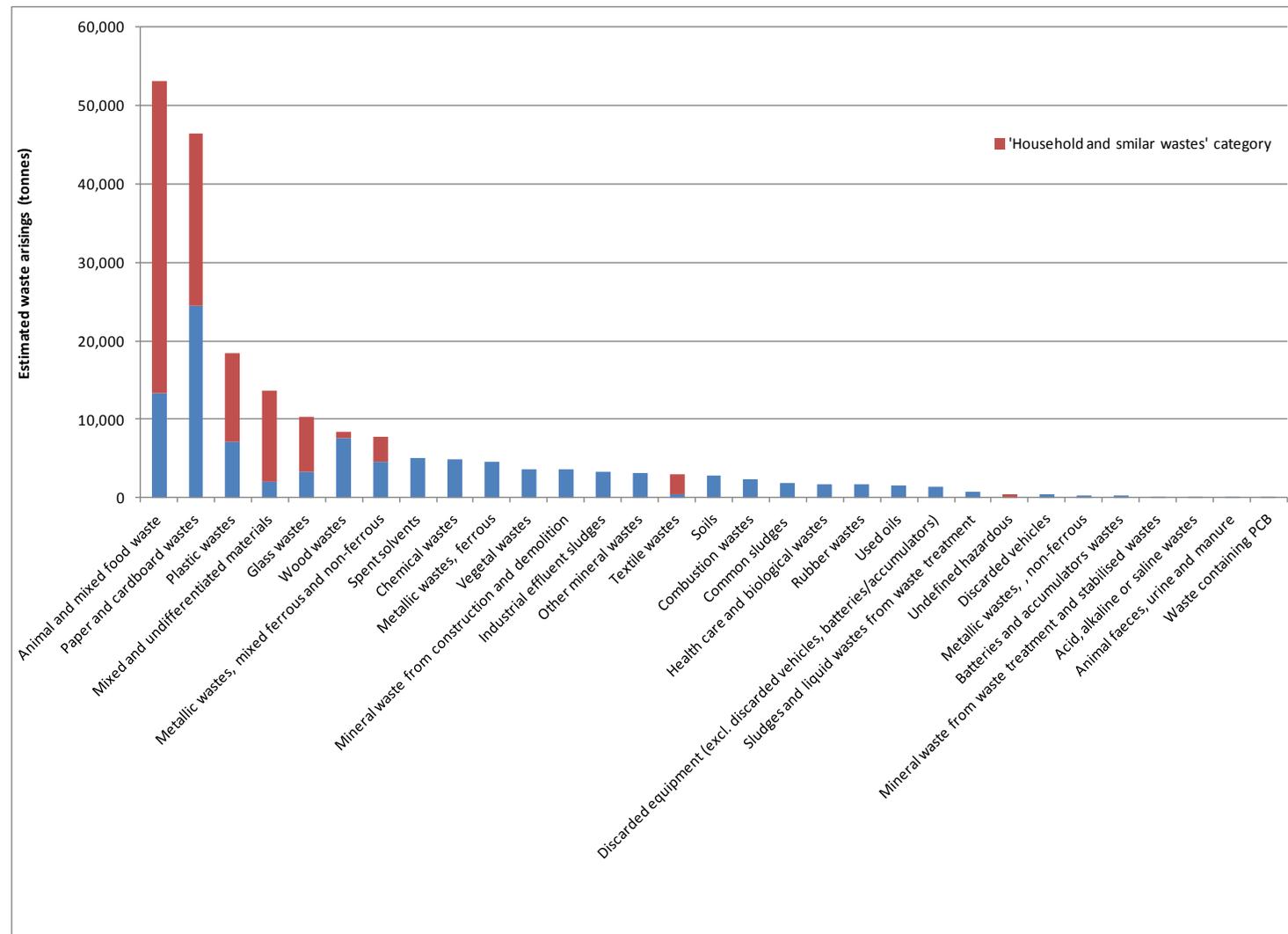
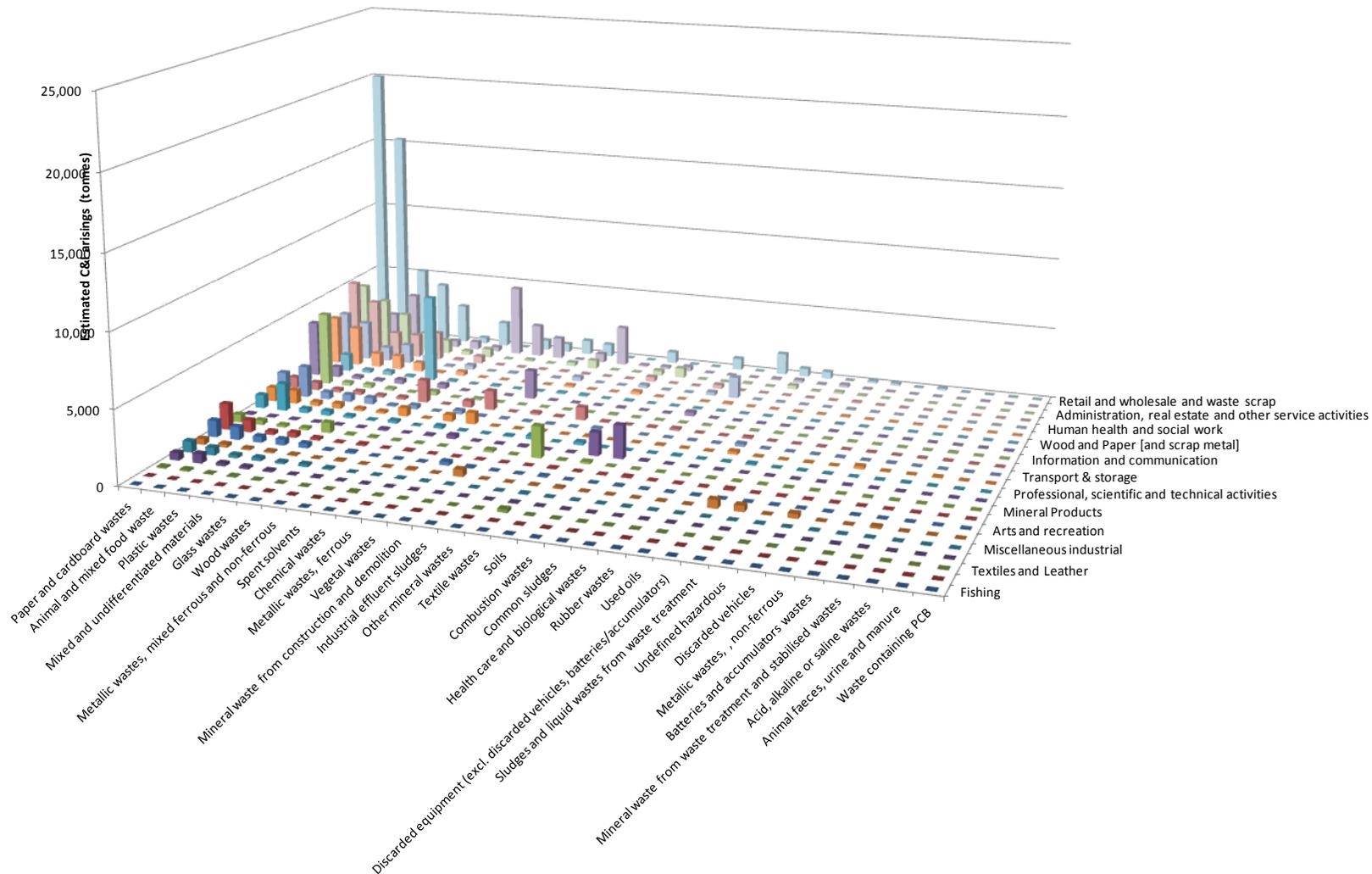


Figure 4: Estimated waste arising in Telford and Wrekin by sector and waste type, 2013



Using the Scottish C&I Waste Survey, it is estimated that total C&I arisings in 2013 in Telford & Wrekin were approximately 205,000 tonnes.

The composition of this was calculated to be as follows, with the wastes divided into categories relating to whether they are likely to be currently recycled or composted (reported separately in C&I surveys) or disposed (reported as mixed waste, or reported separately and likely to be disposed due to type of waste).

Waste type	Dry recyclable	Green / organic	Total recyclable or compostable	Residual	Total
Tonnes (approximate)	64,400 (31.35% of total)	27,300 (13.31 % of total)	91,700 (44.64% of total)	113,700 (55.36%)	<b>205,400</b>

It can be seen from this table that approximately 45% of the C&I waste arisings in the Plan area is currently estimated to be recycled or composted.

The figure indicates that the bulk of the tonnage of C&I waste arisings in Telford and Wrekin come from a minority of economic sectors and are, in general, a limited to a relatively small range of waste types out of all the possible permutations.

### 3.2.7 Limitations of C&I estimation methodology

There are some limitations with the method used for estimating C&I waste arisings in Telford and Wrekin, summarised as follows:

- There has not been a primary data gathering exercise for C&I waste generators in Telford and Wrekin, instead we have estimated the arisings from other published data
- ONS business data is rounded to the nearest five local units and does not capture businesses that are not VAT or PAYE registered.
- The 2010 survey data was taken in a periods that was just emerging from the deepest economic recession since 1930s. This may be viewed as atypical and outside of the normal business cycle, so is likely to have affected business activity, and as a result C&I waste tonnages. It also may have reduced willingness to participate.
- SEPA data for 2010 was based on survey data from 2006. The report considered that waste arisings from businesses could be decreasing, and it is likely that results from this study may have over-estimate Scotland's business waste arisings for 2010.

## 3.3 Construction, Demolition and Excavation Waste

The quantity of Construction, Demolition and Excavation Waste (CDEW) is extremely difficult to measure. There is no central record of how much of this material is created by the construction industry and the data that does exist is not collated on a geographical basis. It is therefore not possible to measure accurately the quantity of this type of waste arising in the Telford & Wrekin area.

It particular, much of this type of waste is not managed at Permitted facilities and therefore there is no information on this waste stream recorded in the Waste Data Interrogator. It should be recognised however, that this may also indicate that most waste from construction activities is being sustainably managed by the industry, either on site or at alternative construction sites.

WRAP commissioned a study into CDEW in England<sup>5</sup> using data from 2008 and this gives an overall figure of 86.93 million tonnes of CDEW as shown in the table below. This can be used as a starting point for the calculation of arisings within the Plan area.

It should be noted that there was a significant downturn in construction activity in 2008 and that this will have an impact on the figures used. It is also important to note that the quantity of waste arising from demolition can vary very significantly depending on the amount of planning that is put into the operation. The outputs can therefore be negligible by separating out different materials and soils and re-using these. Alternatively, if a demolition operation is carried out with very little pre-planning, materials will be mixed and usually be taken to landfill.

**Table 4 Estimated arisings of CDEW in 2008 in England (million tonnes)**

Year	2008
'Hard inert' CDEW generating recycled aggregate	43.52
Inert CDEW recovered as recycled soils	9.21
Waste (mainly excavation waste) spread on exempt sites	10.98
Mainly inert CDEW beneficially used for landfill engineering / capping or to restore former quarries	10.60
Other largely inert CDEW deposited at landfills as waste	8.93
<b>Sub-total (largely inert CDEW) A</b>	<b>83.24</b>
of which deposited at permitted landfills B	19.53
Non-inert CDEW deposited at permitted landfills as waste	2.87
Non-inert CDEW sent for external recovery	0.82
<b>Total Arisings</b>	<b>86.93</b>

Total employment in Telford & Wrekin is 0.27% of the England total. Using these figures from the survey for England, the total quantity of CDEW that managed can be estimated as 0.27% of 86.93 million tonnes which equates to 237,250 tonnes in 2008.

Information can also be extracted from the Waste Data Interrogator for construction waste as follows:

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<sup>5</sup> Construction, Demolition and Excavation Waste Arisings, Use and Disposal for England 2008, WRAP

Quantity of construction waste from the Plan area deposited in inert landfill (source: WDI):

Year	2010	2011	2012
Quantity sent to landfill originating in Telford & Wrekin (tonnes)	153,854	215,626	187,710

The destination of this material was the single inert waste landfill site in Telford & Wrekin which is Blockleys Brick Works on Somerfield Road. This site also accepted significant quantities of construction waste from outside Telford & Wrekin. This implies that a significant amount of waste generated from the construction industry is recycled or re-used rather than being sent to landfill. Estimates of recycling levels of CDEW vary from 50% to 96%, depending of the level of planning that is put into a project before commencement. In managing CDEW arisings, it is therefore preferable to encourage builders and demolition contractors to focus on early planning of demolition rather than seeking to develop additional sites for sorting, bulking and crushing CDEW after demolition has occurred.

### 3.4 Hazardous Waste

Waste is classified as “Hazardous Waste” if it has characteristics that make it harmful to human health, or to the environment, either immediately or over an extended period of time. The European Union Hazardous Waste Directive gives an extensive list of these wastes drawn up by the European Commission, because they possess one or more of the hazardous properties.

Hazardous wastes are by their nature specialist waste streams which require particular processes for their treatment. In order for the facilities that manage hazardous wastes to be economic, they have to be of a minimum size and to gather waste from a wide geographical range. It is therefore unusual for most Waste Planning Authorities to be self-sufficient in the management of this waste stream.

Hazardous waste is a sub-category of the other types of waste as wastes within these categories can contain materials that are hazardous.

Data on hazardous waste arisings and fates is provided in the Hazardous Waste Interrogator which is produced by the Environment Agency.

The total quantity of hazardous waste arising in Telford & Wrekin in 2012 was 6,540 tonnes. This was managed as shown in the table below:

**Table 5: Fate of Hazardous Waste Arising in Telford & Wrekin**

Fate	Tonnes Managed	Tonnes Transferred
Incineration without energy recovery	42	
Landfill	266	
Recovery	1,907	
Transfer (for disposal)		1,342
Transfer (for recovery)		1,609
Treatment	4,326	
<b>Total</b>	<b>6,541</b>	<b>2,951</b>

### 3.5 Radioactive Wastes

Radioactive waste is any material that is either radioactive itself or is contaminated by radioactivity and for which no further use is envisaged. Most radioactive waste is produced from nuclear power stations and the manufacture of fuel for these power stations. This is referred to as “nuclear waste.”

Radioactive waste also arises from nuclear research and development sites. Some also arises from Ministry of Defence sites and medical, industrial and educational establishments. This is sometimes referred to as “non-nuclear waste”.

This waste stream is divided into four categories as follows:

- **High Level Wastes (HLW)**  
 These are highly radioactive materials that generate substantial amounts of heat. HLW is the product from reprocessing spent nuclear fuel at Sellafield in Cumbria. It arises as highly radioactive nitric acid, which is converted into glass within stainless steel containers in a process called vitrification which is carried out at Sellafield. If declared a waste, spent fuel can also be categorised as HLW.
  
- **Intermediate Level Wastes (ILW)**  
 These are wastes with radioactivity levels that are higher than for Low Level Waste, but which do not require heating to be taken into account in the design of management facilities. ILW is sufficiently radioactive to require shielding and containment. It arises mainly from the reprocessing of spent fuel and from operations and maintenance at nuclear sites, including fuel casing and reactor components, moderator graphite from reactor cores, and sludges from the treatment of radioactive effluents.
  
- **Low Level Wastes (LLW)**  
 These are radioactive wastes other than that suitable for disposal with ordinary refuse. Radiation levels do not exceed 4 gigabecquerels per tonne of alpha activity, or 12 gigabecquerels per tonne of beta or gamma activity. (A Becquerel is the unit of radioactivity, representing one disintegration per second.) Unlike HLW and ILW, LLW does not normally require shielding during handling or transport. LLW consists largely of paper, plastics and scrap metal items that have been used in hospitals, research establishments and the nuclear industry. As nuclear plants are decommissioned, there will also be large volumes of this type of waste arising in the form of soils, concrete and steel. LLW represents about 90% by volume of UK radioactive wastes but contains less than 0.0003% of the radioactivity.
  
- **Very Low Level Wastes (VLLW)**  
 This is a sub-category of LLW, consisting of the same sorts of materials, and divided into Low Volume (“dustbin loads”) and High Volume (“bulk disposal”). Low volume VLLW can be disposed of to unspecified destinations with municipal, commercial or industrial waste. High volume VLLW can be disposed of to specified landfill sites and controlled as specified by the environmental regulators.

The policy on management of radioactive waste is being developed jointly by the Environment Agency and the Office for Nuclear Regulation which is an agency of the Health and Safety Executive (HSE).

Radioactive waste is not classified as “hazardous waste” by the Environment Agency and no data on arisings and their destinations is held by the EA, as there is a different regime for its regulation.

Most material is either Low Level or Very Low Level and can be disposed of at non-hazardous waste management facilities, such as landfill or thermal treatment facilities. Unfortunately, at present, waste producers of low volume VLLW do not have to identify which landfill site or incinerator is used for disposal of this material. It is likely that the low level material is finding their way to local non-hazardous landfill sites at present and that higher level radioactive waste is being managed at the available sites in Lancashire and Cumbria. Because the quantities involved are likely to be very small, these exports will not have a significant impact on the waste management strategies of these Waste Planning Authorities.

#### 4. Movements of Waste into and out of Telford and Wrekin

The Environment Agency Waste Data Interrogator (WDI) provides some data on movements of waste between waste planning authority areas. The WDI is based upon information supplied as returns for sites operating under waste management licences. Where material has been separated into recyclate or refuse derived fuel it is no longer considered a waste and is not counted as such by the Environment Agency. Although generally a useful dataset, not all movements give a detailed geographic waste source, and movements to those facilities exempt from waste management licencing are not reported, so the picture provided may be partial in some cases.

Telford & Wrekin is largely a net importer rather than exporter of waste. Imports of waste into the authority in 2012 were only from Shropshire and Staffordshire. Waste was sent to landfill sites as shown in the table below:

**Table 6: Waste Imported to Landfill in Telford & Wrekin in 2012 (tonnes)**

Site Name	Michelmersh Brick UK Ltd	Granville Landfill Site	Candles Landfill Site	Total non-hazardous
Waste Type	Mineral wastes	Non-hazardous	Non-hazardous	
Shropshire	22,136	18,258	135,565	<b>153,823</b>
Staffordshire	61	0	10,10	<b>10,110</b>

Candles Landfill site has an expected closure date of 2015. It is therefore apparent that efforts are being made to restore this site and that large quantities of waste are being received here for this purpose. After this date, imports of waste to Telford & Wrekin are likely to reduce significantly. It should also be noted that the energy from waste facility being developed in Shropshire is currently under construction and is expected to be commissioned in 2015. The need for waste from Shropshire to be landfilled in Telford & Wrekin will then reduce significantly.

Exports of residual waste from Telford & Wrekin in 2012 were to treatment facilities and were of minimal tonnage as follows:

Receiving Authority	Tonnes
Staffordshire	4,397
Derbyshire	105

Table 7 shows the quantities of hazardous waste that were sent to authorities outside Telford & Wrekin where the amount sent was over 10 tonnes.

**Table 7: Hazardous waste exported from Telford and Wrekin in 2012 (tonnes)**

Authority	Tonnes received
Walsall	3,002
Liverpool	1,606
Sandwell	1,078
Staffordshire	446
Stoke-on-Trent City	366
Derbyshire	323
Salford	248
Cheshire West and Chester	198
Wolverhampton	193
Birmingham City	173
Dudley	137
Nottinghamshire	135
Knowsley	126
Lancashire	118
Worcestershire	114
Warwickshire	105
Flintshire	105
Northamptonshire	99
Sefton	97
St Helens	92
West Berkshire	78
Bedford	60
Dorset	56
Stockton-on-Tees	52
Rotherham	51
Redcar and Cleveland	50
Hertfordshire	36
Tameside	20
Cheshire East	19
Bolton	18
Nottingham City	12

## 5. Waste Management Capacity

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### 5.1 Approach to assessing Capacity

Assessing the capacity of waste management facilities is not an exact science. The quantity of waste that can be treated by a facility may be limited by a number of factors:

- The size and layout of the site
- The type of equipment used
- The skill and experience of the staff running the site
- The Environmental Permit
- Restrictions on planning permission.

Environmental Permits are granted for different “size bands” of facility and charges are levied accordingly. These size bands are therefore not a good guide to the capacity of a facility.

Planning permissions for waste management facilities sometimes have maximum throughputs attached to them which are limiting factors on the available capacity. These maximum throughputs may be related to vehicle movements and hours of operation. Alternatively, new equipment or new ways of working may result in a more efficient operation and a higher annual throughput.

Other factors that can affect the actual throughput of a facility concern the market for treatment of the type offered by that facility. For example, organic wastes of particular types may be required for the efficient operation of an anaerobic digestion facility and a reliable stream of waste material must be secured. This factor can also apply to recycling and processing facilities for dry recyclable material. The most recent throughput of a facility may therefore sometimes be lower than the maximum capacity of a facility. For planning purposes, the higher figure should be used to understand the total capacity available.

The best information on the capacity of a waste management facility is therefore obtained from first-hand information from the operator. In the absence of carrying out detailed research to contact all operators, the actual throughput of a treatment facility can be obtained from the Waste Data Interrogator. Examining three years of throughputs can provide a picture of the changing throughput of a facility. The total capacity for the purposes of calculating the capacity gap is then assessed as the highest or most recent capacity of the facility.

Assessing the capacity of landfill sites demands a different approach. The total remaining void can be calculated by examining the contour of the final restored site, but settlement of non-hazardous waste can mean that the quantity of waste accommodated can alter over the life of the landfill site. In addition to this, the planning permissions for most landfill sites have a date by which restoration of the site must be achieved. An approaching end date can mean that the rate of landfilling will increase in order to achieve the necessary contours to complete the site in time.

The total remaining capacity of a landfill site therefore needs to be assessed by dividing the remaining capacity by the number of years left in the life of the site. This does not account for possible time extensions that can be applied to planning permissions, or settlement issues or changes to the contours of the restored site that are sometimes required for landscaping reasons.

## 5.2 Existing capacity in Telford and Wrekin

Given the geographical size of Telford & Wrekin, there is significant waste management capacity within the Plan area. In particular, there are two non-hazardous landfill sites that take waste from both Telford & Wrekin and Shropshire in significant quantities.

The Candles Landfill site is operated by Veolia Environmental Services who are the Council's main contractor for municipal waste services from 2014. This site is expected to be restored by 2015. - although Veolia do not use the Candles site to dispose of waste arising from the Telford and Wrekin contract and the future of this site does not have any impact on the management of Local Authority Collected Waste from Telford & Wrekin.

The other non-hazardous landfill in the Plan area is Granville Landfill site which has permission to continue operating until 2025. This site is likely to remain the main site used by the Council's contractor until transfer station capacity and residual waste treatment capacity becomes available in nearby locations (see paragraph 5.3 below).

The medium term position regarding changes to transfer capacity will also have an impact on available treatment capacity. A new waste transfer facility is planned for Hortonwood which will be designed to take approximately 95,000 tonnes per annum of residual waste and recyclables from 2016. This will allow LACW residual and recyclables to be transfer loaded and bulk delivered to treatment plants outside the borough as an alternative to the Granville Landfill currently being used.

Use of Council CRC sites by non Telford and Wrekin residents is currently under review as a significant imbalance in use in favour of Shropshire Council penalises Telford and Wrekin council. A change in policy to no longer allow use of sites by Shropshire residents could deliver significant capacity to increase reuse and recycling via the sites for Telford residents.

The following tables show the waste management facilities in the Plan area:

**Table 8: Landfill Deposited in Telford & Wrekin**

Site Type	Operator	Site Name	Tonnes deposited by Year		
			2012	2011	2010
Non Hazardous Landfill	Veolia ES Landfill Ltd	Candles Landfill Dog In The Lane, New Works, Telford	252,021	262,761	193,323
Non Hazardous Landfill	Shropshire Waste Management Limited	Granville/ Woodhouse Landfill, Grange Lane, Redhill	173,151	129,154	102,029
Inert Landfill	Michelmersh Brick UK Ltd	(Blockleys Brick Works) Sommerfeld Road, Trench Lock, Telford	209,910	260,289	165,580
Restricted Landfill	Saint Gobain Pipelines Plc	Mafeking Road, Telford		729	1,733

**Table 9: Organic Treatment Capacity in Telford & Wrekin**

Treatment	Operator	Inputs (tonnes per annum)			Annual capacity for capacity gap calculations (tonnes pa)
		2012	2011	2010	
Composting Facility	Jack Moody Limited	38,075	23,669	25,859	38,000
Biological Treatment Facility	Severn Trent Water Ltd	36,315	46,657	25,892	47,000
Anaerobic digestion facility	Harper Adams Energy Ltd	11,862	5,613		0**
<b>Total organic treatment capacity</b>		<b>86,252</b>	<b>75,939</b>	<b>51,751</b>	<b>85,000</b>

\*The Severn Trent facility is primarily for the treatment of sewage sludge, although additional capacity could be developed here for the management of other organic wastes.

\*\*There was an AD facility at Harper Adams located in Telford and Wrekin; however there was an accident there in 2014 and there are no current plans to replace the facility or build a new AD facility in Telford and Wrekin. Therefore, for planning purposes it is assumed that there is no AD treatment capacity in Telford and Wrekin.

**Table 10: Other Treatment Capacity in Telford & Wrekin**

Treatment	Operator	Inputs (tonnes per annum)			Annual capacity for capacity gap calculations (tonnes pa)
		2012	2011	2010	
Material Recycling Treatment Facility	Planet Clean Ltd	1,071	1,169	2,287	2,500
Materials Recycling Facility	S B P Ltd	16,907	16,359	8,971	17,000
Material Recycling Treatment Facility	Shropshire Waste Management Ltd ( Sita UK)	7,610			7,600
WEEE treatment facility	Xpo It ServicesLtd	258	154	116	250
HCI Waste TS + treatment + asbestos	Dean, Leslie	3,017	3,515	2,786	3,500
<b>Total other treatment capacity</b>		<b>28,863</b>	<b>21,197</b>	<b>14,160</b>	<b>30,850</b>

**Table 11: Transfer Capacity in Telford & Wrekin**

Permit Site Type	Operator	Inputs (tonnes per annum)			Annual capacity for capacity gap calculations (tonnes pa)
		2012	2011	2010	
Household Waste Amenity Site, Ketley	Telford & Wrekin Services Ltd	4,967	5,662	5,944	5,000
Household Waste Amenity Site, Newport (now closed)	Telford & Wrekin Services Ltd	729	2,494	2,125	0
Household Waste Amenity Site, Halesfield	Telford & Wrekin Services Ltd	5,321	5,903	5,891	6,000
Household Waste Amenity Site, Granville	Shropshire Waste Management Ltd (Sita)	6,000	6,000	6,000	6,000
Household, Commercial & Industrial Waste Transfer Station	Wellings Ltd (Pink Skips) <sup>6</sup>	97,949	91,138	41,267	100,000
Household, Commercial & Industrial Waste Transfer Station	Quick Skips (Telford) Ltd	1,629	3,265	895	3,300
Household, Commercial & Industrial Waste Transfer Station	Skitt, Karl	1,195		2,803	3,000
Transfer Station, Hortonwood	Veolia				95,000*
Transfer Station taking Non-Biodegradable Wastes	Lawrence, Mr G W	4,858	10,855	10,908	11,000
Hazardous Waste Transfer Station	Go Plant Ltd	7,094	4,604	3,596	7,000
Hazardous Waste Transfer Station	Wellington Insulation Co Ltd	18	9	11	20
Hazardous Waste Transfer Station	Cartwrights Waste Disposal Services Ltd	19,152	21,108	17,137	21,000
<b>Total transfer capacity</b>		<b>142,912</b>	<b>145,038</b>	<b>90,577</b>	<b>162,320</b> <b>Say, 160,000</b>

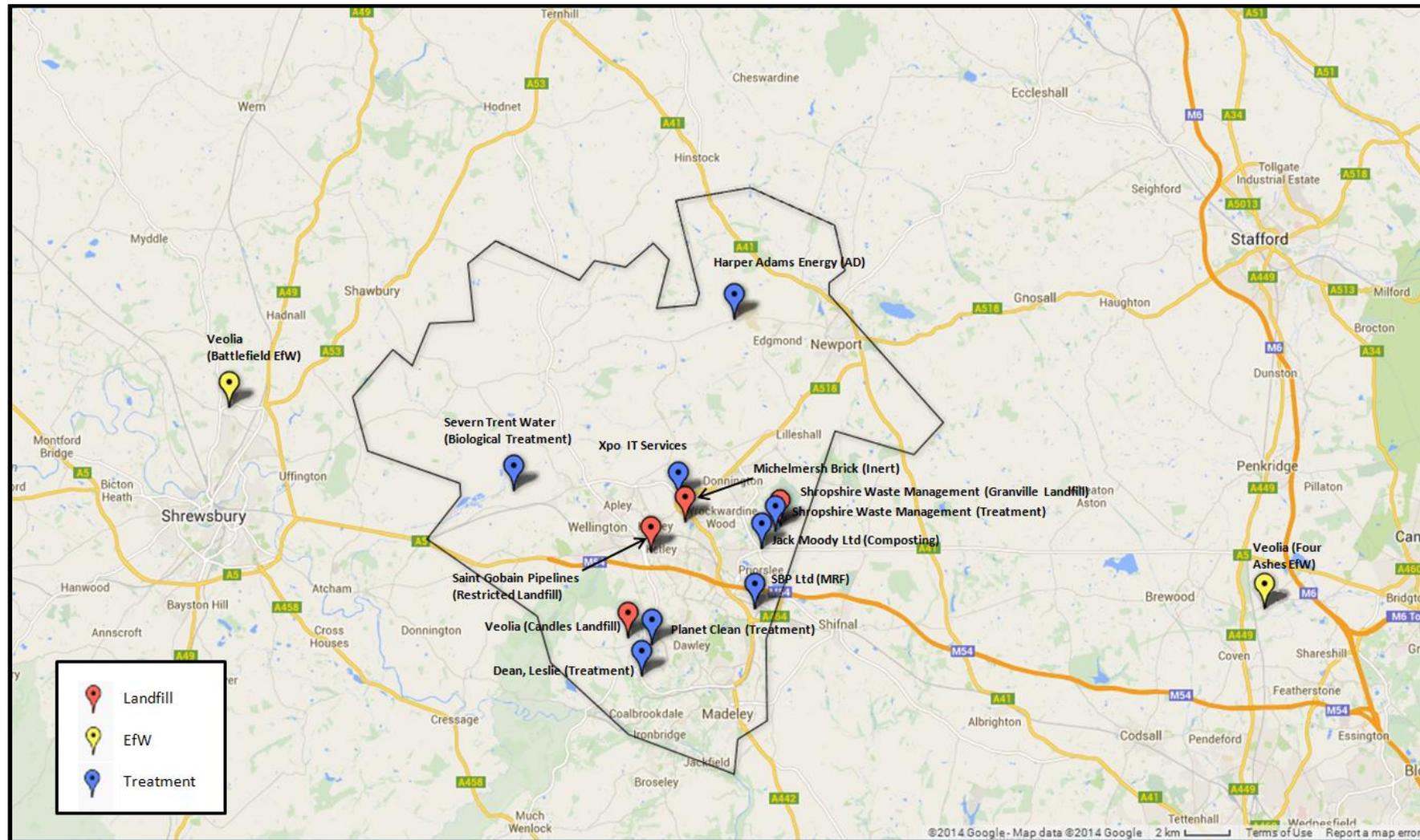
\*The facility at Ketley is due to close in 2019 and the new facility at Hortonwood providing capacity of 95,000 tonnes per annum will be open in 2019.

<sup>6</sup> Wellings Ltd went into administration in 2013 and this site is now operated by Greenways. Capacity is still available at this site.

A temporary transfer station with a capacity of up to 20,000 tonnes per annum at a site adjacent to Candles Landfill Site was granted consent in February 2014. This is intended to operate until the new facility at Hortonwood is available.

A map of the existing facilities in Telford and Wrekin is shown in Figure 5 below:

Figure 5: Map of existing waste management facilities in Telford and Wrekin



### 5.3 Other available capacity

Telford & Wrekin has historically been a net importer of waste from other Waste Planning Authority Areas. In particular, both Shropshire and Staffordshire are now in the process of delivering their own strategic Energy from Waste facilities for their own municipal waste management contracts. Both of these facilities are being developed by Veolia Environmental Services. The facility at Battlefield in Shropshire is to become operational in 2015 with a capacity of 90,000 tonnes per annum. The facility at Four Ashes in Staffordshire became operational in 2014, with a capacity of 340,000 tonnes per annum.

There is also an operational anaerobic digestion facility at Gnosall close to the boundary with Staffordshire Council operated by Lower Reule Bioenergy Ltd which treats food waste. This plant currently has a capacity of 30,000 tonnes per annum with planning permission to treat up to 45,000 tonnes per annum. The inputs to this facility are initially treated at a de-packaging plant close to Four Ashes EfW. There is an opportunity for waste from Telford & Wrekin to utilise the potential additional capacity at this plant.

There are also operational energy from waste facilities in Staffordshire, and significant additional capacity with planning permission in authorities further afield including Derbyshire, Greater Manchester and the Wirral.

It is likely that when these facilities are operational, the operators will wish to make use of the “head room” in capacity for managing waste from other areas. This may provide opportunities for both local authority collected waste and commercial and industrial waste from Telford & Wrekin to be managed at these recovery facilities.

## 6. Forecasting Waste Arisings

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### 6.1 Forecasting Local Authority Collected Waste Arising

Clearly, forecasting waste arisings into the future is a speculative process. The recent reduction in overall arisings was not predicted in the years before it happened and the reasons for this reduction are not well understood. Therefore a number of different scenarios have been considered for future arisings of Local Authority Collected Waste as follows:

Scenario name	Description
Scenario 1	1% annual decrease in LACW arisings per household.
Scenario 2	Static LACW arisings per household.
Scenario 3	2% annual increase in LACW arisings per household.

Scenario 1 (1% annual decrease per household) is based on recent trends in household waste arisings and is broadly in line with the average rate of decrease in total household waste and recycling arisings for England between 2000 and 2010.

Scenario 3 represents a risk averse scenario, in terms of assessing treatment capacity requirements. Although it is in contrast with the overall decrease in household arisings, more recently there is evidence that the rate of decrease has started to slow, possibly in line with increasing economic activity. The 2% annual increase in Scenario 3 is broadly in line with increases in household waste arisings in England prior to 2000 and can be considered as a scenario in which waste arisings are coupled alongside economic growth.

Scenario 2 (no increase in waste arisings per household) represents a middle case scenario.

In each case, an increase in the number of households is assumed in line with the household growth figures anticipated in the Shaping Places Local Plan, as shown in Table 12. These figures are based on using a baseline number of households of 66,700 in 2010/11 and assuming a linear annual increase in the number of households to a total of 15,555 additional households in 2030/31, .

**Table 12: Housing Projections for Telford & Wrekin**

Year	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
No of households	66,700	67,478	68,256	69,033	69,811	70,589	71,367	72,144

Year	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26
No of households	72,922	73,700	74,478	75,255	76,033	76,811	77,589	78,366

Year	2026/27	2027/28	2028/29	2029/30	2030/31
No of households	79,144	79,922	80,700	81,477	82,255

It is apparent that whether the quantity of waste generated per household increases or decreases, the increase in the total number of households in Telford & Wrekin will be a pressure leading to an increase in arisings overall.

The quantities of waste comprising organic material that could be treated at composting or anaerobic digestion facilities. These are shown separately so that the capacity required to treat this material is identified. The quantity of dry recyclables is also given for each scenario so that similarly the capacity for recycling this material can be identified.

In each scenario it is anticipated that the total combined composting and recycling rate will reach 70% by the year 2030, in accordance with latest European policy.

Tables 13 to 15 show the predicted tonnage arisings for the main LACW waste streams for each of the aforementioned scenarios. The baseline year for calculating the projections is 2013/14. This uses actual tonnages for LACW reported by Telford & Wrekin Council and then applies changes to each of the LACW waste stream tonnages for each period going forward, on the basis of household growth (Table 12) and the growth scenario applied. 2014/15 is the first period for which the various tonnage growth scenarios are predicted.

It can be seen from the tables below, that the quantities of organic material arising varies from approximately 15,700 tonnes per annum to 25,800 tonnes in 2031 in the lowest case scenario or nearly 36,000 tonnes in 2031 in the highest case scenario.

Similarly, the quantities of material that will require sorting to obtain clean recyclate vary from 19,700 tonnes in 2014 in the lowest case scenario to 29,000 tonnes or 36,200 in scenario 2, or 55,000 tonnes in the highest case scenario.

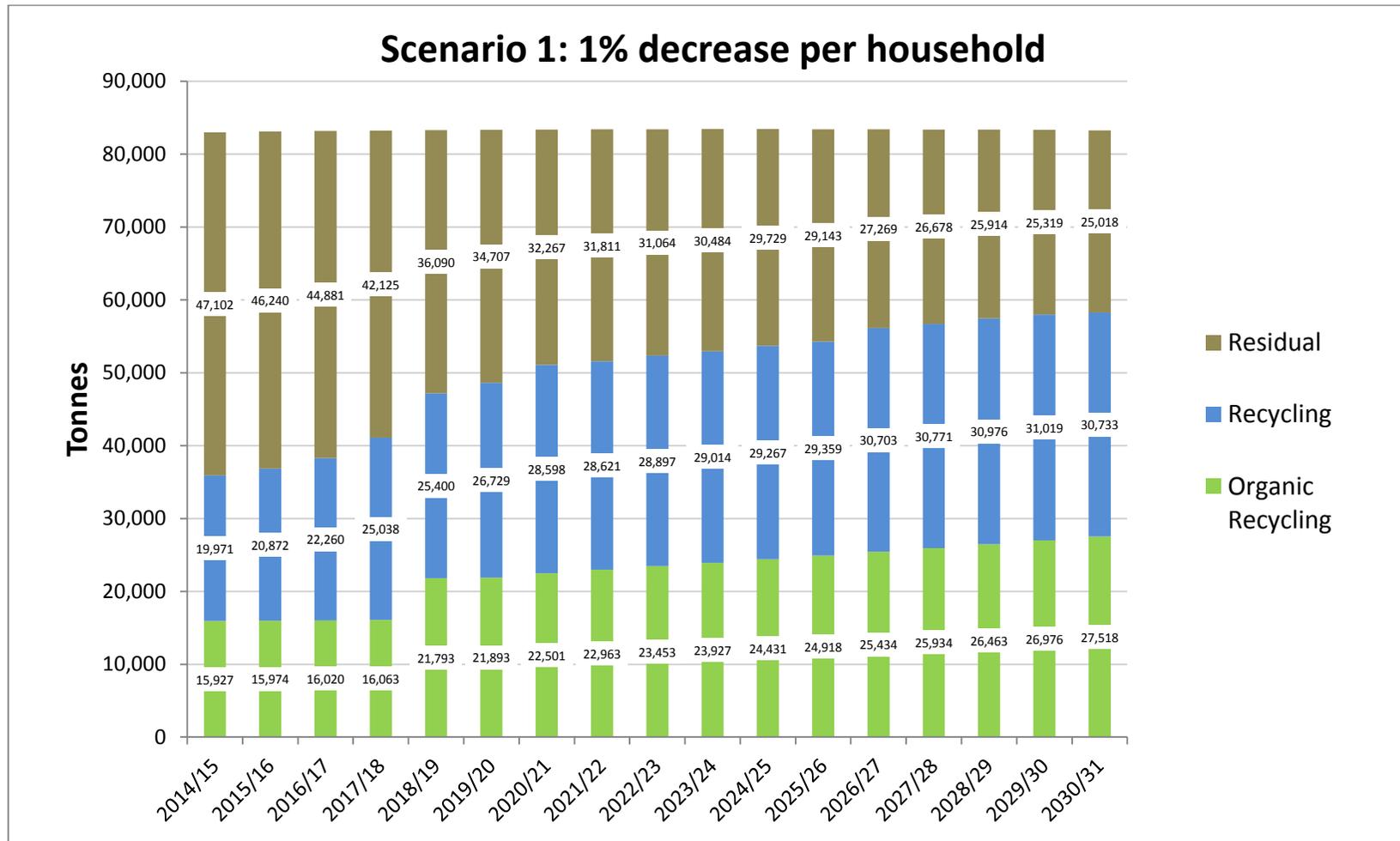
There is a significant increase in the recycling rate between 2017/18 and 2018/19. This is due to the anticipated roll-out of food waste collections, in line with the contract with Veolia, and the target of 60% recycling by 2020 included in the contract. This contract also provides for a growth of 1% per annum in dwellings and an increase of 0.5% per annum in waste tonnages for the first nine years of the contract (to 2023).

**Table 13: LACW waste arisings projections for Telford and Wrekin, Scenario 1: 1% annual decrease in LACW arisings per household**

Year	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
Organics	15,927	15,974	16,020	16,063	21,793	21,893	22,501	22,963	23,453
<i>Garden waste</i>	<i>15,927</i>	<i>15,974</i>	<i>16,020</i>	<i>16,063</i>	<i>16,105</i>	<i>16,145</i>	<i>16,305</i>	<i>16,310</i>	<i>16,336</i>
<i>Food waste</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>5,688</i>	<i>5,749</i>	<i>6,197</i>	<i>6,653</i>	<i>7,117</i>
Dry Recycling	19,971	20,872	22,260	25,038	25,400	26,729	28,598	28,621	28,897
Disposal	47,102	46,240	44,881	42,125	36,090	34,707	32,267	31,811	31,064
Total	<b>83,000</b>	<b>83,086</b>	<b>83,161</b>	<b>83,227</b>	<b>83,283</b>	<b>83,329</b>	<b>83,367</b>	<b>83,395</b>	<b>83,414</b>
<b>Recycling rate</b>	<b>43.3%</b>	<b>44.3%</b>	<b>46.0%</b>	<b>49.4%</b>	<b>56.7%</b>	<b>58.3%</b>	<b>61.3%</b>	<b>61.9%</b>	<b>62.8%</b>

Year	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Organics	23,927	24,431	24,918	25,434	25,934	26,463	26,976	27,518
<i>Garden waste</i>	<i>16,339</i>	<i>16,361</i>	<i>16,360</i>	<i>16,380</i>	<i>16,375</i>	<i>16,391</i>	<i>16,384</i>	<i>16,397</i>
<i>Food waste</i>	<i>7,589</i>	<i>8,069</i>	<i>8,558</i>	<i>9,054</i>	<i>9,559</i>	<i>10,071</i>	<i>10,592</i>	<i>11,121</i>
Dry Recycling	29,014	29,267	29,359	30,703	30,771	30,976	31,019	30,733
Disposal	30,484	29,729	29,143	27,269	26,678	25,914	25,319	25,018
Total	<b>83,425</b>	<b>83,427</b>	<b>83,420</b>	<b>83,406</b>	<b>83,383</b>	<b>83,353</b>	<b>83,314</b>	<b>83,269</b>
<b>Recycling rate</b>	<b>63.5%</b>	<b>64.4%</b>	<b>65.1%</b>	<b>67.3%</b>	<b>68.0%</b>	<b>68.9%</b>	<b>69.6%</b>	<b>70.0%</b>

Figure 6: LACW waste arisings projections for Telford and Wrekin, Scenario 1

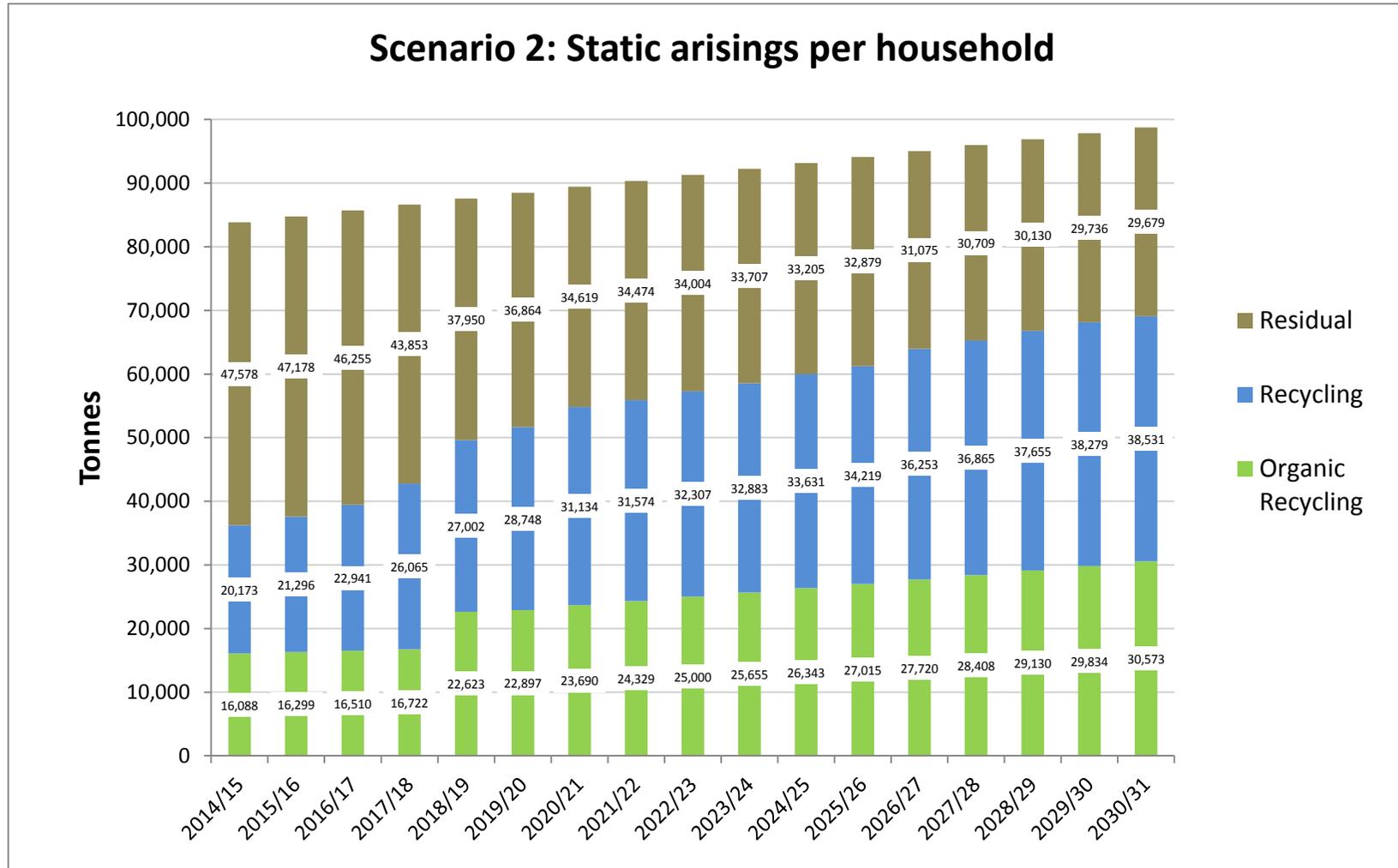


**Table 14: LACW waste arisings projections for Telford and Wrekin, Scenario 2: Static LACW arisings per household**

Year	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
Organics	16,088	16,299	16,510	16,722	22,623	22,897	23,690	24,329	25,000
Garden waste	16,088	16,299	16,510	16,722	16,877	17,090	17,431	17,609	17,811
Food waste	0	0	0	0	5,745	5,807	6,259	6,720	7,189
Dry Recycling	20,173	21,296	22,941	26,065	27,002	28,748	31,134	31,574	32,307
Disposal	47,578	47,178	46,255	43,853	37,950	36,864	34,619	34,474	34,004
<b>Total</b>	<b>83,839</b>	<b>84,773</b>	<b>85,707</b>	<b>86,641</b>	<b>87,575</b>	<b>88,509</b>	<b>89,443</b>	<b>90,377</b>	<b>91,311</b>
<b>Recycling rate</b>	<b>43.3%</b>	<b>44.3%</b>	<b>46.0%</b>	<b>49.4%</b>	<b>56.7%</b>	<b>58.3%</b>	<b>61.3%</b>	<b>61.9%</b>	<b>62.8%</b>

Year	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Organics	25,655	26,343	27,015	27,720	28,408	29,130	29,834	30,573
Garden waste	17,989	18,192	18,371	18,574	18,753	18,957	19,135	19,340
Food waste	7,666	8,151	8,644	9,146	9,655	10,173	10,699	11,233
Dry Recycling	32,883	33,631	34,219	36,253	36,865	37,655	38,279	38,531
Disposal	33,707	33,205	32,879	31,075	30,709	30,130	29,736	29,679
<b>Total</b>	<b>92,245</b>	<b>93,179</b>	<b>94,113</b>	<b>95,047</b>	<b>95,981</b>	<b>96,915</b>	<b>97,849</b>	<b>98,783</b>
<b>Recycling rate</b>	<b>63.5%</b>	<b>64.4%</b>	<b>65.1%</b>	<b>67.3%</b>	<b>68.0%</b>	<b>68.9%</b>	<b>69.6%</b>	<b>70.0%</b>

Figure 7: LACW waste arisings projections for Telford and Wrekin, Scenario 2

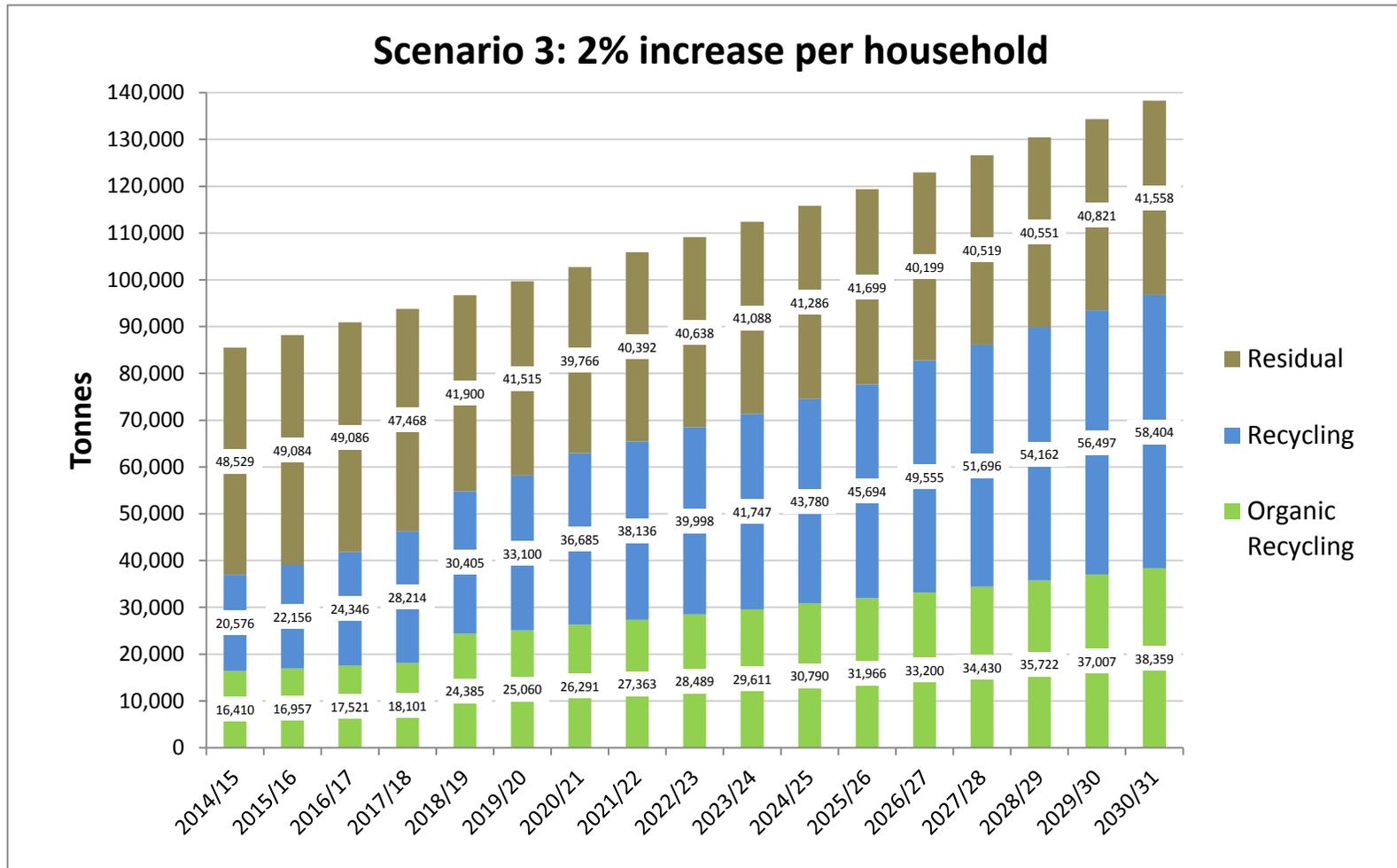


**Table 15: LACW waste arisings projections for Telford and Wrekin, Scenario 3: 2% Annual increase in LACW arisings**

Year	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
Organics	16,410	16,957	17,521	18,101	24,385	25,060	26,291	27,363	28,489
<i>Garden waste</i>	<i>16,410</i>	<i>16,957</i>	<i>17,521</i>	<i>18,101</i>	<i>18,525</i>	<i>19,138</i>	<i>19,906</i>	<i>20,509</i>	<i>21,156</i>
<i>Food waste</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>5,860</i>	<i>5,923</i>	<i>6,384</i>	<i>6,854</i>	<i>7,332</i>
Dry Recycling	20,576	22,156	24,346	28,214	30,405	33,100	36,685	38,136	39,998
Disposal	48,529	49,084	49,086	47,468	41,900	41,515	39,766	40,392	40,638
<b>Total</b>	<b>85,516</b>	<b>88,198</b>	<b>90,953</b>	<b>93,783</b>	<b>96,690</b>	<b>99,675</b>	<b>102,742</b>	<b>105,891</b>	<b>109,125</b>
<b>Recycling rate</b>	<b>43.3%</b>	<b>44.3%</b>	<b>46.0%</b>	<b>49.4%</b>	<b>56.7%</b>	<b>58.3%</b>	<b>61.3%</b>	<b>61.9%</b>	<b>62.8%</b>

Year	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Organics	29,611	30,790	31,966	33,200	34,430	35,722	37,007	38,359
<i>Garden waste</i>	<i>21,792</i>	<i>22,477</i>	<i>23,149</i>	<i>23,872</i>	<i>24,581</i>	<i>25,345</i>	<i>26,094</i>	<i>26,901</i>
<i>Food waste</i>	<i>7,819</i>	<i>8,314</i>	<i>8,817</i>	<i>9,328</i>	<i>9,848</i>	<i>10,376</i>	<i>10,913</i>	<i>11,458</i>
Dry Recycling	41,747	43,780	45,694	49,555	51,696	54,162	56,497	58,404
Disposal	41,088	41,286	41,699	40,199	40,519	40,551	40,821	41,558
<b>Total</b>	<b>112,446</b>	<b>115,856</b>	<b>119,358</b>	<b>122,954</b>	<b>126,645</b>	<b>130,435</b>	<b>134,326</b>	<b>138,320</b>
<b>Recycling rate</b>	<b>63.5%</b>	<b>64.4%</b>	<b>65.1%</b>	<b>67.3%</b>	<b>68.0%</b>	<b>68.9%</b>	<b>69.6%</b>	<b>70.0%</b>

Figure 8: LACW waste arisings projections for Telford and Wrekin, Scenario 3



The ranges of LACW arisings predictions for Scenarios 1, 2 and 3, for residual, organics and dry recycling streams, are illustrated in Figures 9, 10 and 11 respectively.

It is recommended that the middle scenario is the most plausible for planning purposes and that the capacity required to achieve maximum diversion rates from the Local Authority Waste collected of approximately 31,000 tonnes of organic processing capacity, approximately 39,000 tonnes of dry recycling capacity and approximately 30,000 tonnes per annum of residual waste management capacity.

**Figure 9: Range of predicted tonnages for LACW residual waste in Telford and Wrekin**

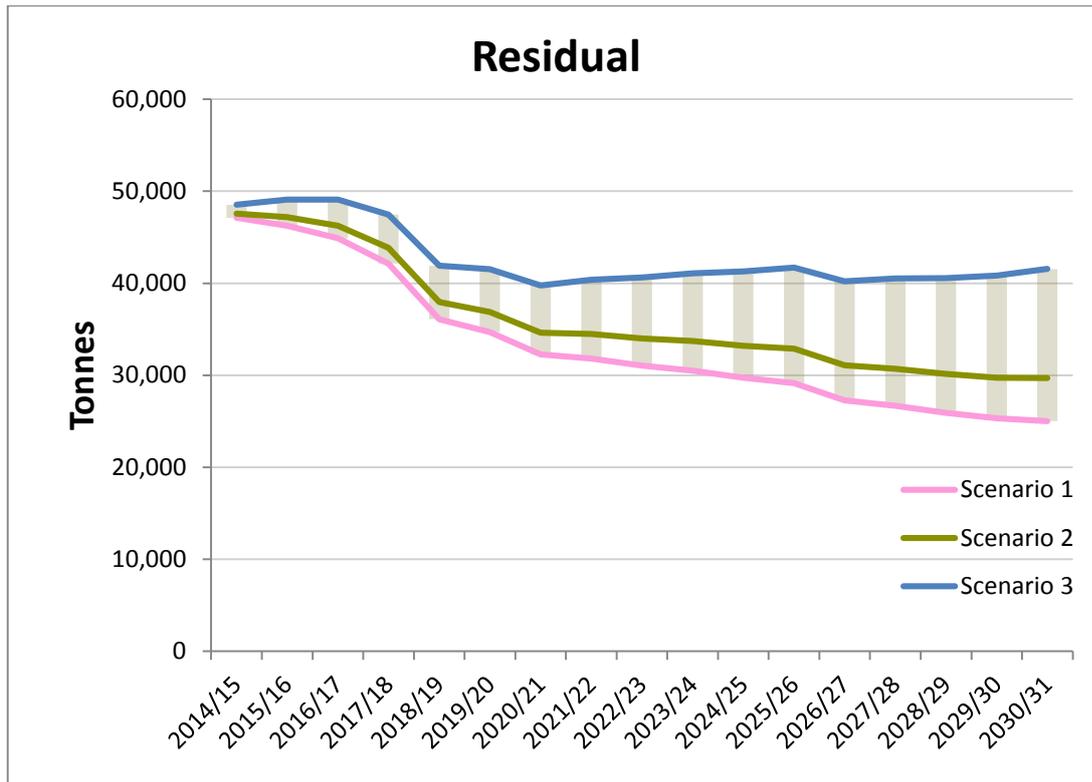


Figure 10: Range of predicted tonnages for LACW organics in Telford and Wrekin

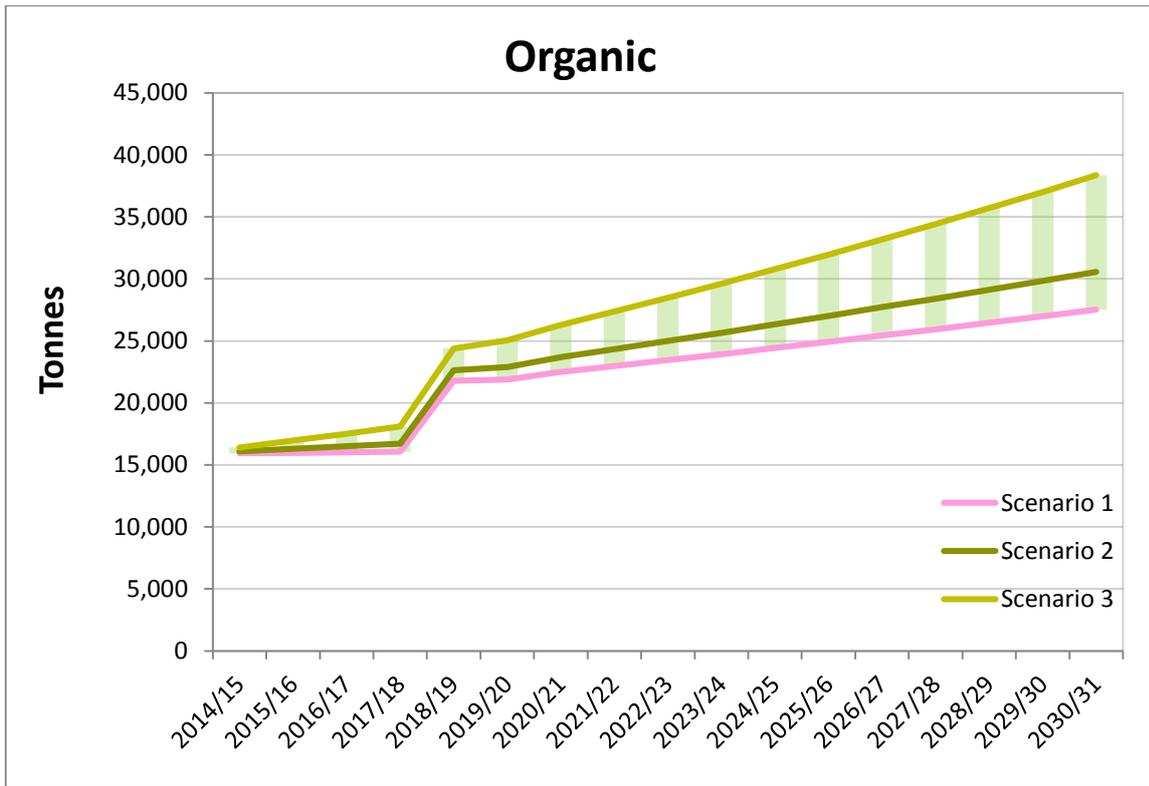
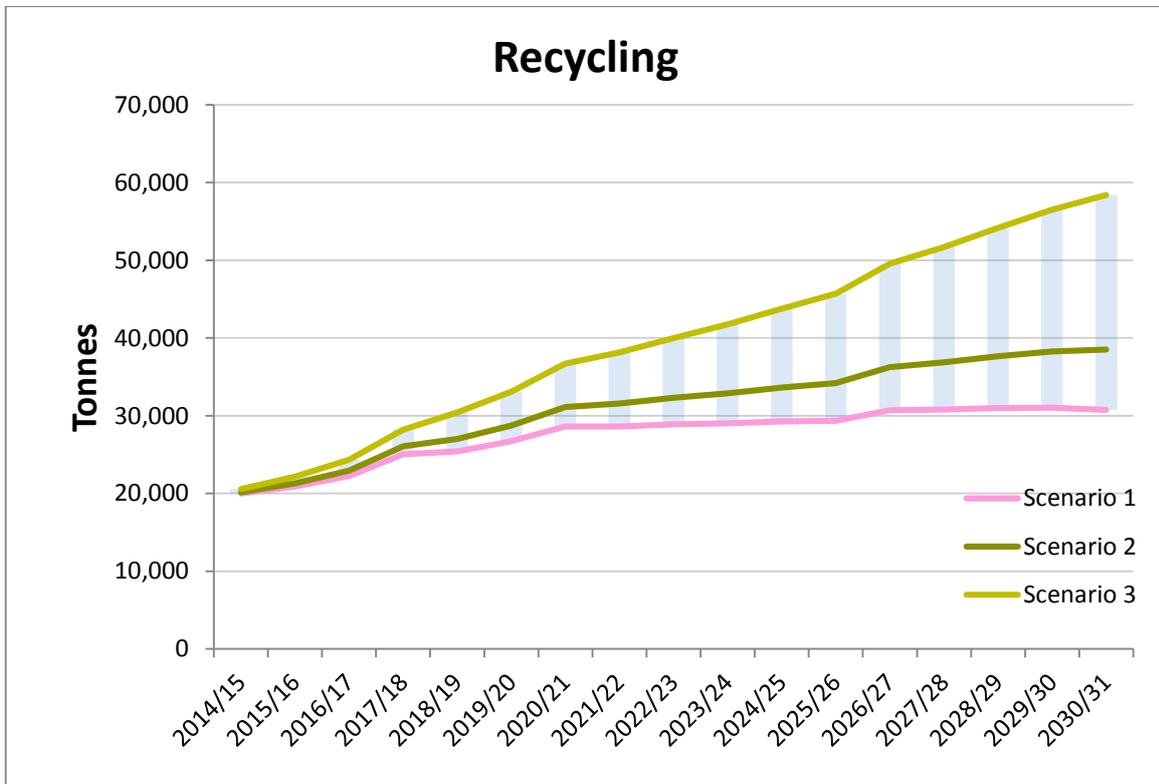


Figure 11: Range of predicted tonnages for LACW dry recycling in Telford and Wrekin



## 6.2 Forecasting Commercial and Industrial Waste Arising

There are a range of economic forecasts against which the waste generated by businesses could be extrapolated.

Defra published a report titled “Forecasting 2020 Waste Arisings and Treatment Capacity” in 2013 which provides forecasts of waste growth that have been used for this report. Three scenarios are shown to the year 2020. We have therefore extended these rates of growth to 2023 by assuming further growth as average of last three years of the projections to 2020. In common with LACW projections, it is assumed that 70% recycling of C&I wastes will be achieved by 2030/31. The tables below show the results from this approach.

There were some challenges in terms of classifying organic elements of C&I wastes, from the estimates calculated according to the methodology described in Section 3.2. The problematic subfractions were:

- Animal and mixed food waste
- Vegetal wastes
- Soils
- Wood wastes.

Initially all of these fractions were classified as being organic in terms of probable treatment routes. However on consideration it was considered more likely that “Soils” and “Wood wastes” would be more likely to be recycled through a process that would not involve composting. Therefore the “Soils” and “Wood wastes” fractions of C&I recycling have been included in the “Dry recycling” category in the tables and charts presented in this section.

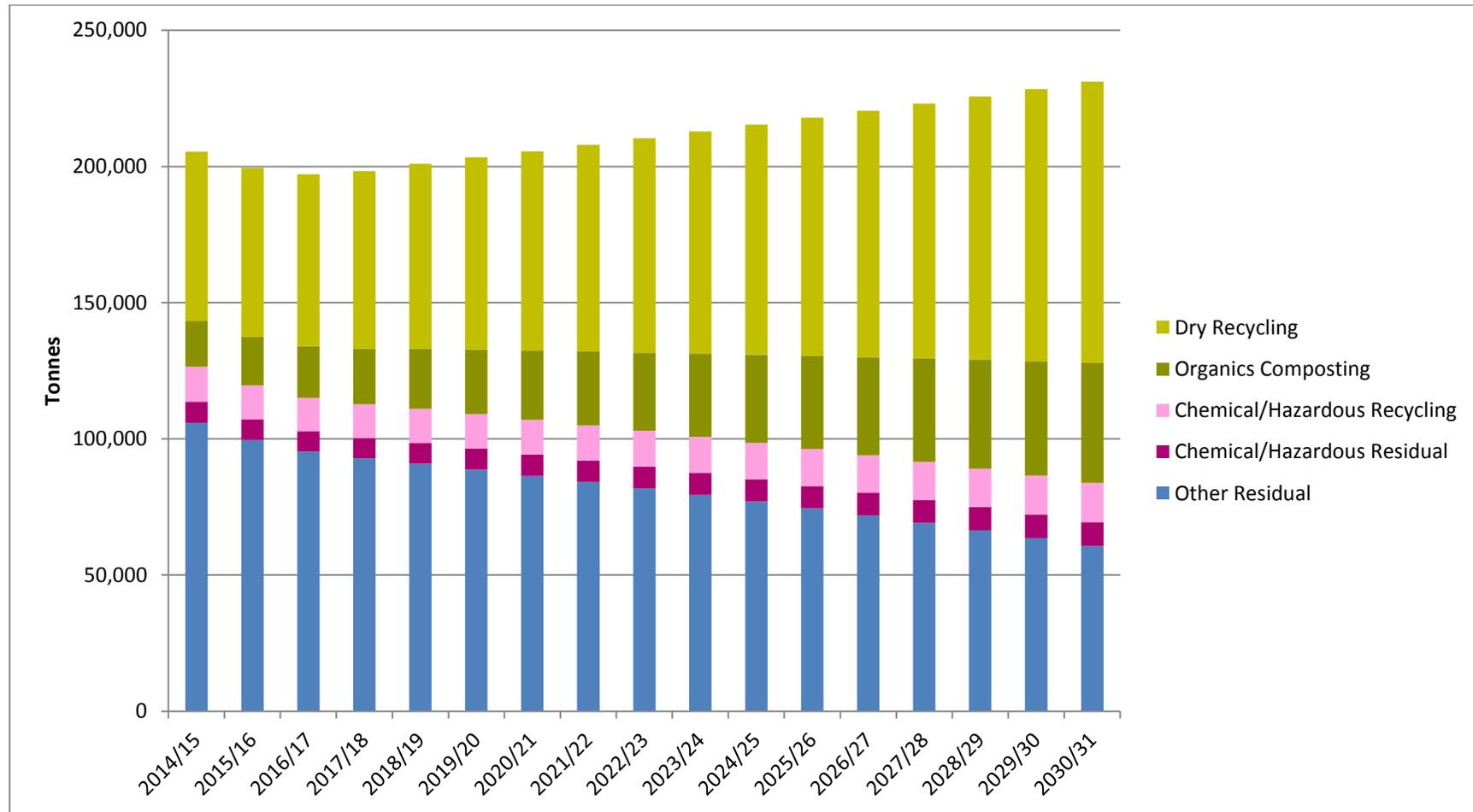
“Animal and mixed food waste” and “Vegetal wastes” are considered to be likely to largely be food waste or similar material. There may be a small amount of material similar to garden waste, but it is difficult to estimate what proportion that might be, and it has therefore been assumed that all of these materials would need to be treated in IVC or AD processes. These fractions have been included in the “Organics Composting” category in the tables and charts presented here.

**Table 16: Commercial & Industrial Arisings Forecast Scenario 1 – Low**

Year	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
Dry Recycling	62,047	62,035	63,085	65,277	67,959	70,597	73,181	75,922	78,718
Organics Composting	16,922	17,781	18,910	20,376	22,011	23,651	25,290	26,999	28,746
Chemical/Hazardous Recycling	12,780	12,407	12,261	12,339	12,504	12,652	12,782	12,934	13,087
Chemical/Hazardous Residual	7,794	7,567	7,478	7,526	7,626	7,716	7,796	7,888	7,982
Other Residual	105,874	99,632	95,349	92,823	90,884	88,745	86,416	84,153	81,824
<b>Recycling rate</b>	<b>44.7%</b>	<b>46.2%</b>	<b>47.8%</b>	<b>49.4%</b>	<b>51.0%</b>	<b>52.6%</b>	<b>54.1%</b>	<b>55.7%</b>	<b>57.3%</b>
Total C&I arisings	205,418	199,422	197,082	198,341	200,984	203,360	205,465	207,897	210,357

Year	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Dry Recycling	81,569	84,477	87,442	90,466	93,548	96,691	99,896	103,162
Organics Composting	30,530	32,352	34,213	36,114	38,055	40,037	42,060	44,126
Chemical/Hazardous Recycling	13,242	13,398	13,557	13,717	13,880	14,044	14,210	14,378
Chemical/Hazardous Residual	8,076	8,172	8,269	8,366	8,465	8,566	8,667	8,769
Other Residual	79,429	76,965	74,432	71,828	69,152	66,403	63,579	60,679
<b>Recycling rate</b>	<b>58.9%</b>	<b>60.5%</b>	<b>62.0%</b>	<b>63.6%</b>	<b>65.2%</b>	<b>66.8%</b>	<b>68.4%</b>	<b>70.0%</b>
Total C&I arisings	212,846	215,365	217,913	220,492	223,101	225,741	228,412	231,115

Figure 12: Commercial & Industrial Arisings Forecast Scenario 1 - Low

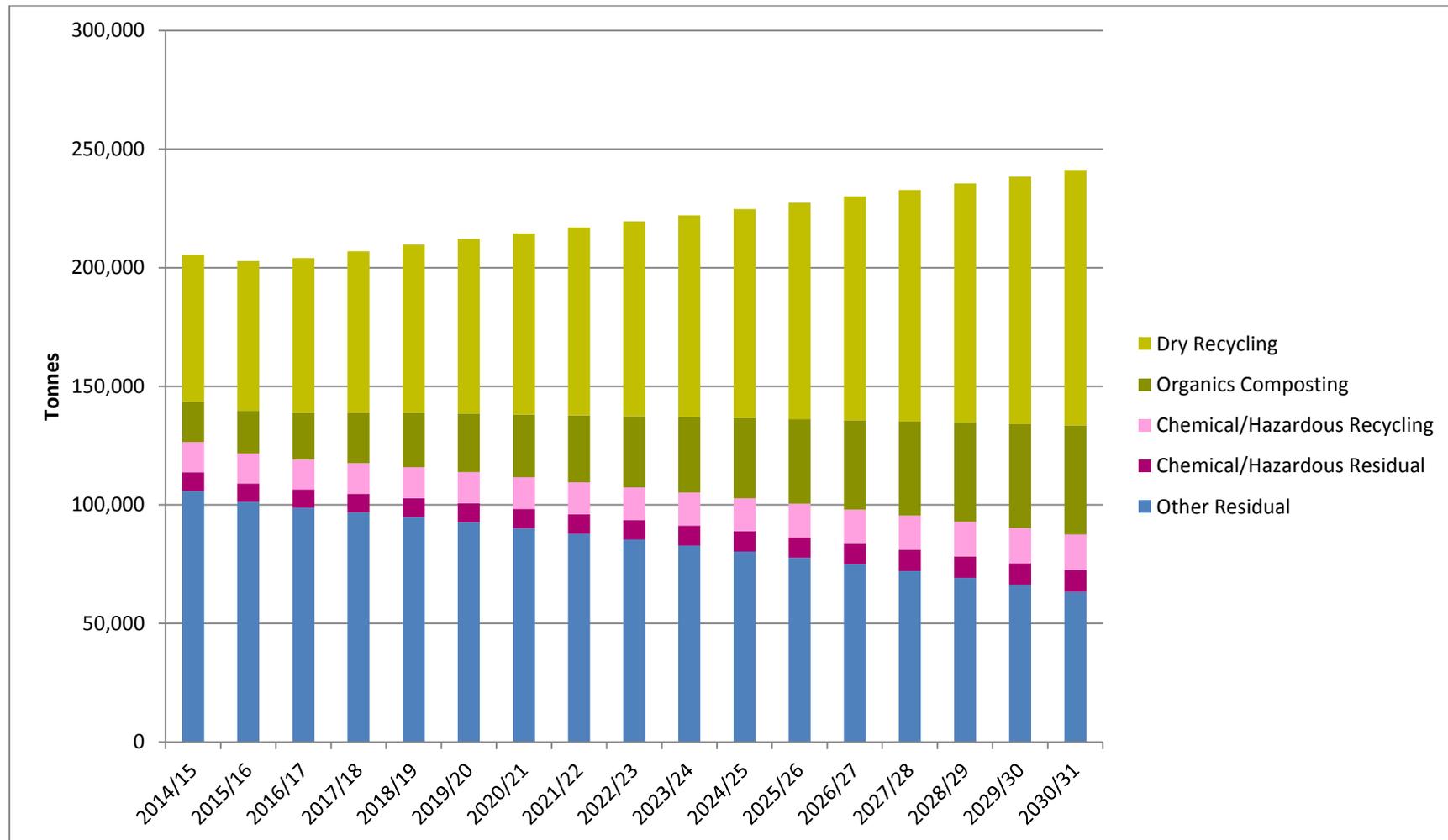


**Table 17: Commercial & Industrial Arisings Forecast Scenario 2 - Medium**

Year	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
Dry Recycling	62,047	63,099	65,335	68,122	70,922	73,674	76,371	79,232	82,150
Organics Composting	16,922	18,086	19,584	21,264	22,971	24,682	26,392	28,176	29,999
Chemical/Hazardous Recycling	12,780	12,619	12,698	12,877	13,049	13,203	13,340	13,498	13,657
Chemical/Hazardous Residual	7,794	7,697	7,745	7,854	7,959	8,053	8,136	8,232	8,330
Other Residual	105,874	101,342	98,751	96,869	94,846	92,612	90,183	87,822	85,391
<b>Recycling rate</b>	<b>44.7%</b>	<b>46.2%</b>	<b>47.8%</b>	<b>49.4%</b>	<b>51.0%</b>	<b>52.6%</b>	<b>54.1%</b>	<b>55.7%</b>	<b>57.3%</b>
Total C&I arisings	205,418	202,844	204,114	206,986	209,747	212,224	214,422	216,959	219,527

Year	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Dry Recycling	85,125	88,160	91,254	94,410	97,627	100,907	104,251	107,661
Organics Composting	31,861	33,763	35,705	37,689	39,714	41,782	43,894	46,050
Chemical/Hazardous Recycling	13,819	13,982	14,148	14,315	14,485	14,656	14,830	15,005
Chemical/Hazardous Residual	8,428	8,528	8,629	8,731	8,834	8,939	9,045	9,152
Other Residual	82,892	80,321	77,677	74,960	72,167	69,298	66,351	63,325
<b>Recycling rate</b>	<b>58.9%</b>	<b>60.5%</b>	<b>62.0%</b>	<b>63.6%</b>	<b>65.2%</b>	<b>66.8%</b>	<b>68.4%</b>	<b>70.0%</b>
Total C&I arisings	222,125	224,754	227,413	230,105	232,828	235,583	238,371	241,192

Figure 13: Commercial & Industrial Arisings Forecast Scenario 2 – Medium

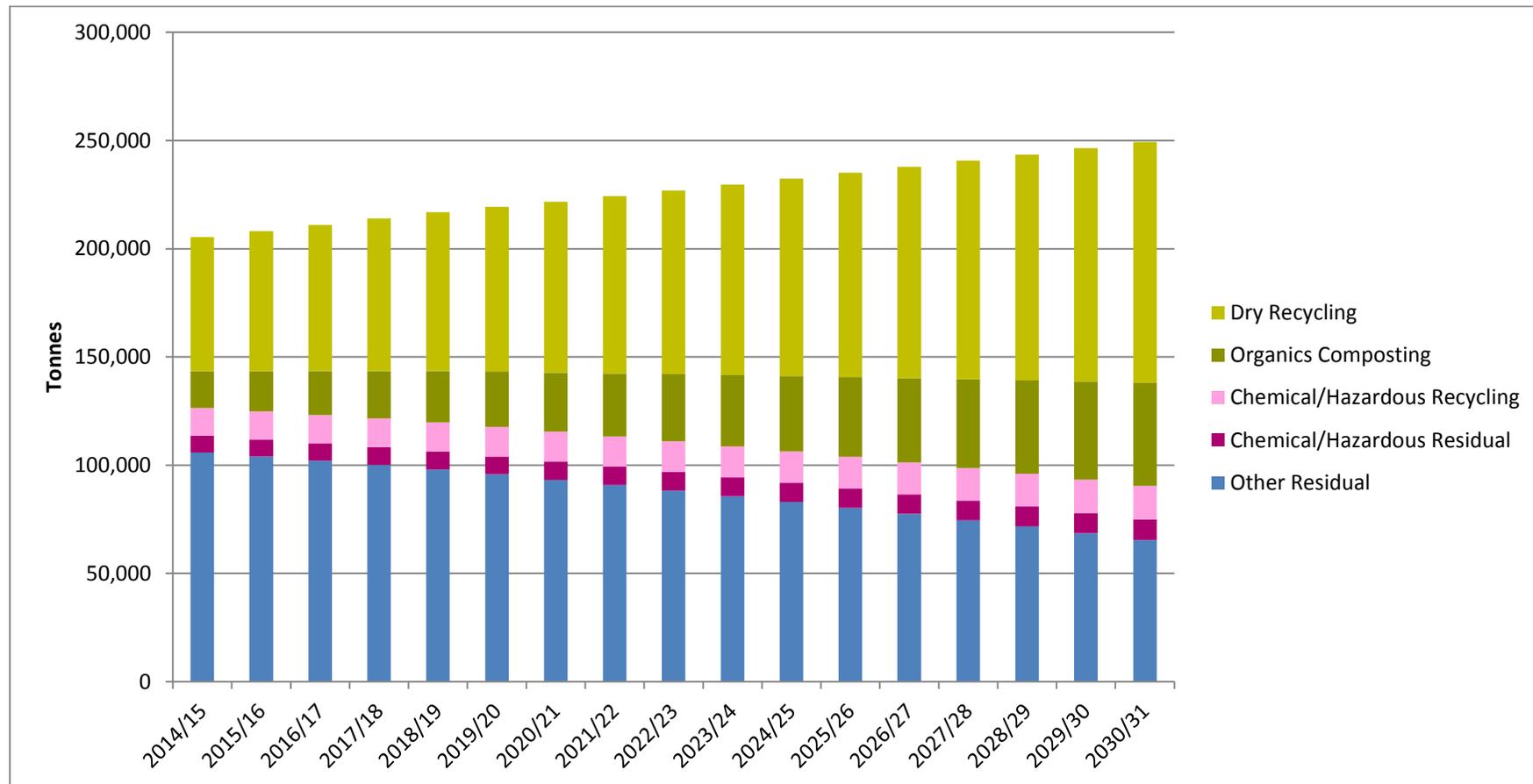


**Table 18: Commercial & Industrial Arisings Forecast Scenario 3 - High**

Year	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
Dry Recycling	62,047	64,739	67,544	70,425	73,319	76,164	78,952	81,909	84,926
Organics Composting	16,922	18,556	20,246	21,983	23,747	25,516	27,284	29,128	31,013
Chemical/Hazardous Recycling	12,780	12,947	13,128	13,312	13,490	13,649	13,791	13,954	14,119
Chemical/Hazardous Residual	7,794	7,897	8,007	8,119	8,228	8,325	8,411	8,511	8,611
Other Residual	105,874	103,975	102,089	100,144	98,051	95,743	93,231	90,789	88,277
<b>Recycling rate</b>	<b>44.7%</b>	<b>46.2%</b>	<b>47.8%</b>	<b>49.4%</b>	<b>51.0%</b>	<b>52.6%</b>	<b>54.1%</b>	<b>55.7%</b>	<b>57.3%</b>
Total C&I arisings	205,418	208,114	211,013	213,983	216,834	219,397	221,669	224,292	226,945

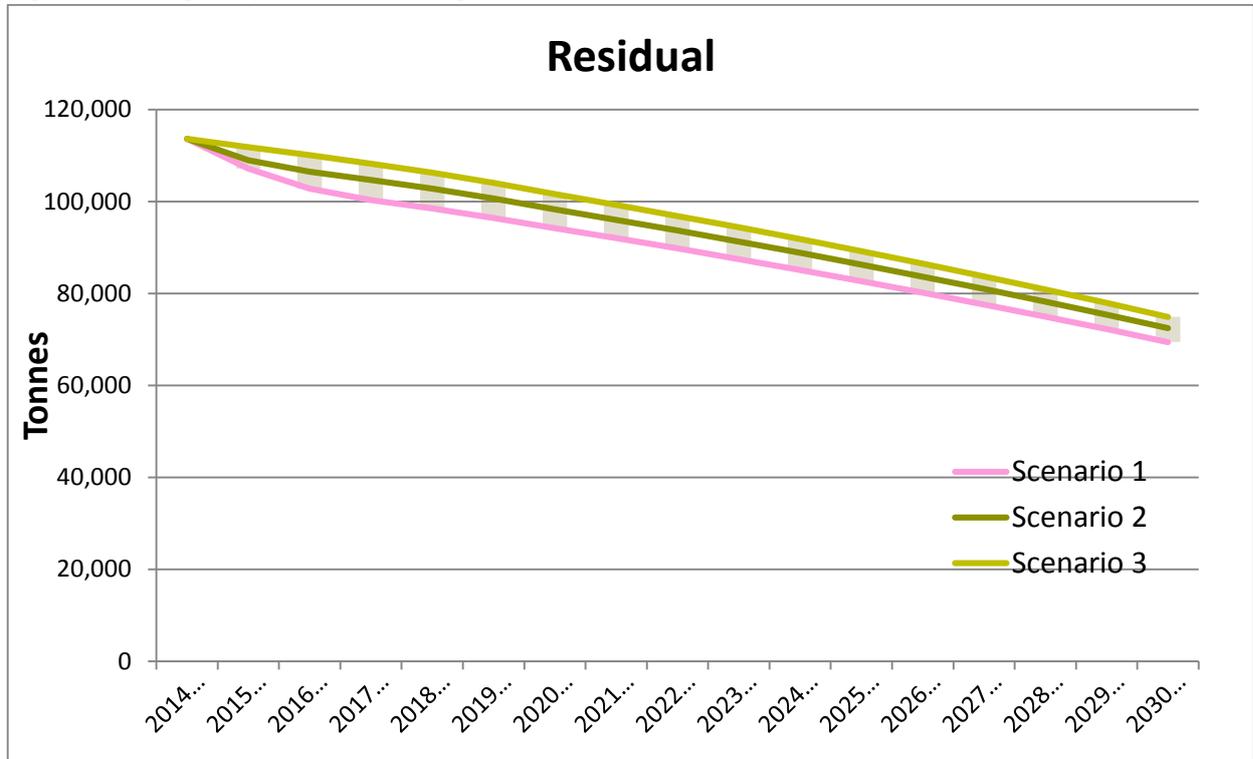
Year	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Dry Recycling	88,002	91,139	94,337	97,599	100,925	104,316	107,773	111,297
Organics Composting	32,938	34,904	36,911	38,962	41,056	43,194	45,377	47,605
Chemical/Hazardous Recycling	14,286	14,455	14,626	14,799	14,974	15,151	15,331	15,512
Chemical/Hazardous Residual	8,713	8,816	8,921	9,026	9,133	9,241	9,350	9,461
Other Residual	85,693	83,035	80,302	77,492	74,606	71,639	68,593	65,464
<b>Recycling rate</b>	<b>58.9%</b>	<b>60.5%</b>	<b>62.0%</b>	<b>63.6%</b>	<b>65.2%</b>	<b>66.8%</b>	<b>68.4%</b>	<b>70.0%</b>
Total C&I arisings	229,631	232,348	235,097	237,879	240,693	243,541	246,423	249,339

Figure 14: Commercial & Industrial Arisings Forecast Scenario 3 – High



The ranges of C&I arisings predictions for Scenarios 1, 2 and 3, for residual, organics and dry recycling streams, are illustrated in the charts below.

**Figure 15: range of predicted tonnages for C&I residual waste in Telford and Wrekin**



**Figure 16: range of predicted tonnages for C&I organics in Telford and Wrekin**

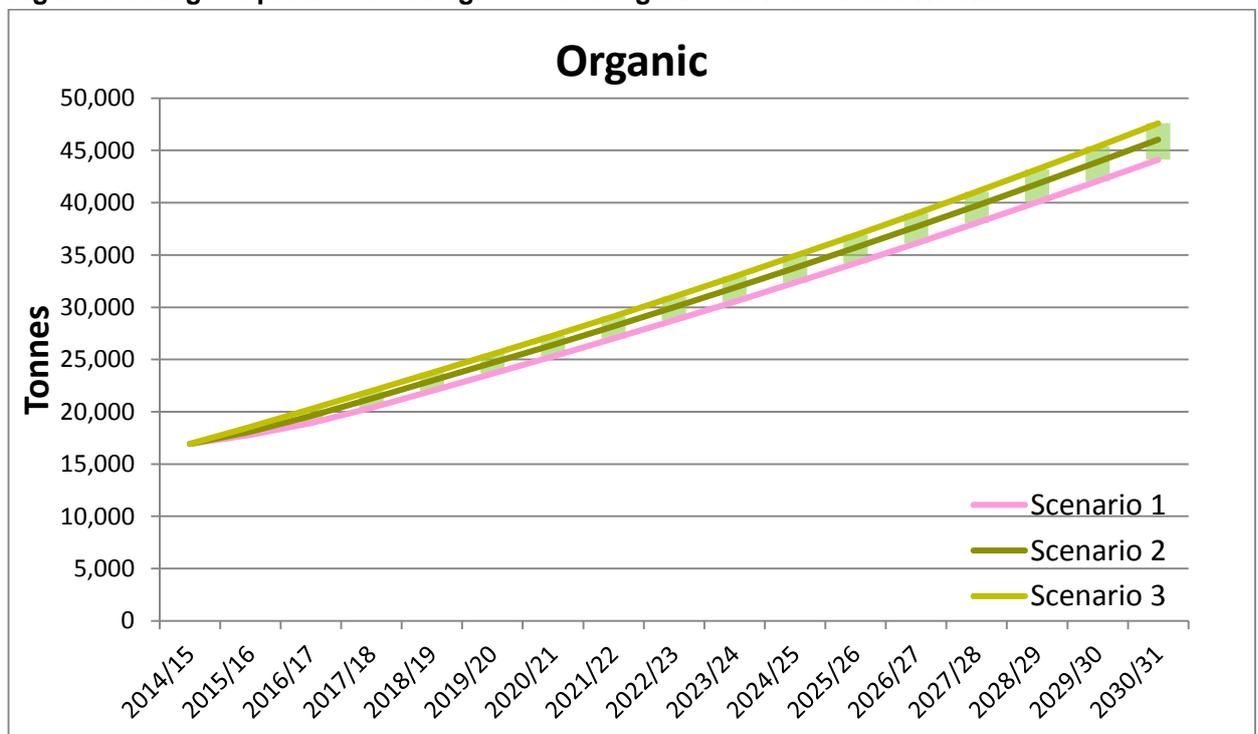
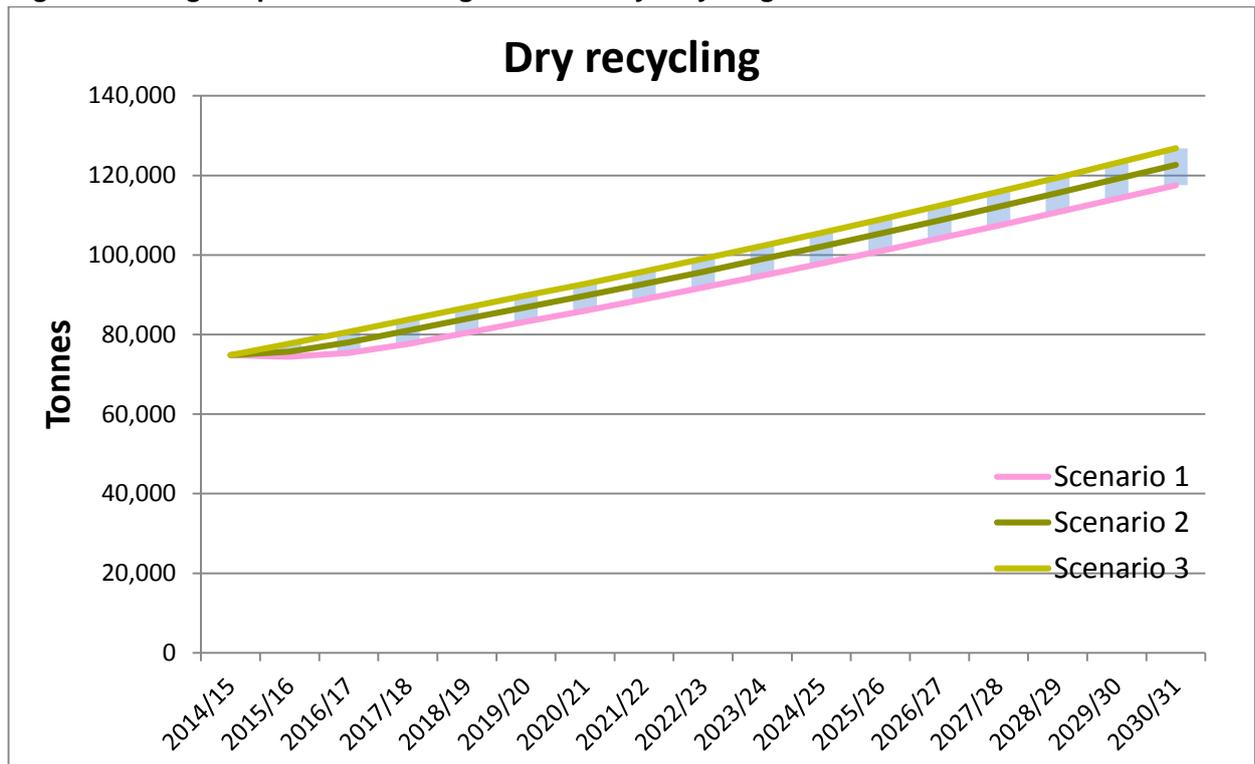


Figure 17: range of predicted tonnages for C&I dry recycling in Telford and Wrekin



### 6.3 Combined Local Authority Collected Waste arisings and Commercial & Industrial Waste arisings

While the data on Local Authority Collected Waste and Commercial & Industrial Waste is derived from different sources, the nature of the waste itself and the management routes taken after collection are very similar. Treatment and disposal facilities take waste from both Local Authority collections and business waste collections and often cannot distinguish the origin of the material they manage.

With regard to the composition of these wastes, while some wastes from industrial sources are disposed of directly to reprocessing facilities and some are even sold as “co-products”, there is a large element that comprises “household and similar wastes”.

When analysing the ways in which non-hazardous waste is managed, it is therefore useful to combine the total arisings from LACW and C&I waste and the results of this are shown below:

**Table 19: Total C&I and LACW SCENARIO 1 – LOW**

Year	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
Organics	32,850	33,756	34,930	36,439	43,804	45,544	47,791	49,962	52,199
<i>Garden Waste</i>	15,927	15,974	16,020	16,063	16,105	16,145	16,305	16,310	16,336
<i>Other organics</i>	16,922	17,781	18,910	20,376	27,699	29,400	31,486	33,652	35,863
Dry Recycling	94,798	95,313	97,606	102,654	105,863	109,978	114,562	117,477	120,702
Disposal	160,771	153,439	147,708	142,474	134,600	131,168	126,479	123,853	120,870
<b>Total</b>	<b>288,419</b>	<b>282,508</b>	<b>280,243</b>	<b>281,568</b>	<b>284,267</b>	<b>286,690</b>	<b>288,832</b>	<b>291,291</b>	<b>293,771</b>

Year	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Organics	54,457	56,783	59,131	61,548	63,989	66,499	69,036	<b>71,644</b>
<i>Garden waste</i>	16,339	16,361	16,360	16,380	16,375	16,391	16,384	<b>16,397</b>
<i>Other organics</i>	38,119	40,421	42,771	45,168	47,614	50,108	52,652	<b>55,247</b>
Dry Recycling	123,824	127,142	130,358	134,886	138,199	141,711	145,125	<b>148,274</b>
Disposal	117,989	114,866	111,844	107,464	104,296	100,883	97,565	<b>94,466</b>
<b>Total</b>	<b>296,271</b>	<b>298,791</b>	<b>301,333</b>	<b>303,897</b>	<b>306,484</b>	<b>309,094</b>	<b>311,727</b>	<b>314,384</b>

**Table 20: Total C&I and LACW SCENARIO 2 MEDIUM**

Year	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
Organics	33,011	34,385	36,095	37,986	45,594	47,579	50,082	52,505	54,999
<i>Garden waste</i>	16,088	16,299	16,510	16,722	16,877	17,090	17,431	17,609	17,811
<i>Other organics</i>	16,922	18,086	19,584	21,264	28,716	30,488	32,651	34,896	37,188
Dry Recycling	95,000	97,014	100,975	107,064	110,973	115,625	120,845	124,303	128,114
Disposal	161,247	156,217	152,751	148,576	140,755	137,529	132,938	130,528	127,726
<b>Total</b>	<b>289,257</b>	<b>287,616</b>	<b>289,821</b>	<b>293,627</b>	<b>297,322</b>	<b>300,732</b>	<b>303,865</b>	<b>307,336</b>	<b>310,838</b>

Year	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Organics	57,516	60,106	62,720	65,408	68,122	70,912	73,728	<b>76,623</b>
<i>Garden waste</i>	17,989	18,192	18,371	18,574	18,753	18,957	19,135	<b>19,340</b>
<i>Other organics</i>	39,526	41,913	44,349	46,834	49,369	51,955	54,593	<b>57,283</b>
Dry Recycling	131,827	135,774	139,622	144,978	148,976	153,218	157,360	<b>161,197</b>
Disposal	125,027	122,053	119,185	114,766	111,711	108,368	105,132	<b>102,156</b>
<b>Total</b>	<b>314,370</b>	<b>317,933</b>	<b>321,527</b>	<b>325,152</b>	<b>328,809</b>	<b>332,498</b>	<b>336,220</b>	<b>339,975</b>

**Table 21: Total C&I and LACW SCENARIO 3 High**

Year	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
Organics	33,332	35,514	37,767	40,084	48,132	50,576	53,575	56,491	59,501
<i>Garden waste</i>	16,410	16,957	17,521	18,101	18,525	19,138	19,906	20,509	21,156
<i>Other organics</i>	16,922	18,556	20,246	21,983	29,607	31,439	33,668	35,983	38,345
Dry Recycling	95,403	99,842	105,017	111,951	117,213	122,913	129,428	133,999	139,043
Disposal	162,198	160,956	159,182	155,731	148,178	145,583	141,408	139,692	137,527
<b>Total</b>	<b>290,934</b>	<b>296,312</b>	<b>301,966</b>	<b>307,766</b>	<b>313,524</b>	<b>319,073</b>	<b>324,411</b>	<b>330,183</b>	<b>336,071</b>

Year	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Organics	62,549	65,694	68,877	72,162	75,485	78,915	82,384	<b>85,964</b>
<i>Garden waste</i>	21,792	22,477	23,149	23,872	24,581	25,345	26,094	<b>26,901</b>
<i>Other organics</i>	40,756	43,217	45,728	48,290	50,904	53,570	56,290	<b>59,063</b>
Dry Recycling	144,034	149,374	154,657	161,953	167,595	173,629	179,601	<b>185,213</b>
Disposal	135,494	133,137	130,921	126,717	124,258	121,432	118,764	<b>116,482</b>
<b>Total</b>	<b>342,077</b>	<b>348,204</b>	<b>354,455</b>	<b>360,832</b>	<b>367,339</b>	<b>373,977</b>	<b>380,749</b>	<b>387,659</b>

These three scenarios show that the annum likely waste arisings by 2030/31 will be between 314,000 tonnes and 388,000 tonnes, with a middle scenario of 340,000 tonnes pa.

Of this, between 72,000 tonnes and 86,000 tonnes will be organic material that could be treated using AD or composting technologies. Between 148,000 tonnes and 185,000 tonnes will comprise recyclable material that will require sorting technologies; and between 94,000 tonnes and 116,000 tonnes per annum will require residual treatment and / or landfill.

## 7. Calculating the Capacity Gap

From Section 5 of this report, the available treatment capacity in Telford & Wrekin at present is as follows:

	Annual capacity for capacity gap calculations (tonnes pa)
Organic treatment capacity - anaerobic digestion	0
Organic treatment capacity - composting	38,000
Other treatment capacity (mainly MRF)	30,850
Total transfer capacity	160,000
Recovery capacity	Landfill only

The organic waste treatment capacity run by Severn Trent Water is not included in this table since it is not available for the treatment of LACW or C&I waste at present, although the site could be brought into use for the treatment of organic wastes in the future.

Comparing this with the forecast arisings, the need for capacity can be calculated as follows:

*Organic waste including food wastes:* The total arisings will need to be processed at an appropriate facility.

*Organic waste comprising garden waste:* This can be treated at open windrow composting sites. There is one site of this type in the Plan Area which is of sufficient size to manage the forecast arisings.

*Other treatment capacity:* This mainly made up of Material Recycling Facility (MRF) capacity and therefore significant additional treatment and recovery capacity is needed. Recyclable waste other than this organic fraction will need to be processed through a MRF.

*Transfer Capacity:* recyclable material that is to be sent to a MRF is first handled through a transfer station and sufficient capacity to manage this material will therefore be required. Residual waste can be delivered to a facility either directly using collection vehicles, or it can be bulked up first and transported, depending on the travelling distances involved. The recently consented facility at Hortonwood will provide 95,000 tonnes per annum of additional transfer capacity for both residual waste and recyclable material. The total available transfer capacity after 2016 will be sufficient to manage forecast arisings.

*Residual Recovery Capacity:* the remainder of non-hazardous arisings will need to be treated at a residual waste treatment facility. A recovery facility involves using waste to replace other non-waste materials to achieve a beneficial outcome in an environmentally sound manner.

*Disposal Capacity:* this is required to get rid of the waste in a safe and environmentally sound manner, often through the use of landfill.

In 2010, the Environment Agency has produced some guidance on the difference between recovery and disposal activities in its Regulatory Guidance Note 13 which can be found at [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/302955/RGN13.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/302955/RGN13.pdf)

The capacity gap is summarised in the table below:

**Table 22 Summary of Waste Management Capacity Required**

	<b>Annual capacity for capacity gap calculations (tonnes pa)</b>	<b>Maximum Capacity Requirement in 2030/31 (tonnes pa) from Table 21</b>	<b>Capacity Gap (tonnes pa)</b>
Organic treatment capacity – anaerobic digestion	0	59,000	59,000
Organic treatment capacity - composting	38,000	27,000	-
MRF capacity	30,850	185,200	154,350
Total transfer capacity	160,000 rising to 250,000 in 2019	185,000 (Recyclables) 116,500 (Residual))	-
Residual recovery capacity	Landfill only	116,500	116,500

There is therefore sufficient capacity for the treatment of organic garden waste by composting in the plan area and new capacity of this type is not required. However, additional capacity for the treatment of food waste using either anaerobic digestion or in-vessel composting will be required in the authority is to be self-sufficient in this respect.

There is a significant shortfall in capacity for managing recyclable materials. Although some recycling activity usually takes place at transfer stations, it is difficult to assess the extent of this and efforts will be required to increase the level of separation and sorting of waste materials at Community Recycling Centres and other transfer stations. Additional capacity of approximately 154,350 tonnes pa for sorting and transfer of recyclable material from both LACW and C&I sources will be required during the Plan period and to a significant extent this will be delivered through the new facility at Hortonwood. The extent to which this provides sufficient capacity will need to be monitored throughout the Plan period.

There is no recovery capacity for residual treatment in the plan area at present. The management of Local Authority Collected Waste is to be carried out by Veolia who have access to residual waste treatment facilities with significant capacity in neighbouring local authority areas (section 5.3). These facilities are likely to be sufficient until the end of the Plan period although consideration should be given as to whether additional residual waste management treatment capacity may be required at that time. A decision would then need to be made as to whether such capacity should be developed within Telford & Wrekin, or whether capacity in other nearby facilities could still be used. Initial discussions with the relevant waste planning authorities and then operators of these facilities indicate that there is no barrier to the use of these facilities for the management of waste from Telford & Wrekin. If sufficient capacity were not available in nearby facilities, a residual waste treatment facility would need to be developed within Telford & Wrekin. Under the “High” scenario, the total quantity of non-hazardous waste to be treated at a residual facility is 116,500 tpa and under the “Low” scenario, the total quantity is 94,500 tpa. These quantities are comparable to the capacity of the facility at Battlefields in Shropshire and a similar sized facility would be required.

## 8. Conclusions and Recommendations

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### 8.1 Conclusions with regard to waste management capacity

At present there is sufficient waste treatment and disposal capacity for Telford & Wrekin to achieve net self-sufficiency in the management of non-hazardous and inert wastes. However, this includes the use of Candles and Granville non-hazardous landfill sites, both of which have a finite lifetime.

A site for additional capacity for the treatment of food waste is required, for up to 59,000 tonnes per annum. This could be accommodated at a single site. Additional capacity for the sorting and transfer of waste may also be required for C&I waste if this waste stream is to be successfully separated for processing into new materials. Alternatively, transfer capacity is required to access the residual waste management facilities in neighbouring waste planning authority areas.

There is significant recovery capacity coming on stream in neighbouring authorities and it is likely that the Council's own contractor will make use of this capacity for the treatment of Local Authority Collected Waste. In particular, the Council's waste management contractor, Veolia Environmental Services is the developer of the two nearest planned facilities in Shropshire and Staffordshire and will have access to the treatment capacity created. Commercial & Industrial waste may also be taken to these facilities through flexible contracts for smaller quantities of waste collected by different private sector companies.

In order to identify all possible residual waste management solutions, liaison should take place with the Planning Officers of these Waste Planning Authorities. This should identify how much capacity is likely to be available to accommodate residual waste from Telford & Wrekin and also ensure that the use of these facilities does not have any significant impact on the waste management strategy of those authorities over the Plan period. Depending on the outcome of these discussions a site for a residual waste facility to manage the additional capacity of up to 116,500 tonnes per annum should be sought.

Additional capacity of approximately 155,000 tonnes pa for sorting and transfer of recyclable material from both LACW and C&I sources will be required during the Plan period in order for the 70% recycling target to be achieved. To a significant extent this will be delivered through the new facility at Hortonwood.

There is significant management capacity for green waste treatment in the Plan area but additional capacity is required for the treatment of food waste of approximately 59,000 tonnes per annum. A single large AD facility on a site of approximately 2 ha would have the necessary capacity to manage this quantity of organic waste. Alternatively, two smaller facilities could be developed, but each site would require approximately 1.2 ha of land with appropriate access. Typically, a site for an AD plant should be on-farm or in an isolated location, although some industrial locations may also be suitable, depending on access, the sensitivity of any receptor sites and the technology proposed. The existing facility at Gnosall has the potential to increase its capacity from 30,000 tonnes per annum to 45,000 tonnes per annum and this additional capacity could be available for the treatment of waste from Telford & Wrekin.

With regard to the additional residual waste management capacity that is required, discussions will be required between the Waste Disposal Authority and the operators of the existing residual waste management facilities at Battlefields and Four Ashes.

## 8.2 Conclusions with regard to waste policies in the Shaping Places Local Plan

The waste policies in a Local Plan need to be sufficiently flexible to respond to a range of requirements in terms of how much waste will require management over the Plan period and how much waste management capacity will therefore be required. The number of sites required to provide this capacity cannot be determined with certainty since the capacity of each site will depend on the type of waste to be managed and the type of facility to be developed there.

A Sites Document is likely to be required as part of the Shaping Places Local Plan. This should identify possible strategic sites for new waste management facilities. These may include transfer stations and Community Recycling Centres and residual treatment facilities. A strategic site is one on which the waste management strategy relies in order to be delivered.

Criteria for new waste management sites should also be developed against which applications for permission for waste management sites can be assessed.

## 8.3 Summary of Recommendations

The Local Planning Authority should carry out the following actions:

- Safeguard all existing waste management facilities, including organic treatment facilities, transfer and sorting facilities and landfill sites.
- Seek to increase capacity for anaerobic digestion, in-vessel composting, recycling and re-use within Telford & Wrekin. In particular the planned improvements to the Community Recycling Centres could contribute to this. Additional capacity for sorting and bulking recycling may also be required and sites for these uses should be identified.
- Seek additional capacity of approximately 155,000 tonnes pa for sorting and transfer of recyclable material from both LACW and C&I sources to achieve the 70% recycling target. To a significant extent this may be delivered through the new facility at Hortonwood.
- Carry out negotiations with authorities where residual waste treatment facilities are located and with operators of those facilities in order to ensure there is sufficient capacity for residual waste treatment and disposal for the development of a deliverable waste management development planning document. A site for a residual waste management facility should be identified within the Plan area if capacity outside the authority cannot be made available.
- Produce a Sites Document as part of the Shaping Places Local Plan which identifies possible sites and criteria for new transfer stations and residual treatment facilities.

## 8.4 Suggested waste management policies for consultation

- 1) Provision should be made for the management of the following quantities of non-hazardous waste:

Year	2015/16	2020/21	2025/26	2030/31
Organic waste	34,400	50,100	62,700	<b>76,600</b>
Dry Recycling	97,000	120,800	139,600	<b>161,200</b>
Disposal	156,200	132,900	119,200	<b>102,200</b>
<b>Total</b>	<b>287,600</b>	<b>303,800</b>	<b>321,500</b>	<b>340,000</b>

- 2) Existing waste management facilities should be safeguarded for the management of waste arising in Telford & Wrekin in the long term in order that the Authority can take responsibility for the management of the waste arising within its area. Development proposals in close proximity to existing waste management sites should demonstrate that they would not prejudice or be prejudiced by a waste management facility.
- 3) Planning permission for new waste management facilities will be granted if they contribute to promoting the management of waste further up the waste hierarchy and in particular to meeting targets of recycling and composting 70% of non-hazardous waste arising.
- 4) New sites for waste management should take into account the following issues:
- protection of water resources
  - traffic and access
  - proximity to the source of waste to be managed
  - nature conservation
  - conserving the historic environment
  - visual intrusion
  - potential land use conflict
  - air emissions, including dust
  - odours
  - vermin and birds
  - noise, light and vibration
  - litter
  - land instability

In other words, waste management facilities should be of a high quality design to make a positive contribution to the local area.

- 5) New development should be designed to take account of the need to manage waste sustainably and enable the collection of waste to facilitate its management further up the waste hierarchy. This should include allowing provision of storage for waste and recyclable material and access for collection vehicles. Proposals for waste management development will be required to achieve a high standard in their design and mitigation of environmental impacts including climate change.

- 6) Consideration will be given to proposals for residual waste treatment facilities (annual capacity of 100,000 tonnes or more) within existing employment areas. New landfill (or landraise) sites or extensions to existing landfill sites will only be considered where there is an established need and provision will only be made for waste that cannot practicably be recycled, composted or recovered.
- 7) Consideration will be given to proposals for new anaerobic digestion facilities for the treatment of approximately 60,000 tonnes per annum of food and other organic waste in appropriate locations (as described in point 4). A site of approximately 2 hectares will be required for the treatment of food wastes. Depending on the availability of residual waste treatment capacity outside the plan area, if a site is required for the treatment of residual mixed waste, this will need to extend to approximately 2 hectares.

## 9. References

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### European Policy

Waste Framework Directive 2008: <http://ec.europa.eu/environment/waste/framework/>

EU Guidance Note on preparing a waste management plan:

[http://ec.europa.eu/environment/waste/plans/pdf/2012\\_guidance\\_note.pdf](http://ec.europa.eu/environment/waste/plans/pdf/2012_guidance_note.pdf)

European Review of Waste Policy and Legislation:

[http://ec.europa.eu/environment/waste/target\\_review.htm](http://ec.europa.eu/environment/waste/target_review.htm)

### National Policy

Planning Act 2008: [http://www.legislation.gov.uk/ukpga/2008/29/pdfs/ukpga\\_20080029\\_en.pdf](http://www.legislation.gov.uk/ukpga/2008/29/pdfs/ukpga_20080029_en.pdf)

Localism Act 2011: [http://www.legislation.gov.uk/ukpga/2011/20/pdfs/ukpga\\_20110020\\_en.pdf](http://www.legislation.gov.uk/ukpga/2011/20/pdfs/ukpga_20110020_en.pdf)

National Planning Policy Framework 2012: <https://www.gov.uk/government/publications/national-planning-policy-framework--2>

Waste Management Plan for England 2013 (and predecessor documents):

<https://www.gov.uk/government/publications/waste-management-plan-for-england>

Forecasting 2020 waste arisings and treatment capacity 2013 (Defra)

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[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/190220/ci-project-report.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/190220/ci-project-report.pdf)

Survey of Industrial & Commercial Waste Generated in Wales 2012 (Natural Resources Wales)

<http://naturalresourceswales.gov.uk/our-work/policy-advice-guidance/waste-Policy/industrial-and-commercial-waste-generated-wales/?lang=en#>

Scotland Business Waste Survey Data for 2010 (SEPA)

[http://www.sepa.org.uk/waste/waste\\_data/commercial\\_industrial\\_waste/business\\_waste\\_arisings.aspx](http://www.sepa.org.uk/waste/waste_data/commercial_industrial_waste/business_waste_arisings.aspx)

Planning Policy Statement 10 “Planning for Sustainable Waste Management 2011

<https://www.gov.uk/government/publications/planning-for-sustainable-waste-management-planning-policy-statement-10>

CLG Guidance on how to implement the requirements of the Waste Framework Directive

<https://www.gov.uk/government/publications/guidance-for-local-planning-authorities-on-implementing-planning-requirements-of-the-eu-waste-framework-directive-2008-98-ec>

## **Regional Policy**

Regional Spatial Strategy for the West Midlands (2008)

<https://www.worcestershire.gov.uk/cms/pdf/APD%201%20West%20Midlands%20Regional%20Spatial%20Strategy%20January%202008.pdf>

Study to fill Evidence Gaps for Commercial & Industrial Waste Streams in the North West Region of England (2007)

<http://www.gmwastedpd.co.uk/docs/NWCI-Report.pdf>

North West of England Commercial and Industrial Waste Survey 2009 for the Environment Agency March 2010

[http://www.persona.uk.com/barnfield/Core\\_docs/M/M26.pdf](http://www.persona.uk.com/barnfield/Core_docs/M/M26.pdf)

## **Local Policy**

Shropshire and Telford and Wrekin Minerals Local Plan 1996-2006

[http://www.telford.gov.uk/downloads/file/906/shropshire\\_and\\_telford\\_and\\_wrekin\\_minerals\\_local\\_plan\\_1996-2006](http://www.telford.gov.uk/downloads/file/906/shropshire_and_telford_and_wrekin_minerals_local_plan_1996-2006)

Telford & Wrekin Planning Policies

[http://www.telford.gov.uk/downloads/1004/planning\\_policy](http://www.telford.gov.uk/downloads/1004/planning_policy)

## 10. Abbreviations

<b>AD</b>	Anaerobic Digestion
<b>C&amp;I</b>	Commercial and Industrial Waste
<b>CDEW</b>	Construction, Demolition and Excavation Waste
<b>Defra</b>	Department for Environment, Food and Rural Affairs
<b>EA</b>	Environment Agency
<b>ELV</b>	End of Life Vehicles
<b>ILW</b>	Intermediate Radioactive Waste
<b>IVC</b>	In Vessel Composting
<b>IWMF</b>	Integrated Waste Management Facility
<b>Ktpa</b>	Kilo [Thousand] Tonnes Per Annum
<b>LACW</b>	Local Authority Collected Waste
<b>LLW</b>	Low Level Radioactive Waste
<b>MBT</b>	Mechanical, Biological &/or Thermal Treatment
<b>MRF</b>	Materials Recycling Facility
<b>MSW</b>	Municipal Solid Waste
<b>SEPA</b>	<b>Scottish Environmental Protection Agency</b>
<b>SNRHW</b>	Stabilised Non-Reactive Hazardous Waste
<b>VLLW</b>	Very Low Level Radioactive Waste
<b>WCA</b>	Waste Collection Authority
<b>WDA</b>	Waste Disposal Authority
<b>WDD</b>	Waste Development Document
<b>WEEE</b>	Waste Electrical and Electronic Equipment
<b>WPA</b>	Waste Planning Authority
<b>WSE 2007</b>	Waste Strategy for England 2007

## 11. Glossary

<b>Agricultural Waste</b>	Waste from a farm or market garden, consisting of matter such as manure, slurry and crop residues.
<b>Anaerobic Digestion</b>	Organic matter broken down by bacteria in the absence of air, producing a gas (methane) and solid (digestate). The by-products can be useful, for example biogas can be used in a furnace, gas engine, turbine or gas-powered vehicles, and digestates can be re-used on farms as a fertiliser
<b>Biodegradable waste</b>	Waste that is capable of breaking down naturally, such as food, garden waste and paper.
<b>Bulky Goods</b>	Goods of a large physical nature (for example DIY, furniture, carpets) that sometimes require large areas for storage or display.
<b>Commercial and Industrial (C&amp;I) Waste</b>	Controlled waste arising from business premises.
<b>Community Recycling Centre</b>	A facility provided by the Local Authority that is available to the public to deposit waste which cannot be collected by the normal household waste collection round.
<b>Construction, Demolition and Excavation Waste (CDEW)</b>	Controlled waste arising from the construction, repair, maintenance and demolition of buildings and structures.
<b>DEFRA – Department for Environment, Food and Rural Affairs</b>	Defra is a UK Government department. Its mission is to enable everyone to live within our environmental means. This is most clearly exemplified by the need to tackle climate change internationally, through domestic action to reduce greenhouse gas emissions, and to secure a healthy and diverse natural environment.
<b>Development Plan</b>	A document setting out the local planning authority's policies and proposals for the development and use of land and buildings in the authority's area. This includes adopted Local Plans, neighbourhood plans and the London Plan, and is defined in section 38 of the Planning and Compulsory Purchase Act 2004.
<b>Energy from Waste</b>	The conversion of waste into a useable form of energy, often heat or electricity.
<b>Environment Agency (EA)</b>	The Government agency that aims to prevent or minimise the effects of pollution on the environment. The EA issues permits to monitor and control activities that handle or produce waste and provides information on waste managed.
<b>Green waste</b>	Biodegradable plant waste from gardening and landscaping activities. This can be composed of garden or park waste, such as grass or flower cuttings and hedge trimmings, as well as domestic and commercial food waste.
<b>Hazardous Landfill</b>	Sites where hazardous waste is landfilled. This can be a dedicated site or a single cell within a non-hazardous landfill, which has been specifically designed and designated for depositing hazardous waste.
<b>Hazardous Treatment</b>	Sites where hazardous waste is treated so that it can be landfilled.

<b>Hazardous Waste</b>	Waste that poses substantial or potential threats to public health or the environment (when improperly treated, stored, transported or disposed). This can be due to the quantity, concentration, or characteristics of the waste. Hazardous wastes can be identified from the European Waste Catalogue.
<b>Household Waste</b>	Refuse from household collection rounds, waste from street sweepings, public litter bins, bulky items collected from households and wastes which householders themselves take to household waste recovery centres and "bring sites".
<b>Household Waste Recovery Centres / Civic Amenity Sites</b>	A facility provided by the Waste Disposal Authority that is available to the public to deposit waste which cannot be collected by the normal household waste collection round.
<b>Incineration</b>	The controlled burning of waste. Energy may also be recovered in the form of heat (see Energy from Waste).
<b>Industrial Waste</b>	Waste from a factory or industrial process.
<b>Inert waste</b>	Waste that does not decay or degrade, mainly originating from construction and demolition activity.
<b>Inert Landfill</b>	A landfill site that is licensed to accept inert waste for disposal.
<b>In-Vessel Composting</b>	A system that ensures composting place in an enclosed but aerobic environment, with accurate temperature control and monitoring. There are many different systems, but they can be broadly categorised into six types: containers, silos, agitated bays, tunnels, rotating drums and enclosed halls.
<b>ILW - Intermediate level waste</b>	Radioactive wastes exceeding the upper activity boundaries for LLW but which do not need heat to be taken into account in the design of storage or disposal facilities.
<b>Kerbside Collection</b>	The collection by local authorities of recyclable goods directly from households, or occasionally industrial and commercial premises.
<b>Landfill (including land raising)</b>	The permanent disposal of waste into the ground, by the filling of man-made voids, or the construction of landforms above ground level (land-raising).
<b>Landfill Directive</b>	European Union requirements on landfill to ensure high standards for disposal and to stimulate waste minimisation.
<b>Materials Recycling Facility (MRF)</b>	A facility for sorting and bulking up recyclable waste.
<b>Mechanical Biological Treatment (MBT)</b>	The treatment of residual waste using a combination of mechanical separation and biological treatment.
<b>Municipal Solid Waste (MSW)</b>	Household waste and any other waste collected by a waste collection authority such as municipal parks and gardens waste, beach cleansing waste and waste resulting from the clearance of fly-tipped materials.
<b>Non Hazardous Landfill</b>	A landfill which is licensed to accept non-inert (biodegradable) wastes e.g. municipal and commercial and industrial waste and other non-hazardous wastes (including inert) that meet the relevant waste acceptance criteria.
<b>Non Hazardous Waste</b>	Waste that does not pose a particular risk to the environment because of any hazardous content, but which contains biodegradable elements within a mixture of materials.
<b>Non Inert</b>	Waste that is potentially biodegradable or may undergo significant physical, chemical or biological change once landfilled.
<b>Non Operational Facility with Planning Permission</b>	A waste facility that has obtained planning permission, which is yet to expire and therefore has 'potential planned capacity'.

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<b>Non Operational Facility</b>	A facility which is currently non-operational and does not have potential capacity for processing waste (such as a facility where planning permission has expired).
<b>Open Windrow Composting</b>	A biological process which biodegradable waste (such as green waste and kitchen waste) is broken down in an open air environment (aerobic conditions) by naturally occurring micro-organisms to produce a stabilised residue.
<b>Operational Facility</b>	A waste facility which is currently operating in the Plan Area.
<b>Organic Treatment Facility</b>	A facility that can treat organic waste including Open Windrow Composting, In-Vessel Composting and Anaerobic Digestion facilities.
<b>Pollution Prevention and Control / Integrated Pollution Control</b>	A system of regulations and permit regime designed to prevent or reduce pollution.
<b>Proximity Principle</b>	Requires that waste should be managed as near as possible to its place of production, reducing travel impacts.
<b>Recovery</b>	Value can be recovered from waste by recovering materials through recycling, composting or recovery of energy.
<b>Recycled Aggregates</b>	Aggregates produced from recycled construction waste such as crushed concrete and brick.
<b>Recycling</b>	The reprocessing of waste either into the same product or a different one.
<b>Refuse Derived Fuel (RDF)</b>	A fuel product produced from the combustible fraction of waste.
<b>Residual Waste</b>	Waste remaining after materials for re-use, recycling and composting have been removed.
<b>Scottish Environmental Protection Agency (SEPA)</b>	Scotland's environmental regulation organisation with responsibility for the protection and improvement of the environment, including the sustainable management of natural resources.
<b>Waste Collection Authority (WCA)</b>	A local authority that has a duty to collect household waste. They also have a duty to collect commercial waste if requested to do so and may also collect industrial waste. (The waste collection authority may differ from the waste disposal authority).
<b>Waste Disposal Authority (WDA)</b>	A local authority responsible for managing the waste collected by the collection authorities and the provision of household waste recovery centres.
<b>Waste Electrical and Electronic Equipment (WEEE)</b>	Sites for the depollution, disassembly, shredding, recovery or preparation for disposal, and any other operation carried out for the recovery or disposal of Waste Electrical and Electronic Equipment.
<b>Waste Hierarchy</b>	A framework for securing a sustainable approach to waste management. Waste should be minimised wherever possible. If waste cannot be avoided, then it should be re-used; after this it should be prepared for recycling, value recovered by recycling or composting or waste to energy; and finally disposal.
<b>Waste Minimisation / Reduction</b>	The most desirable way of managing waste, by avoiding the production of waste in the first place.
<b>Waste Transfer Station</b>	A site where waste is sorted or baled prior to transfer for recycling, treatment or disposal.