



## **Oxfordshire County Council**

Minerals & Waste Local Plan Support

Oxfordshire Waste Data Refresh Exercise

### **Executive Summary**

Issued: 14 February 2014

## BPP Consulting Document Control

**Project:** Oxfordshire Waste Needs Assessment Refresh

**Report:** Executive Summary

**Version Description:** Final Issue

**Version No.:** 1.1

**Date:** 14.02.14

<b>Version No.</b>	<b>Version Description</b>	<b>Author</b>	<b>Date</b>	<b>Reviewed</b>	<b>Date</b>
1.0	Draft for Client Approval	Alan Potter	11.02.14	David Payne	11.02.14
1.1	Final Issue	Alan Potter	14.02.14	Ian Blake	14.02.14

## Table of Contents

1.	Introduction.....	1
2.	Findings.....	2
2.1.	Municipal Solid Waste (MSW) Forecasts.....	3
2.2.	Agricultural Waste .....	4
2.3.	Commercial & Industrial Waste.....	4
2.3.1.	Conclusion on Baseline.....	4
2.3.2.	Conclusion on Growth .....	5
2.3.3.	Conclusion on Targets .....	5
2.4.	Construction, Demolition & Excavation Waste.....	6
2.4.1.	Conclusion on Baseline.....	6
2.4.2.	Conclusion on Growth .....	6
2.4.3.	Conclusion on Targets .....	7
2.5.	Hazardous Waste.....	7
2.5.1.	Conclusion on Baseline.....	7
2.5.2.	Conclusion on Growth .....	8
2.5.3.	Conclusion on Flows .....	8
2.5.4.	Conclusion on Management Need .....	8
3.	Summary of Key Findings.....	9

## List of Tables

Table 1: Estimated Waste Arising in Oxfordshire Baseline 2012 & 2031 Forecast.....2

## 1. Introduction

Oxfordshire County Council commissioned BPP Consulting LLP to undertake a critical review of the *Oxfordshire Minerals and Waste Development Framework Draft Waste Needs Assessment* that underpinned the Minerals & Waste Core Strategy 2012 (now withdrawn). This exercise identified a number of weaknesses in the data and recommended that further action be taken to remedy shortcomings. BPP Consulting was then commissioned to undertake the following tasks:

1. Critically review the forecasts for MSW sourced from the Oxfordshire Joint Municipal Waste Management Strategy.
2. Produce a robust baseline value for agricultural waste arisings within Oxfordshire and assess possible management needs.
3. Produce robust baseline value, forecasts and suggested targets for C&I and CDEW produced in Oxfordshire.
4. Produce robust baseline value, forecasts, assessment of flows and possible management needs for hazardous waste produced in Oxfordshire.
5. Undertake a rapid survey of operators of processing plant producing recycled product from CDEW in Oxfordshire.

## 2. Findings

Table 1 brings together the findings for the baseline waste arisings assessments and forecasts by waste stream.

**Table 1: Estimated Waste Arising in Oxfordshire Baseline & Forecast<sup>1</sup>**

*(rounded to nearest 000s)*

	<b>Baseline@ 2012</b>	<b>Forecast @ 2031</b>
MSW	315,000	322,000
C&I	710,000	773,000
CDEW	1,360,000	2,100,000
Hazardous	52,000	79,000
Agric	911,000	911,000
<b>Totals</b>	<b>3,348,000</b>	<b>4,185,000</b>

This estimates a possible increase of 25% in the overall tonnage of waste to be managed by the end of the Plan period (2031).

---

<sup>1</sup> No forecast was produced for agricultural waste so it is assumed to remain constant.

## 2.1. Municipal Solid Waste (MSW) Forecasts

Historical trends identified range from some growth (1997/98-2012/13) to steep decline (2006/07-2008/09) in MSW arisings depending on the period taken into account. In forecasting forward determining which years may be representative of future years in terms of the profile of service provision and demographics is crucial. This suggests exclusion of data from the years prior to the introduction of service changes and also moderation of more recent data given the sharp decline attributable both to one-off service changes and the recession.

The growth scenario put forward in the Joint Municipal Waste Management Strategy (JMWMS) does not seem an unreasonable basis on which to plan. However it is recommended that several MSW growth scenarios be considered to plan within a range. This reflects the fact that any single prediction is likely to be 'wrong'. Planning within a range also allows for an element of flexibility.

We therefore propose modelling high, medium and low growth scenarios which will include work to establish the profile of each scenario. In any event it does seem sensible to include use of the JMWMS growth scenario in order to demonstrate consistency in forward planning across the authority.

Development of the other scenarios should take the following into account:

- Future service changes
- Population growth forecasts
- Housing growth forecasts
- Fiscal and legislative measures affecting consumption and production of waste.

Development of the scenarios should also take into account the guidance in Annex D of the PPS10 Companion Guide.

## 2.2. Agricultural Waste

The total arisings estimate for agricultural waste is 910,900 tonnes per annum and of this, 11,500tpa (1.3%) is of 'non-natural' origin. Of the non natural waste an unknown amount is already managed through the formal management system without currently posing apparent capacity challenges. Agricultural waste is also dealt with through activities exempt from the need for an environmental permit and there is an established collection network anchored around exempt sites. Providing the exemptions remain in place, this suggests that any additional demand for separate management of this stream will not be significant. The potential inclusion of organic waste from intensive farming units in particular is something that the Plan could seek to take account of.

## 2.3. Commercial & Industrial Waste

### 2.3.1. Conclusion on Baseline

The original Oxfordshire Waste Needs Assessment (OWNA) used the value generated by the 2009 DEFRA study apportioning the regional results down to WPA level. This gave a value of 566,800 tonnes which indicates a drop of 45% on the previous dataset generated by the ADAS study. Having analysed the data on business activity in Oxfordshire there is no apparent reason as to why the quantity of C&I waste generated should have halved over the 2-3 year period since the previous study. Such a drop is not borne out by analysis of the trends in number of businesses or GVA. The value generated through the BPP method is a closer fit to those generated in the past and the change in business population in Oxfordshire over the period supports this. Therefore it is proposed that the value used as the baseline for C&I waste arisings should be taken to be **710,000 tonnes per annum.**



### **2.3.2. Conclusion on Growth**

There is considerable uncertainty in forecasting C&I waste arisings. The Government forecast described in the forecasting paper published by Defra in 2013 predicts C&I arisings nationally to be lower in 2020 than the figure arrived at in the national 2009 survey which itself was found to be unrealistically low. The economy of Oxfordshire is likely to be more resilient and grow faster than that of the UK as a whole. Therefore the expectation of the national forecasts that C&I waste arisings will fall in real terms to 2020 is considered to be overly conservative and has therefore not been applied.

To provide flexibility and help ensure that there are sufficient opportunities to develop the necessary facilities, it is considered prudent to plan for waste management capacity that will meet requirements based on higher predicted levels of waste arisings. The selected forecasts are based on moderate growth with the highest scenario showing a final maximum figure in 2031 of 773,000 tpa which is 63,000 tonnes above the 2011 baseline. This represents the capacity of one moderately sized facility or two smaller facilities.

### **2.3.3. Conclusion on Targets**

The analysis indicates that the target of 70% recycling or composting of C&I waste by 2025 proposed in the OWINA is ambitious. The scale of the challenge presented depends on a number of unknowns such as the level of current recycling and projected growth. Up to 200,000 tonnes of additional capacity could be required over the period. This may present challenges in terms of identifying deliverable sites and the ability of the market to respond. Therefore we suggest the target be modified to 65% by 2025 and the 70% target being set for the year before the end of the Plan period i.e. 2030.

## **2.4. Construction, Demolition & Excavation Waste**

### **2.4.1. Conclusion on Baseline**

The overall estimated value for the Plan Area generated through a point of production method is 1.36 million tonnes pa (*using 2008 baseline data updated to 2010*). This is closely aligned with the value used in the withdrawn Oxfordshire Minerals & Waste Core Strategy of 1.3 million tonnes pa. This compares with the value of 1.44 mtpa cited in the original OWNA for 2008/09. We believe that the method used to derive a slightly lower value is as robust as that used to generate the DCLG CDEW arisings data with the added benefit that it draws on a locally based assessment of construction sector activity.

### **2.4.2. Conclusion on Growth**

The assessment indicates that a positive growth rate may be applicable for the initial plan period after which the effect of growth from a revival in construction could be offset by improved waste reduction measures. In our view a trajectory somewhere within the 'cone of possibility' would be most robust which is approximately between 1.2m and 2.1m tonnes per annum at 2031. We suggest a higher growth scenario be used as the basis to plan going forward as it takes a positive growth rate and thus ensures that the plan is flexible enough to provide for increases in arisings.

### 2.4.3. Conclusion on Targets

To promote the movement of waste up the waste hierarchy, ultimately more material needs to be converted to products which replace primary materials, together with a minimal amount of material - such as clays and hazardous materials (e.g. asbestos) – continuing to be landfilled.

On this basis it is considered that the following targets should be adopted.

	2010	2015	2020	2025	2030
Recycling , Use or Conversion to Product	54%	55%	60%	65%	70%
Recovery	24%	25%	25%	25%	25%
Landfill/Restoration	22%	20%	15%	10%	5%

## 2.5. Hazardous Waste

### 2.5.1. Conclusion on Baseline

The combined datasets indicate the following results:

1. In 2012 Oxfordshire produced just over 52,000 tonnes of hazardous waste;
2. Of this just over 10,500 tonnes were dealt with in Oxfordshire.
3. Just over 20,500 tonnes of waste was imported to Oxfordshire to be managed.

This dataset suggests that Oxfordshire achieved 60% net self sufficiency in hazardous waste management in 2012.

### **2.5.2. Conclusion on Growth**

Growth estimates have been made for the wastes that account for those streams that occurred in quantities of 500 tonnes or more in 2012. It has been assumed that the remainder will remain constant as there is no alternative basis to forecast growth. This gives a total forecast arising in 2031 of 78,668 tonnes - a rise of 51% on the 2012 baseline. This equates to an average annual growth rate over the plan period of 2.2% per annum.

### **2.5.3. Conclusion on Flows**

Just under 80% of hazardous waste arising within the Plan Area is managed within 2.5 hours driving time of the centre of the Plan Area and within 2 hours of the Oxfordshire boundary. Waste going to landfill, if not managed within Oxfordshire itself, is generally transported only within an hour of the Oxfordshire boundary.

The vulnerability analysis undertaken, identified two solvent based waste streams with possible vulnerability which suggests a need to investigate further albeit for a relatively small amount.

### **2.5.4. Conclusion on Management Need**

The analysis indicates that:

1. There is sufficient capacity within a reasonable travel time of the Plan Area boundary to manage all principal hazardous waste streams. Thus the current arrangements appear to be reasonably resilient. The availability of the capacity should be confirmed with receiving WPAs via Duty to Cooperate arrangements.

2. The vast majority of hazardous waste arising in Oxfordshire is managed through recovery, with disposal either through landfill or incineration only being used as a last resort. Therefore the need to make provision in the Plan for capacity that promotes movement of this waste stream up the waste hierarchy appears to be satisfied.

Bearing in mind provision for management of hazardous waste is not necessarily expected to be at Plan Area level, there does not appear to be a need to make provision for additional management capacity within the Plan Area itself. Even with growth there is unlikely to be sufficient waste to warrant provision of specialist facilities to deal with any particular stream without drawing in waste from surrounding WPAs.

It is recommended that the Plan considers making provision to retain existing capacity through policies to safeguard and encourage improvement and expansion of existing facilities in the form of:

1. Metal recycling sites (MRS) to receive and process end of life vehicles (ELVs) as this makes a significant contribution towards the current level of over 50% net self-sufficiency.
2. Transfer capacity as this allows for waste to be bulked up enabling it to move more readily to suitable capacity even if it is at some distance from the Plan Area boundary.
3. SNRHW cell capacity at Landfills to maintain net self-sufficiency in asbestos contaminated waste, all the while quantities of this are being produced.

### **3. Summary of Key Findings**

The findings are summarised in the table that follows.

	<b>Key Findings</b>	<b>Key Messages/Recommendation</b>
<b>MSW</b>	<p>The growth scenario put forward in the JMWMS does not seem an unreasonable basis for forward planning.</p>	<p>Several MSW growth scenarios (high, medium and low) be considered so that plan is developed considering a range of possibilities. Work should be undertaken to assess the detail of each scenario with use of backcasting to anticipate possible future 'shocks'.</p> <p>As a general point regular monitoring and review of forecasts relied upon is needed to determine if any correction is required to predicted course.</p>
<b>Agricultural</b>	<p>900,000 tonne per annum value cited in the OWNA is within the right ballpark</p> <p>Organic waste represents 98% of production.</p> <p>Feedstock potential is circa 200,000 tonnes of slurry, manure and silage effluent.</p>	<p>Non-natural agricultural waste represents a relatively small proportion of the total quantity of waste produced in Oxfordshire and does not require separate/specific provision.</p> <p>The potential introduction of organic waste from intensive farming units is something that the Plan could seek to take account of if taking a feedstock focussed approach.</p>
<b>C&amp;I</b>	<p><u>Proposed Baseline 710,000 tonnes p.a.</u></p> <p>The selected forecasts show moderate growth with the highest showing a final maximum figure in 2031 68,000 tonnes above the 2011 baseline. This represents capacity of one moderately sized facility or two smaller facilities.</p> <p>The target of 70% recycling or composting of C&amp;I waste by 2025 suggests a rate of capacity development of up to 50,000 tonnes every four years to 2025.</p>	<p>The proposed target could be over ambitious and it may be advisable to extend the timescale for delivery to nearer the end of the Plan period.</p> <p>Given uncertainties over data (current baseline and management profile) over emphasis on achieving specific % targets should be avoided. In reality fiscal and practical pressure will act at the principal drivers and the market will respond according to its perception of need/opportunity. Flexibility should be retained to accommodate these responses supported by annual monitoring.</p>

<p><b>CDEW</b></p>	<p>Proposed Baseline: 1.36 million tonnes pa.</p>	<p>More ambitious targets can be achieved given the right signals. 70% Recycling ; 25% recovery; 5% landfill by 2030.</p> <p>Planning policy can assist in this by restricting availability of landfill capacity in the medium term while at the same time ensuring the availability of suitable recovery capacity either at new sites or by expansion of existing capacity. In addition ambitious targets in the Minerals Core Strategy for the production of recycled minerals could assist.</p>
<p><b>Hazardous</b></p>	<p>In 2012 Oxfordshire produced just over <u>52,000 tonnes of hazardous waste</u>;</p> <p>Oxfordshire achieved <u>60% net self sufficiency</u> in hazardous waste management in 2012.</p> <p>The forecasts indicate that hazardous waste arising in Oxfordshire may grow from the current level of around 50,000 tonnes to as much as <u>79,000 tonnes per annum in 2031</u>.</p> <p>There is unlikely to be sufficient to warrant provision of specialist facilities to deal with any stream on its own in isolation from surrounding WPAS.</p>	<p>Consider making provision to retain existing capacity through safeguarding and policies to encourage improvement and expansion in the form of:</p> <ol style="list-style-type: none"> <li>1. Metal recycling sites (MRS) to receive and process end of life vehicles (ELVs).</li> <li>2. Transfer capacity as this provides the facility for waste to be bulked up enabling it to move more readily to suitable capacity even if it is at some distance from the Plan Area boundary.</li> <li>3. SNRHW cell capacity at Landfill to maintain net self sufficiency in asbestos contaminated waste, all the while significant quantities of this are being produced.</li> </ol>