Issue 2 Topic Paper

Whether the statistical basis for the CS is robust and justifies the vision and the strategic objectives

Whether the tonnage of waste planned for is justified by the evidence base and consistent with national policy and the Regional Strategy insofar as it remains material and whether the Vision and Strategic Objectives developed follow and are justified by the analysis of the evidence base.

Date: January 2012

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Question 1: Statistical base: Municipal Solid Waste

1.1 The issue of Municipal Solid Waste (MSW) data is examined in detail within both of the Waste Planning Authority's (WPA) waste data evidence papers (CD10.3 Section 2 and CD10.4 Section 3). These sections cover a range of areas including arisings, recycling, facilities and capacity gaps. This data is taken mainly from the Waste Disposal Authority (WDA) as they have control over MSW within the County. PPS10 Companion Guide (CD12.32 paragraph 4.1 and 4.5) states that the evidence base should be founded on the best available data for the waste stream, therefore for MSW this is from the WDA. The WPA makes no apology that the WCS has a close relationship with the Joint Municipal Waste Management Strategy (JMWMS) and the evidence provided by the WDA, this approach is supported by Companion Guide to PPS10 (CD12.32 paragraphs 7.8-7.12). There are targets set within the RSS (CD11.34 Appendix 2 and CD11.35) for Annual Municipal Waste Management Capacities for Landfill Directive Years. However as it is the WDA who is in control of this waste stream, it is the data from them that is more relevant and up-to-date in relation to the requirements which need to be identified in the WCS. Section 3 of the waste data update (CD10.4 tables 3m, 3n, and 3o) take into consideration the RSS indicative figures in identifying the capacity requirements for MSW over the plan period.

Question 2.1: The CS assumes that this waste stream will increase to some 359,600 per annum by 2027/28. Are the underlying assumptions about population growth and growth in waste per head (if any) robust? If not, what assumptions would be more robust?

Background

1.2 On average, each European citizen generated 460 kg of municipal waste in 1995. This amount rose to 520 kg per person by 2004, and the European Environment Agency predicts a further increase to 680 kg per person by 2020. In total, this corresponds to an increase of almost 50% in 25 years (European Environment Agency 2008).

1.3 In Gloucestershire's case, each person generated 414kg of municipal waste in 1995 and 504kg in 2009/10. This increase in waste tonnes is primarily due to, growth in household consumption, changes to waste collection systems and an increase in household numbers.

Joint Municipal Waste Management Strategy (JMWMS) (CD11.12)

1.4 In the Municipal Waste Arising Projection report, 2006 (CD13.38), the Waste Disposal Authority (WDA) developed its waste arising projection using the methodology set out below and using 7 years data, from 1998/99 - 2005/06.

The following data sets were used:

- data on waste collection (see report for detail on waste data used):
- population and household numbers and average household sizes
- planned service changes for waste collection (including fortnightly collection of residual waste, food waste recycling, etc.)

The projections for each waste stream were then collated to produce an overall county projection which at that time forecast waste growth at an annual average of 1.6% pa.

Current Housing and Population forecasts

1.5 In the most recently published housing and population forecasts (Housing Trend Analysis & Population and Household Projections Final Report May 2011 CD13.35), the population in Gloucestershire is estimated to increase from 601k in 2009 to between 660k and 686k in 2027, similarly households are set to increase from 259k in 2009 to between 306k and 319k by 2020 (CD13.35 tables 11 and 12). This is an increase in population of approximately 12% and an increase in households of approximately 18%. Comparing these growth rates to the tonnage table in the Waste Core Strategy (CD10.4 Table 3l page 39/40) we see that the growth rate is closely aligned to the anticipated growth in households (see table 1).

Table 1 Forecasts of waste tonnage, population and household numbers.

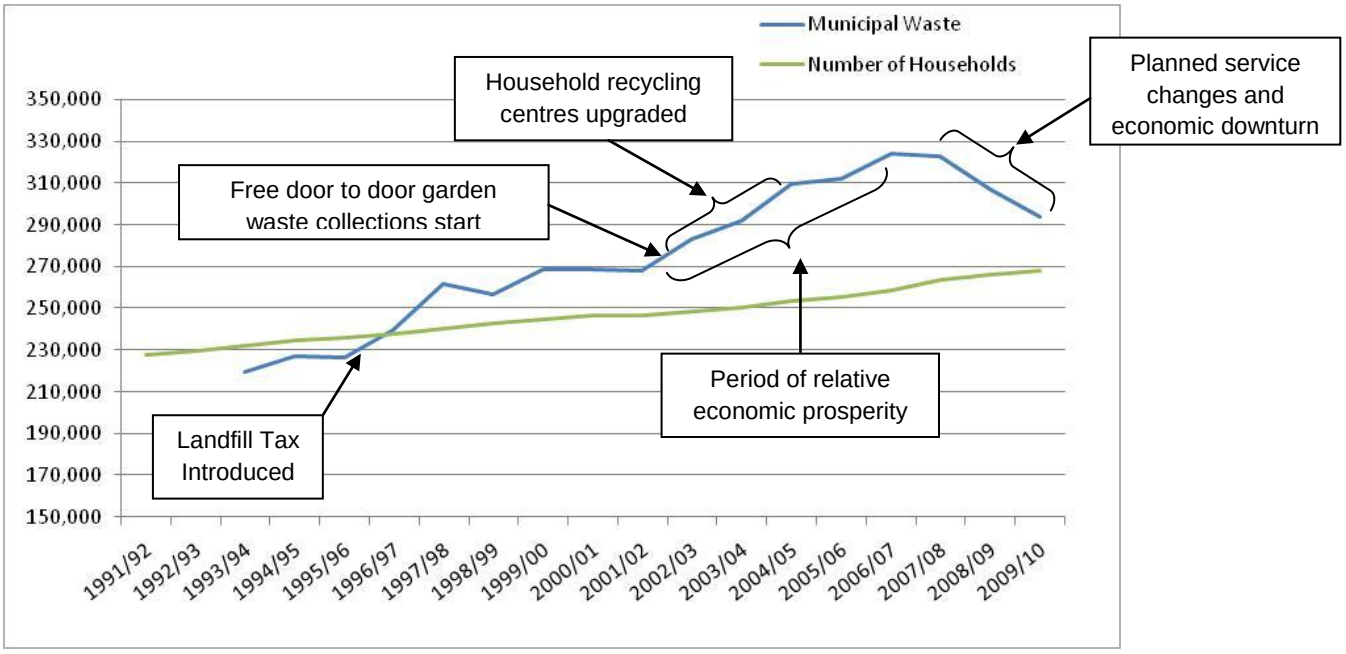
Year	Waste Tonnage Forecast	Percentage Change	Population	Percentage Change	Households	Percentage Change
2008/09	307,269		597,684			
2009/10	293,815	-4.38	599,673	0.33	258,900	
2010/11	292,816	-0.34	604,700	0.55	261,400	0.97
2011/12	297,116	1.47	608,100	0.56	263,900	0.96
2012/13	301,914	1.61	611,400	0.54	266,300	0.91
2013/14	306,793	1.62	614,700	0.54	268,900	0.98
2014/15	311,753	1.62	618,000	0.54	271,700	1.04
2015/16	316,794	1.62	621,400	0.55	274,500	1.03
2016/17	321,918	1.62	624,800	0.55	277,500	1.09
2017/18	327,127	1.62	628,200	0.54	280,300	1.01
2018/19	332,422	1.62	631,600	0.54	283,200	1.03
2019/20	337,805	1.62	635,000	0.54	286,200	1.06
2020/21	340,533	0.81	638,300	0.52	288,900	0.94
2021/22	343,258	0.80	641,700	0.53	291,600	0.93
2022/23	345,984	0.79	645,000	0.51	294,700	1.06
2023/24	348,709	0.79	648,200	0.50	296,700	0.68
2024/25	351,435	0.78	651,300	0.48	299,200	0.84
2025/26	354,161	0.78	654,300	0.46	301,700	0.84
2026/27	356,886	0.77	657,300	0.46	304,100	0.80
2027/28	359,612	0.76	660,100	0.43	306,600	0.82

1.6 WDA modelling uses the 1.6% growth rate initially, however based on achieving policy 1 of the JMWMS (CD11.12), to reduce waste growth to zero at a household

level by 2020, the forecast for the WCS was linked to the increase in household numbers giving a growth rate of 0.8% year on year from 2020.

Is linking waste growth to changes in household numbers a robust assumption?

1.7 Looking at the historical data of actual household numbers since 1991 (census data and house building figures supplied by Research and Intelligence Team) and waste tonnages from 1993 to date gives the following chart.



1.8 It is clear from this chart that there has been an increase in waste arisings and a corresponding increase in the number of households for many years. It is also clear that many other factors affect waste growth including, changes to waste collection systems e.g. free or charged for garden waste collection services, the fortnightly collection of residual waste and the state of the economy.

1.9 However, in the last four years shown in the chart above waste growth has fallen whilst household numbers have continued to grow. So what are the factors which have affected the last four years of waste growth and can these conditions be replicated for the long term?

1.10 The decrease in tonnage experienced in the past four years is due to a number of factors, in particular the economic downturn and planned service changes. The effect of planned service changes was factored into the modelling carried out in 2006. However the economic downturn was not and the WDA believe this is having an additional effect on overall waste arisings.

1.11 This can be demonstrated by looking at the areas of Gloucestershire which have had stable waste services with ones which have experienced service changes. With the exception of a small trial area of 1,700 properties in Stroud District, Stroud and Forest of Dean have not changed their waste services significantly for the past four years and their municipal waste arisings have fallen from 72,678 tonnes in 2007/08 to 69,459 tonnes in 2010/11 a reduction of 4.4% over this period. Cotswold, Cheltenham, Gloucester and Tewkesbury have introduced service changes and their arisings have fallen from 183,128 tonnes in 2007/08 to 166,320 tonnes in 2010/11 a reduction of 9.2% over this period. The WDA believe that this demonstrates that in addition to the economic downturn the service changes introduced are also having the effect of reducing waste arisings.

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1.13 The WDA believes that as the economy recovers waste growth will return although at a reduced rate due to the new waste collection systems which encourage waste minimisation and recycling i.e. from the previous average of 3% pa to 1.6% pa which reduces to 0.8% pa from 2020. However, the underlying drivers of increasing household numbers, reducing average household size and increasing population will remain key factors driving waste growth, especially as the one off reductions, due to planned service changes, will have been implemented. The WDA takes the view that it should link its long term waste forecasts to the growth in the number of households and achieve a zero growth rate at the household level by 2020.

1.14 The WDAs conclusion is that for the purpose of the WCS the forecast waste tonnage figures and assumptions remain robust.

Question 2.2 How will policy WCS1 work to deliver a reduction and is there any evidence of success from these approaches to date?

1.15 The County Council has a number of measures that they developed to encourage waste reduction. These include:

- As part of the Gloucestershire Waste Partnership (GWP) (including the County Council and the 6 district councils) there is the 'Recycling for Gloucestershire School Education Programme'. This supports local schools in making pupils aware of the 3 Rs 'Reduce, Reuse and Recycle'. The aim is to show children that their behaviours will have an impact upon the environment.(http://www.rfgschools.com/index.html)

- In addition the County Council has been working through the GWP to deliver a series of waste reduction initiatives; real nappies – funding and promoting real nappies via a voucher scheme and anti/post natal classes, community composting – funding community composting via recycling credits and start up contributions, master composters – a group of volunteers supported and trained by the County Council so that they can promote home composting in the community, home composting – promoting discounted composting bins (sold over 17,000 since 2006), love food hate waste – local promotions based on the national campaign particularly when introducing food waste collections and County wide campaigns and themed events such as Zero Waste Week.

- Promote and deliver reuse options for the public via our household recycling centres and the Recycle for Gloucestershire website (http://www.recycleforgloucestershire.com/).

- Through the delivery of the JMWMS (CD11.12) waste reduction has been demonstrated. The implementation of the new food waste recycling system linked to a reduction in the frequency of residual waste collection leads to a marked total waste reduction; Cotswold District 9% reduction, Gloucester City 5% reduction and Tewkesbury 5% reduction.

- By April 2012, all the District Councils in Gloucestershire will have adopted a charge for garden waste collection. This has encouraged this waste to now be composted at home and has contributed to a reduction in waste collected.

- In September 2006 the County Council produced a Supplementary Planning Document (SPD) entitled *Waste Minimisation in Development Projects* (CD11.13). This was guidance on how waste generated in construction and demolition (C&D) can be effectively managed. It has an aspiration to divert 100% of C&D waste away from landfill. The guidance applies to all planning applications for 10+ dwellings (or housing developments over 0.5ha) or other development where the floorspace is 1 000m² (or exceeds 1ha in area). It requires developers to submit a 'Waste Minimisation Statement' alongside the planning application detailing how waste will be minimised and dealt with. Monitoring of the success of the SPD takes place within the Gloucestershire Minerals and Waste Annual Monitoring Reports (AMR). Since the implementation of the SPD there has been a continued increase of the number of Waste Minimisation Statements being submitted alongside planning applications for developments that fall within the criteria. The Council will continue to monitor this.

Question 2.3 The number and capacity of the facilities for which the CS plans result from assumptions about recycling and composting and assume 60% by 2020 with an aspiration for 70% by 2030. Are these realistic and, if not, what rates would be more realistic and at which years?

Background

1.16 Gloucestershire is one of the upper quartile County Councils in the Country for minimising the amount of waste produced by each person (Appendix 1) and is also good at recycling and composting the waste that we do produce. Last year (2010/11) Gloucestershire achieved a recycling and composting rate of 46.3% compared to an England average of 41.2%.

1.17 The County Council recognises that more needs to be done to reduce the amount of waste produced and also to recycle and compost as much as possible. That is why the JMWMS (CD11.12) which is adopted by the seven waste authorities has the waste hierarchy at its core. The JMWMS (CD11.12) has nine objectives as set out on pages 17-19 and the delivery of the strategy is considered below.

Delivering the Strategy

1.18 The key to achieving the 60% recycling and composting target is changing the collection service offered to the householder. The full service change includes:

- collecting more recyclables (including food waste),
- charging for garden waste collections, and
- reducing the frequency of residual waste collection.

1.19 This new collection system has been implemented in four district councils so far; Cotswold, Tewkesbury, Gloucester City and Cheltenham. Forest of Dean District Council will be changing their service in July 2012.

1.20 Stroud District Council have not yet agreed to this full service change but are making a partial service change in 2012 to collect more recyclables. They have indicated that they will consider a full service change when their existing contract expires in 2016.

Table 1: the effect of service change on recycling and composting performance

The service change years have been marked as shaded cells.

District	2007/08	2008/09	2009/10	2010/11	2011/12 Forecast
Cheltenham Borough	31%	33%	33%	35%	47%
Cotswold District	43%	61%	60%	60%	60%
Forest of Dean District	38%	40%	40%	39%	40%
Gloucester City	26%	32%	33%	46%	40%
Stroud District	26%	27%	26%	25%	26%
Tewkesbury Borough	29%	33%	32%	54%	55%

1.21 From this evidence it is clear that making the service changes outlined in the JMWMS (CD11.12) increases the levels of recycling.

What is an achievable target for recycling and composting in Gloucestershire?

1.22 Through delivering the waste strategy and modelling its implications the WDA and its partners believe that 60% recycling and composting is achievable across the county

by 2020. This is 10% above the UK target set by Government. However to achieve this level of recycling and composting is not easy, and the following conditions will have to be met:

1. All district councils will have to have implemented the JMWMS "recycling system" – indications are that by 2016 all councils will have done this.
2. Household Recycling Centres will have to be recycling at least 65% of the household waste delivered to them and increase the amount of reuse.
3. Householder participation in using recycling systems will have to be high – greater than 80% participation capturing at least 80% of available materials.

1.23 The WDA is confident that the conditions necessary for 1 are in place with five of the six districts already either having changed their services or in the process of changing.

1.24 Condition 2 is already being met and the WDA will ensure performance is maintained or improved via its contract.

1.25 Condition 3 requires high levels of householder participation in using the recycling systems and high levels of recyclable capture. Participation rates vary across the county and for different materials, the latest surveys (*Gloucestershire County Council - Waste Management - Gloucestershire Participation Monitoring Nov 2010 – CD13.39)* of participation carried out show an average rate of 74% participation in dry recycling and 64% for food waste recycling. So progress on householder participation is good but more needs to be done and the waste partnership is now considering further action to increase participation rates especially to encourage the 1 in 5 households which still do not recycle their waste. The other factor which affects recycling levels is material capture i.e. how much of each material is diverted from the residual waste stream. Levels of capture vary by material and by district but for glass, cans and paper, the capture rates are 70%, 44% and 64% respectively. Again these figures are progressing towards the 80% mark needed to achieve the 60% recycling target.

1.26 Reaching high recycling and composting rates in urban areas, Cheltenham and Gloucester, is difficult but the WDA and its partners are confident that they can achieve a recycling and composting rate of at least 60% across the county by 2020.

1.27 Currently only the WDA has adopted the aspiration of 70% recycling by 2030. The WDA believes this higher rate may be achievable in the future but recognises it will require additional actions at a local and national level, for example:

- All Gloucestershire councils (both WDA and Waste Collection Authorities) will need to sign up to the higher target;

- A greater focus on making it easier for the householder to recycle increasing the level of material capture e.g. a unified co-mingled dry recycling collection system;

- Successful voluntary agreements between the private sector and government such as the Courtauld Commitment[1]; and

- The ability to charge individual households for residual waste collection (common practice across Europe) and/or individual or community rewards (encouraging a greater capture rate for recyclable materials).

1.29 The WCS modelling currently assumes a household recycling and composting rate of 60% by 2020 and the WDA believes this should remain the basis of the WCS. The WDA believes that the recycling and composting target of 60% is realistic by 2020 and the WDA will be encouraging its district partners to officially adopt the 70% recycling and composting aspiration by 2030 as a countywide target.

[1] *The Courtauld Commitment is a responsibility deal aimed at improving resource efficiency and reducing the carbon and wider environmental impact of the grocery retail sector see www.wrap.org for more details*

2. Statistical base: Commercial and Industrial Waste

2.1 Section 4 of the Waste Data Update (CD10.4) examined the management of C&I waste in Gloucestershire. This included discussion on growth trends, facilities, capacity and treatment. The data included within this section are taken from the Environment Agency's Waste Data Interrogator (EA WDI). The WPA also undertook a Waste Facilities in Gloucestershire Survey in January/February 2010 for the financial year 2008/09 (CD10.4 paragraph 4.1.4). This survey provided details on site numbers and current capacities. The Companion Guide to PPS10 (CD12.32) encourages the use of EA data by WPAs in the preparation of DPDs (Section 4 and Annex C).

2.2 Table 4b of Section 4 of CD10.4 is the starting point for identifying the waste managed in Gloucestershire. The baseline data and the assumptions made with regards to the landfill, transfer and treatment categories which underpins Table 4b, are contained in Appendix B of CD10.4. The actual capacities (in light of the RSS categories for recycling, reuse, recovery (including transfer)) are included in Table 4d of CD10.4 (updated through an amendment made in CD 1.11 page 30 and FC5). The actual capacity is applied to the indicative RSS capacities to identify the capacity gaps presented in Tables 4f – 4h. This capacity gap is summarised in Table 4j of CD10.4 and contained in the WCS CD1.1paragraph 3.24- 3.25 and FC9.

2.3 The WPA would like to stress that throughout the preparation of the WCS the approach to the consideration of data and how the WCS provision is identified have been supported by the EA and the RPB (CD 2.3 page 76, CD 3.2 page7 & referenced in CD10.4 page 15) and their representation 9 to the Publication WCS (CD6.1 page 304-305)

Question 2.4 For this waste stream the CS analyses waste managed rather than waste arising in the County. Should the CS utilise the DEFRA survey (See CD1.3, FC3)?

2.4 The introduction above sets out how the process the WPA have undergone in relation to collection and collation of data on C&I waste. The Publication WCS (CD1.1)has used data produced by the Environment Agency as part of their Waste Data Interrogator (WDI). Whilst the WDI is based on reported throughput from waste facilities and not arisings, as it is a National database for waste, it can be used to obtain an indication for waste arising figures (incidentally for all waste streams) i.e. taken as a whole for the country it will provide the proxy for the actual waste 'arising' nationally. More importantly, it's the most current, actual returns information from operators and not a model. However, in relation to waste arisings

sometimes it is not possible for operators to be precise where waste has originated from, particularly if a vehicle contains waste from more than one place of origin and an 'unknown' entry is made on the WDI. Therefore a higher level of consistency will be achieved using the 'managed' approach. The EA data is used by all Planning Authorities. There are limitations as it is operator data. However, it's all balanced and accounted for and contains up to 10 years of data, trends and direction of travel. The WPA has received support from the EA in regards to data included in the WCS data update (CD10.4). The use of the EA data is also supported by Planning for Sustainable Waste Management: Companion Guide to Planning Policy Statement (CD12.32 Annex C).

2.5 The DEFRA 'Commercial and Industrial Waste Survey 2009' (CD12.23) was commissioned to obtain data from business on their C&I waste arisings and the management method for 2009. The DEFRA study (CD13.23) was published after the Publication WCS (CD1.1), therefore any of the data or the findings could not be taken into account within the Publication WCS. However as part of Focused Change 3 (CD1.3), the WPA has outlined its concerns as to the data included in the study. Namely, that it does not take account of exported waste and includes metals which the WPA excluded from their Data Paper (considered in CD1.11 pages 14-15). The WPA acknowledges that the DEFRA study does provide additional information therefore have not dismissed the report but this is not necessarily more authoritative than the data included within the WPAs own data papers (see CD 1.11 paragraphs 3.16, 3.48 and 3.49).

2.6 First it is a known quantity rather, as it is taken from data provided by the EA and waste operators (the DEFRA study is an estimate based on survey data). Secondly, the figure of 375,000 tonnes does not include metal waste as this approach provides a clearer picture of the data (CD10.3 and 10.4). This approach is supported by the EA (CD10.4 paragraph 4.4.6). However, metal forms a significant proportion of the C&I waste stream when it is included. The DEFRA study had a C&I figure of 527, 000 tonnes for Gloucestershire including metals. The Waste Data Paper Update (although for 2008) split C&I waste and metals (CD10.4 Section 4), however when the two figures are put together it provides a figure of 505, 844 tonnes. Therefore there is not a significant difference between the WPA's data and that produced by the DEFRA survey.

2.7 The original Waste Data Paper (CD10.3) clearly specifies under Section 3 Commercial and Industrial Waste, as to why the WPA decided to separate metals from the C&I figure. The reasoning behind this is that metals is a self contained waste stream and has established methods for its re use/disposal. This method had received support from the Environment Agency in the previous data paper (CD10.3 paragraph 71 and

78) and therefore was used in the data paper update in 2010. Metal waste is considered under section 5 (CD10.4) and in particular paragraph 5.5.1 which identifies that there is more than adequate capacity.

2.8 There are also weaknesses as to the data collection for the DEFRA study (CD13.23). The sample size was increased in the South West in comparison to other regions with the intention of improving the quality of the data from earlier arisings studies carried out in 1999 and 2003. However it was still only a sample, therefore there would have been a number of waste companies and other commercial and industrial businesses in Gloucestershire that would not have been surveyed (CD1.11 paragraphs 3.48 and 3.49). There was also only a 60% response rate for the survey for the country (CD13.23 page 13). The intention of the Annex N report for the South West was to provide better data at a regional level. The authors of the study have confirmed through an EA facilitated presentation to South West WPAs (EA offices Exeter 24th March 2011) that the findings are only indicative for the Waste Planning Authority level. The data provided on the EA WDI is taken from operator waste returns which are based on a waste site's environmental permit.

2.9 The WPA still believe that the data paper (CD10.4) is justified to be used to inform the WCS. As highlighted above there is a similarity with the data. However it is considered that the data included within the WPA's own paper has greater validity over that produced in the DEFRA study (CD13.23).

Question 2.5 The DEFRA data reported suggests that the waste arising in the County is managed to a substantial degree out-of-area. How are these apparent cross-boundary flows accommodated in the CS?

2.10 The WPA produced an initial Waste Data Paper (CD10.3) in 2007 to inform the earlier stages of the WCS process. Within this document Section 7 examines the issue of waste transfer into and out of the county. Figures 7 (CD10.3 page 42) and Figure 8 (CD10.3 page 43) provides a visual display of the imports and exports of waste in and out of the County.

2.11 The waste management industry does not respect administrative boundaries and it is the case that movements of waste, particularly C&I, C&D and hazardous waste, takes place across counties.

2.12 In its role as WDA the County Council only has control over municipal waste and cannot control cross-boundary movements of other waste types. This fact is clearly acknowledged in the submission WCS (CD1.1 paragraph 2.32).

2.13 Notwithstanding this, the vision set out in the submission WCS (CD1.1) emphasises the importance of ensuring enough waste management capacity is made available to meet Gloucestershire's needs. It should be remembered that the emerging regional context for waste management is set out in the draft RSS, which identified indicative targets for the provision of capacity for municipal and commercial waste based on the County sub-areas such as Gloucestershire (CD11.35 and 11.36).

2.14 Although there are cross-boundary movements of C&I, C&D and hazardous wastes, the capacity of existing, permitted and proposed (allocated) waste management facilities in Gloucestershire is such that the County is not reliant on other local authority areas to meet its forecast capacity requirements. Although the County has generally been a net importer of waste as outlined in the evidence base (CD10.3 Section 7 and CD10.4 Section 10), the vision of the submission WCS that Gloucestershire should meet its own needs (CD1.3 FC10). Detailed information on waste management capacity requirements and cross boundary issues is set out in the Waste Data update2010 (CD10.4 Section 4, Appendix B and Section 10). The Waste Capacity Study in 2010 also suggests that a large percentage of waste handled at sites is managed in Gloucestershire (CD10.4 Figure 1e).

2.15 The DEFRA study (CD13.23), Figure 8 page 56 and Figure N5 page 139 indicates that a majority of those surveyed on a national level and in the South West do not know the final destination of their waste. Therefore the study is not implicitly stating that a majority of the waste is dealt with outside of the region or county. In addition Figure N5 (CD13.23 page 139) seems to indicate that the destination of commercial and industrial waste is either outside the region (65%) or the respondent doesn't know (32%). This would indicate that a large % of C&I waste in places such as Cornwall, Devon and Somerset is travelling long distances to exit the South West region. This doesn't seem to match the picture with regards managed data and the situation in Gloucestershire alone. This raises doubt on how authoritative the DEFRA study is were it to be relied upon alone in which to make future provision for the management of C&I waste. Therefore the DEFRA study does not appear to be good evidence to justify that the majority of Gloucestershire C&I waste is managed outside of the county. The issues outlined in question 2.15 below addresses further how the cross boundary movements of waste are considered in the WCS.

Question 2.6 What is the justification for the 0% assumed growth rate in this waste stream and how are the figures for Gloucestershire in the RS derived (CD11.34 page 214)?

2.16 The 0% growth rate for C&I is the same as that which underpins the Draft Regional Spatial Strategy for the South West (CD11.34) and originated in 'From Rubbish to Resource The Regional Waste Strategy for the South West 2004-2020' (CD11.36 page 14) and through discussion with the South West RTAB. This actually gave a range of 0 – 1% growth therefore 0% used in the SW RSS being the conservative estimate). It is understood that the RPB consultants (SLR) and the EA advised on using around 0% from which the C&I figures contained in CD11.34 are derived. The reasoning behind the growth rate is that there are inconsistencies over the available data on C&I waste. At the current time this is the only viable advice available to the Council as to the growth rate for this waste sector. Similarly the trend in the management of C&I waste has not shown a trend upwards or downwards (CD10.3 Table 8). The growth rate for C&I waste has been variable over the years and therefore makes any projections very difficult. The South West RTAB suggested that commercial waste would likely see an increase in growth but industrial waste would decline, therefore broadly balancing each other out. There is a relationship between economic growth and C&I growth. This is highlighted by the DEFRA study which showed a 29% reduction in C&I arisings, most likely down to the economic situation (CD13.23 page 8). As the DEFRA study is acknowledged as being undertaken during a period of economic downturn, this could not be relied on to provide an accurate picture for the future planning for C&I waste. It is considered that the WCS provides adequate flexibility for future C&I waste growth trends.

2.17 Section 1 of the Waste Data Update 2010 (CD10.4) includes additional trend data for waste within in Gloucestershire (Tables 1f and Figure 1b related to C&I waste). This shows that there have been fluctuations over an 8 year period. In addition the Update for C&I Table 4b shows that the managed figure for 2008 indicates an increase over 2005 (CD10.3 Table 8). Therefore finding a trend for C&I waste would be very difficult and as included within the earlier data paper a 0% growth rate was considered most suitable.

2.18 In earlier correspondence (CD13.1) the Inspector had raised a query over the figures for C&I waste in the WCS. The waste data update paper (CD10.4) includes the apportionment for Gloucestershire established in the South West RSS (CD11.35). The RSS proposed changes (CD11.35 footnote 9 page 214) states that 'Gloucestershire County Council has followed a 'managed' waste model for this waste stream. This statement was developed through discussion between the County and the Regional Planning Body (RPB). It evolves from the figures on managed C&I within the Gloucestershire Waste Local Plan (CD11.8) which was adopted in 2004. It was

considered that this document had the most update information in relation to C&I waste within Gloucestershire at that time. Figures presented in the Waste Local Plan are significantly lower than the RSS capacities because they do not necessarily capture waste managed outside the region directly recycled and reused.' The reason behind this is that the Council had concerns with the proposed figures that had been proposed in the RSS. The WPA had at that time recently produced its Waste Local Plan in which it had included managed figures. These were lower than those included within the RSS, particularly due to the classification at that time on 'special waste'. The WPA therefore wanted a caveat in the RSS to highlight this. The WPA had corresponded with the RPB at the time stating that the figures in Table 2 (CD11.35 page 213/14) could be used for indicative purposes which is built into RSS policy W1 in any event.

Question 2.7 Why is the term 'recovery' (not defined in the Glossary) used differently when talking about this waste stream (compare CD1.1 paragraphs 3.23 and 3.25)?

2.19 The WPA can confirm that it intended to deal with all the terminology used in the WCS process through the glossary evidence paper at Preferred Options in 2008 CD10.138. In this paper Recovery is defined as: *'The process of extracting a product of value from waste materials, including recycling, composting and energy recovery.'*

2.20 The WPA considers that recovery is being discussed in a broader sense in the WCS in particular with C&I waste. It would still lead to moving waste up the hierarchy as with MSW. The main difference with MSW to C&I is that the method of collection is more strictly defined because of the collection streams involved which provide greater amounts of source segregated waste that can be more readily defined for recycling and composting. In the case of C&I waste there are greater percentages of co-mingled waste arriving at waste management facilities, therefore approaches to extracting the value (e.g. through MRFs) sometimes vary to MSW Focused Change 9 (CD1.3) details the break down of methods of how C&I capacity will be dealt with in terms of recycling, reuse, transfer etc. (However it should be noted that the recovery definition in the RSS Policy W1 figure 6 (CD11.35) also includes transfer). The figures included under strategic objective 3 (CD1.1 paragraph 3.34) for the diversion of C&I away from landfill is again using the term 'recovery' in its broadest sense. There is currently 83% of C&I waste being sent to landfill (CD 10.4 Table 4b) within the county, 'recovery' would therefore reduce this figure which is what the WCS is aiming to do. There is potential that C&I waste would be treated within the same facility as MSW as it has a similar composition.

2.21 It is acknowledge that the glossary within the WCS does not include the terms used within the waste hierarchy. Therefore the WPA proposes to include these as part of

the proposed minor changes.

2.22 PROPOSED ADDITION TO THE GLOSSARY – ALL OF THE TERMS OF THE REVISED WASTE HIERARCHY (Below are taken from DEFRA)

Stages	***Include***
Prevention:	*Using less material in design and manufacture. Keeping products for longer; re-use. Using less hazardous materials*
Preparing for re-use:	*Checking, cleaning, repairing, refurbishing, whole items or spare parts*
Recycling:	*Turning waste into a new substance or product. Includes composting if it meets quality protocols*
Other recovery:	*Includes anaerobic digestion, incineration with energy recovery, gasification and pyrolysis which produce energy (fuels, heat and power) and materials from waste; some backfilling*
Disposal:	*Landfill and incineration without energy recovery*

2.23 In light of proposed change if accepted, some other minor adjustments to the WCS might be required. For example the footnote 2 to policy WCS 4 may need the term recovery to be deleted and replace by management

3. Question 3: Statistical base: Hazardous wastes

Question 2.8 CD10.4 Table 7a suggests that the County is a very significant importer of hazardous waste while also being a significant exporter of hazardous waste generated within the County. Is this understanding correct and, if so, what are the implications for the Vision?

3.1 Planning Policy Statement 10 (CD12.31), the National Waste Strategy for England 2007 (CD12.15), the Waste Framework Directive 2007 (CD12.2), the Draft National Policy Statement for Hazardous Waste (CD13.24), A Strategy for Hazardous Waste Management in England (DEFRA March 2010) (CD12.6) and the hazardous waste regulations (2005) (CD13.25) – updated by the waste regulations 2011 (CD13.29) provide the national policy and legislation for the management of hazardous waste. Policy W3 of the South West Regional Spatial Strategy (CD 11.34, CD11.35) provides a regional context. Paragraphs 4.130 to 4.137 of CD1.1 contain the supporting text to Policy WCS6 and these also detail how the policy has been guided by national expectations. The data evidence underpinning the approach taken in the WCS is CD10.3 (section 5) and CD10.4 (Section 7).

3.2 The WCS (paragraph 4.132 CD1.1) identifies that hazardous waste represents around 2% of all waste managed nationally. Tonnages of hazardous waste are much lower in comparison to other waste streams and as highlighted in paragraph 3.28 of CD1.1 economies of scale and the specialist requirements of managing hazardous wastes means that there will always be an element of importing and exporting of waste. In particular, treatment facilities for individual hazardous waste streams tend to be more strategic, such as Wingmoor Farm East for APC residue, and in some instances there may only one or two national facilities per type of hazardous waste.

3.3 In essence, in 2008 Gloucestershire produced around 38,000 tonnes of hazardous waste, but exported 27,000 tonnes of it. It imported around 79,000 tonnes, but around 34,000 tonnes of that total had come from the APC residue plant (AT Wingmoor Farm East) and had already been counted on arrival (at the APC residue plant). Therefore, actual tonnage of imported waste is really around 45,000 tonnes. This gives in real terms a net difference of around 18,000 tonnes between imported and exported hazardous waste. To further assist with the figures confirmed in CD10.4 (Table 7a), figure 3.1 has been provided with actual tonnages. The data from previous years generally indicates at least a slight net imbalance of imports over exports. Whether the tonnages of arisings or managed amounts are significant or not is a matter of opinion. However the figures for other similar profile shire WPA areas do not suggest that these tonnages in Gloucestershire are significant. For example Oxfordshire recently identified in paragraph 4.4 of their recent consultation (CD13.27) that hazardous arisings are between 40,000-60,000tpa which is

comparable to Gloucestershire's. Worcestershire produced an evidence paper on hazardous waste (CD13.30) which also identifies variable arisings and managed figures (table 3, page 29) and which are also similar to those hazardous figures in Gloucestershire.

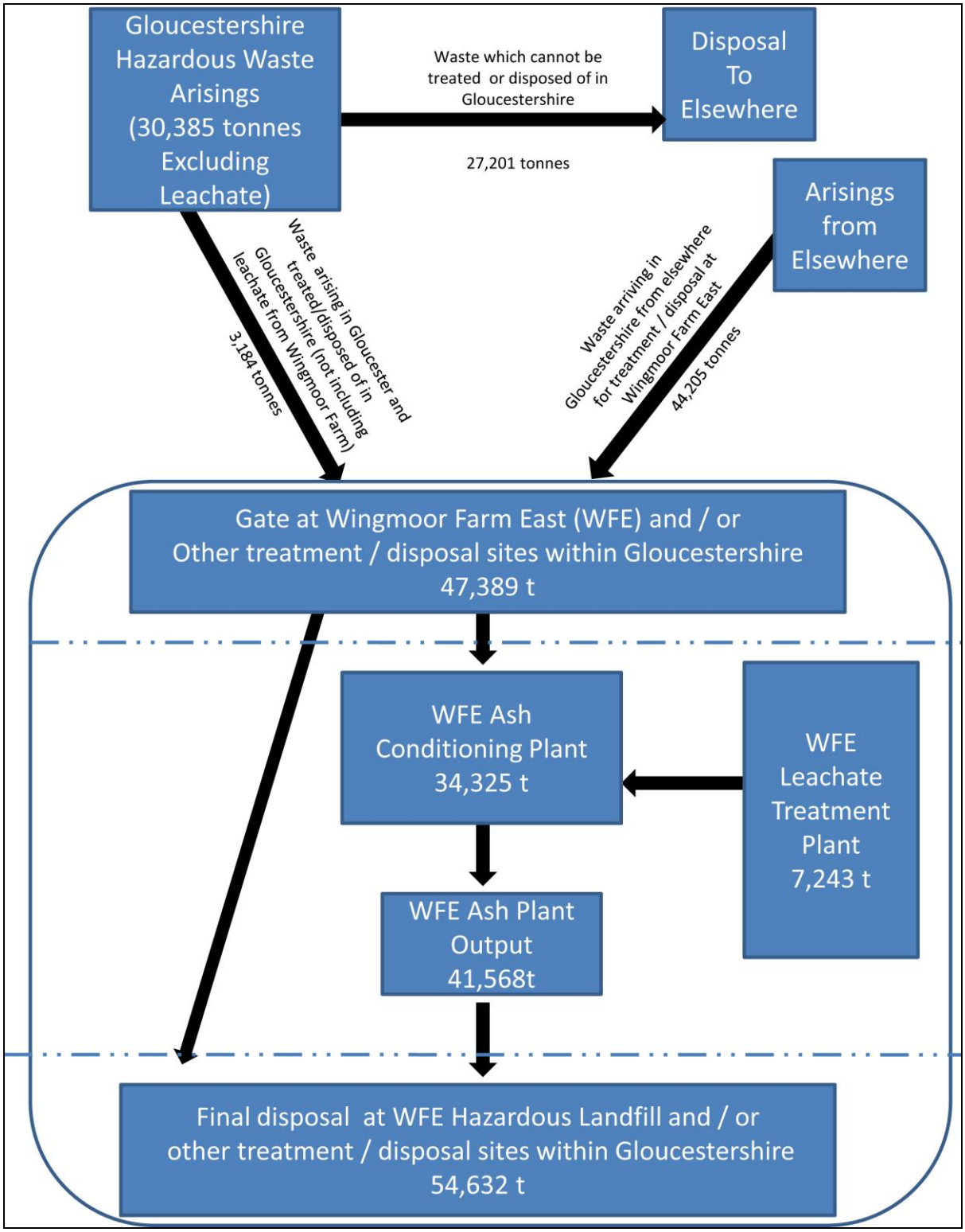
3.4 The reason that some of the waste in Gloucestershire is in effect double-counted is because when discussing waste in managed terms, it is essential to record the separate treatment processes. The ash conditioning plant at Wingmoor Farm East is a treatment facility and the hazardous landfill is a disposal facility and it is essential to record numbers at both facilities. The fact that they are located at the same site is not relevant. The EA have proposed and supported this method of presentation which has been consistently used by GCC since the original Waste Data Paper (CD10.3 Section 5). Table 7a and Figure 7a of CD10.4 suggest that the volumes of hazardous waste in terms of both arisings and managed waste appear to fluctuate from year to year. Therefore this indicates that some flexibility might be required in how to plan for the management of hazardous waste.

3.5 Should new facilities be required in Gloucestershire Policy WCS6 will provide sufficient policy context for any submitted applications. This would also be consistent with the latest DEFRA guidance published in November 2011 for hazardous waste producers on applying the waste hierarchy to hazardous waste (CD13.22), particularly if FC27 is accepted.

3.6 When looking at hazardous waste as an overall total, Gloucestershire is a net importer of hazardous waste. However, it should be noted that due to the specialist processing element of the APC residue occurring at Wingmoor Farm East, there is also an element of 'double-counting' of the waste. Table 7a of CD10.4 outlines how this double-counting works with 'rounded' figures. As mentioned in paragraph 3.3, figure 3.1 has been produced in an attempt to illustrate this complicated process in simple terms.

3.7 The Vision (CD1.1 page36) does not specifically mention either importing or exporting of waste. As mentioned above hazardous waste requires specialist treatment facilities and is dealt with by private contractors and in most instances, to ensure that hazardous waste is moved up the waste hierarchy and is in conformity with the second paragraph of the vision, it would need to be dealt with at the most appropriate installation, which could require exporting out of the county. This would be supported by the sixth paragraph in the Vision which discusses the integrated sustainable waste management system. It should be noted that the Vision is about how to plan for future aspirations and aiming for greater self-sufficiency. The Vision is not intended to reflect existing patterns of waste management.

Figure 3.1 Diagram illustrating hazardous waste movements within Gloucestershire



NB: The Managed figure of 88,957 tonnes is the sum of the Final Disposal 54,632 tonnes and the APC residues processed in the WFE Ash Conditioning Plant - 34,325 tonnes.

3.8 Whilst the Vision has aspirations that landfill should be seen as a last resort, it needs to be recognised that the hazardous waste facility at Wingmoor Farm East is a strategic national facility and that the waste arriving there will generally have been sent there as a "last resort". As highlighted above Policy WCS6 (CD1.1) supports movement of waste up the hierarchy which is consistent with national policy. Hazardous waste figures appear to be variable in Gloucestershire and within some of the neighbouring authorities and Policy WCS6 is flexible to be able to support any potential changes in categorisation or legislation on hazardous waste by allowing waste to be moved up the waste hierarchy by being dealt with at the most appropriate installation as outlined in paragraph 3 of PPS10 (CD12.31).

4. Question 4: Statistical base: Landfill

4.1 The national policy basis is contained in PPS10 (CD12.31) paragraph 3 bullet 1). Regional policy includes indicative allocations for landfill and is included in RSS Policy W1 (CD11.36). The context is discussed in Section2 of CD10.4. Section 11 of the Waste Data Update (CD10.4) details the landfill capacity within Gloucestershire at the current sites. This established that there is enough capacity and therefore there were no significant grounds for a landfill policy in the WCS. This was due to the data included within the paper indicating that landfill has a lifespan of 10-13 years (CD10.4 paragraphs 11.4.15 and 11.4.16). This estimation was taken from three sources, the Environment Agency's Waste Data Interrogator (WDI), the Waste Disposal Authority (WDA) and data collected from the landfill operators directly. This has been incorporated into the vision and strategic objectives as appropriate. The WPA has acknowledged in the WCS there may need to be a review or a landfill DPD later on in the WCS timeframe (CD1.1 paragraph 4.129).

Question 2.9 CD1.1 paragraphs 4.125 and 4.127 and CD1.3 FC25 set out positions regarding the life of the non-hazardous and hazardous landfill. For the former, the assumption is that the remaining capacity may not last for the plan period. All these assumptions are based on the Wingmoor Farm East application being approved and there is now a resolution to do so (CD13.2). What impact does this have on the remaining landfill capacity?

4.2 The specified paragraphs within the WCS (CD1.1) suggest that for non hazardous waste it is estimated that there is at least 10-13 years of disposal void. For hazardous waste there is around 22 years of space remaining. Paragraph 4.125 states that *'However this is a conservative estimate and the likelihood is that, due to future reductions to landfill as a result of mechanisms such as the Landfill Tax, landfill void could last significantly longer.'* This was then clarified in Focused Change 25 (CD1.3)which added ' potentially to the end of the plan period (2027) or beyond depending on future diversion rates from landfill across all waste streams.' The WPA considers that there is adequate landfill provision within the County. The main aim of the WCS is to divert waste away from disposal at landfill. The WPA consider that the inclusion of a landfill policy could lead to an over supply of void which could reduce waste moving up the hierarchy.

4.3 The Inspector had requested that the WPA produce a position statement (CD13.11) with the two landfill operators in the county prior to the Pre Hearing Meeting. This position statement established where there were agreements and differing views over landfill void particularly focusing on the issue of Wingmoor Farm East. The

outcomes of this position statement are outlined in section 12 of CD13.11.

4.4 The background to the approach in the WCS is outlined in Section 2 of CD13.11. The position in light of the approval of Wingmoor Farm East now being permitted is considered in Sections 3 and 4 of CD13.11. The WPA would point out that there is no intention to mislead through the 10 – 13 years timeframe for landfill capacity included in the WCS. The WPA was using the best data available at the time (CD10.4) and trying to come to reasonable balance in being able to predict when landfill might last until and the appropriate action which might need to be taken through the development plan. It is accepted that this was based on the latest through put of landfill which was 2008 – 2009 which would have suggest landfill capacity possibly running out 2019 – 2022 on the basis of a 10 – 13 year timeframe. In other words the combined landfill capacity would potentially last until the later half of the plan period even at a conservative assessment. CD10.4 also addresses the situation of each individual landfill and it is acknowledged that some of these could last through and beyond 2027 making assumptions that throughput of waste to landfill does not increase. The possible scenarios which could happen with better diversion rates and lowered throughputs to landfill is considered in CD 1.11 (paragraphs 3.3 – 3.40). The clarification provided by Cory in CD13.11 point towards the position taken in the WCS and FC25 being correct in that landfill could last potentially beyond 2027.

4.5 Even after the position statement (CD 13.11) the WPA still believe that the evidence collected for the Waste Data Update (CD10.4) does not indicate that there is a need for a landfill policy. This view is also supported by Cory Environmental Ltd. The evidence shows that there is at least 10 years of landfill void and this situation will be monitored and if there is a shortfall envisaged the WCS indicates that a review of the WCS or the production of a Landfill DPD (CD1.1 paragraph 4.129). However as part of the position statement the WPA suggested that additional wording could be included within the WCS in regards to the preparation of a Landfill DPD.

4.6 The WPA therefore propose this wording to be added to paragraph 4.129 – '*This position will require monitoring and is likely to require further consideration through a review of the WCS or preparation of a separate development plan document potentially starting in 2017/2018. The DPD would include specific details as to suitable locations for landfill sites; this would either be in the form of areas of search and/or specific sites. To get to that stage detailed assessment of suitable geology, aquifers and source protection zones would have to be considered. This follows Environment Agency Landfill Directive Regulatory Guidance Note 3 (Version 4.0, December 2002) Groundwater Protection: Locational aspects of landfills in planning consultation responses and permitting decisions) on landfill design and construction*

which excludes non-hazardous landfills on or in a major aquifer. Other planning issues such as transport, flood risk, amenity and proximity to sensitive receptors would also need to be taken into consideration.' (The above mentioned Landfill Directive Regulatory Guidance note is CD13.33)

4.7 Notwithstanding the WPA's view that the evidence does not suggest the need for a landfill policy, as part of the position statement the WPA agreed that they would produce wording for a landfill policy to be considered as part of the examination process. The background to why a policy could possibly be considered are outlined in section 10 and the penultimate bullet of Section 12 of CD13.11. The WPA would be looking for criteria based policy to cover any potential application for landfill that might come forward prior to the landfill DPD or during the lifetime of the WCS.

Core Policy WCSxx – Landfill

Proposals for new landfill developments or extensions to existing landfill sites will only be permitted where it can be demonstrated that:
1. The waste cannot be managed further up the waste hierarchy through reuse, recycling and recovery; and
2. The proposed landfill would involve the minimum amount of waste necessary to deliver the County's needs and to enable;
i. restoration of current or former minerals sites (subject to technical suitability of the site); or
ii. a demonstrable improvement in the quality of the land; or
iii. facilitating an appropriate after use; or
iv. the engineering or other operations.
3. The proposed development would not compromise the permitted restoration of mineral sites or existing landfill sites by the diversion of significant amounts of material; and
4. The site does not fall into the following designations – major aquifers, source protection zones, European Sites of Nature Conservation (and the appropriate buffers).

Question 2.10 How would the proposals for built development at Wingmoor Farm West and East (which, as both are in the Green Belt, must be predicated on the fact that the openness of the Green Belt is already compromised by the operational landfill) impact on the availability of the voidspace and therefore the capacity in the plan period?

4.8 With regards to the allocations at both Wingmoor Farm West and East there will not be a direct impact upon the permitted void space/capacity of the landfills as result of any built development associated with the WCS.

4.9 The recent planning application at Wingmoor Farm East did include the WCS allocation within its application boundary. However the phasing scheme that was submitted as part of the application (see officers report CD13.3) did not include the area that has been allocated. Therefore any building created as part of the WCS will not be on land that has been proposed for landfilling.

4.10 At Wingmoor Farm West there are two allocations in the WCS. The first of these (site A) is currently built development in the form of storage and distribution type buildings. Therefore this allocation would not have any impact upon the existing landfill operation to the south of the allocation. This site has recently gained planning permission for an IVC facility. The second allocation at Wingmoor Farm West (site B) is currently partly used as a Household Recycling Centre and sealed asbestos skip. Again any development of these sites this would not have a direct impact upon the existing permitted landfill capacity.

4.11 The WCS (CD1.1) has one key objective which is to move waste up the waste hierarchy therefore reducing the amount of waste to be disposed of. This would then have a knock on effect on landfill capacity/voidspace. The development of a residual treatment facility would see the amount of waste going to landfill dramatically reducing. For example for MSW this is indicated by table 3l CD10.4, which suggests that once a treatment facility becomes operational the left over residual waste (going to landfill) will be between 7,000 and 8,000. For C&I waste particularly if a recovery/recycling facility was located on either Wingmoor Farm West (site B) or Wingmoor Farm East, there could be a marked reduction of waste which is currently going straight to disposal. Therefore there is a high probability that any such facilities on these sites would result in the life of landfill lasting over a longer timeframe than currently envisaged. This scenario is discussed in CD1.11 paragraphs 3.19 and 3.28. In other words the life of the landfill could last until beyond the WCS 2027 timeframe.

4.12 The relationship of these sites being located upon Green Belt is considered in topic papers on Issues 3 (CD13.13) and 5 (CD13.15).

5. Question 5: Statistical base: Construction and Demolition Wastes

Question 2.11 Is the approach taken in the CS justified?

The Evidence

5.1 The WPA believes that the data used is justified, the data has been taken from the Environment Agency's Waste Data Interrogator and the approach taken to the presentation of the data within the WCS has been supported by the EA. The evidence as to how the approach originated is detailed within Section 4 of CD10.3 and subsequently updated by Sections 6 and 12 of CD10.4. Section 7 of CD10.3 also identifies the issue of transfer and how the WPA has addresses this particular issue in relation to C&D waste following advice from the EA.

National & Regional Policy

5.2 The Regional Waste Management Strategy was used as a prudent basis for assuming zero growth (paragraph 6.3.2 of CD10.4 and page 14 of CD11.36).

5.3 The Regional Waste Management Strategy (CD11.36) is used as a basis for the figures within the SWRSS (CD11.34). Using the approach taken within CD11.36 & CD11.34, there would be technically no capacity gap and therefore no capacity required to be identified in the WCS. Section 6 of CD 10.4 (Table 6e) demonstrates that existing capacity far exceeds the indicative capacities in CD11.36.

5.4 The National Waste Strategy 2007 (CD12.15) provided a target to halve the amount of C&D waste going to landfill (paragraph 74).

Waste Core Strategy Approach

5.5 The background to the WCS is outlined in section 6 of CD10.4 and section 4 of CD10.3 as highlighted above. In summary, the WPA has taken a proactive approach to try and move more C&D waste away from landfill and up the waste hierarchy. Strategic Objective 2 incorporates the National Waste Strategy target to divert 50% of C&D waste from landfill by 2012. This is detailed in paragraph 3.27 of CD1.1. The WPA decided to use the 'managed' approach rather than 'arisings' approach to assign the requirements for C&D waste. Please see paragraph 2.4 of this paper as to the validity of focussing on using 'managed' figures derived from the WDI datasets rather than using any available arisings surveys.

5.6 To implement Strategic Objective 2, the WPA translated the 50% into an actual figure within Policy WCS3 of CD1.1. The WPA believes that whilst the Policy WCS3 (CD1.1) may specify an amount for diversion which is smaller than some respondents claim is required, it is not necessarily a limit and the policy provides for sites to come forward in appropriate locations. If the 50% diversion is met and sites came forward

to divert additional C&D inert waste from landfill by moving waste up the waste hierarchy in accordance with national policy, then the WPA would be broadly supportive provided that the application met with other national and local policy requirements.

5.7 The WPA considers that the criteria-based policy approach in WCS3 would be an appropriate basis to judge any future proposals for the management of construction and demolition wastes.

5.8 The final disposal of inert waste is also covered in CD10.4. This is closely related to restoration of landfill and mineral sites. However through a mixture of planned inert disposal capacity (CD10.4 Table 6d) and capacity through exemptions (CD10.4 section 12) illustrates more than adequate levels of capacity that would last the WCS period in particular if the industry successfully brings forward recycling facilities in line with the policy contained as outlined in the WCS.

Consultation summary

5.9 Several respondents made representations in relation to the approach take to C&D that they consider the amount of capacity to be underestimated.

5.10 Furthermore, although objectors have been invited to supply alternate evidence to support their claims, they have chosen not to do so. The WPA believes that it has addressed the issues raised by the respondents within CD6.1, particularly in respect to responses from Moreton C Cullimore (Gravels) Ltd and Smiths (Gloucester) Ltd on pages 21 to 25 of CD6.1.

5.11 In summary, It will always be likely that the actual C&D waste figures will be higher than those recorded (whether using the managed or the arisings methods). This is due either to inert materials being reused on-site and never reaching the waste stream or waste being diverted away from landfill under exemption schemes such as flood defences or golf courses. However, the WPA has taken the approach to plan using the most accurate, recorded data available.

6. Question 6: The Vision and Strategic Objectives

Question 2.12 How did the spatial strategy in the Vision for a number of strategic sites rather than a totally dispersed pattern of smaller sites emerge through the plan preparation process?

6.1 The Vision was developed following consultation at Issues and Options stage. At this point in time Core Strategies were not intended to contain strategic sites and the Waste Core Strategy was looking to apply a broad strategic approach. Paragraph 5.56 of Issues and Options Paper B (CD2.2) suggests that due to economies of scale certain types of waste treatment are likely to require larger facilities. The stakeholder response is highlighted in CD2.4 (page 21) and it is clear at this point that smaller sites were preferred for recycling and transfer facilities and that recovery facilities were preferred to be located closer to Cheltenham and Gloucester. The objectives were also subject to the SA process at Issues and Options stage (pages 66-71 of CD2.6). The results were inconclusive, but the dispersed option did indicate more uncertainty in the SA process than a centralised solution.

6.2 The spatial strategy within the vision which discusses a number of strategic sites is only in relation to 'residual' waste. The Vision then goes on to discuss smaller more local sites and how all sites combine to form an integrated waste management system for all waste streams. The WPA would therefore clarify that a dispersed pattern of smaller sites has not been dismissed in the WCS. As a direct result of comments received to the Publication WCS CD1.1, FC10 (CD1.3) proposes that the Vision is amended to clarify that the strategic sites are intended for the recovery of residual MSW & C&I wastes. The reason for FC10 is also discussed in paragraphs 3.118 to 3.123 of CD1.11.

6.3 The statement within the vision itself is inline with Policy WCS4 and was a theme which emerged from the very beginning of the WCS preparation process which was to direct any strategic sites to the central area and smaller supporting facilities around the county. However, it is important to note that the WCS Vision and the criteria based approach within the policies are intended to be flexible enough to allow for any combination of strategic and local sites. This was originally reflected within the Vision in the Preferred Options document at page 17 (CD3.1). The responses to broad locational issues from the Preferred Options consultation can be found within pages 45-46 of CD3.2. At this stage the response from GOSW (CD3.2 page 63) strongly urged the allocation of strategic sites within the WCS. The WPA acknowledgement of moving toward formal allocations and undertaking site options consultation is contained on pages 66 – 67 of CD3.2.

6.4 The earlier outcomes to the strategic versus dispersed strategy options is discussed further within the Site Options paper (CD4.1 paragraph 2.25). Officers' responses within the Site Options consultation response report (CD4.3) discussed that solutions must be deliverable in planning, technological, environmental and financial terms in conjunction with discussing the focus for strategic sites within Zone C. An example of the officer response can be found on page 10 of CD4.3 (consultee 215) which also states that smaller sites are not necessarily more flexible. The approach to how the site options process was undertaken and how the strategic sites resulted is considered under paragraphs 1.3 to 1.7 of Topic Paper 3 Question 3.1 (CD13.13)

Question 2.13 How did Zone C emerge and were the other Zones considered genuine alternatives?

6.5 As outlined above in question 2.12, the WCS at the time of Issues and Options was intended to contain a broad spatial approach rather than specific waste site allocations.

6.6 The evidence paper related to Spatial Portrait and Vision (CD10.5) outlines some key findings from the Issues and Options stakeholder consultation. One of the main issues is that a spatial vision should have a geographic component, as discussed in Question 2.12. Evidence Paper 'Broad Locational Analysis' CD10.6 was produced to try and address this issue.

6.7 At the time of preparation of the Preferred Options stage of the Waste Core Strategy, the draft RSS (CD11.34) had been published which contained Policy W2 advocating a sequential approach to identifying locations for new waste facilities. When the 16km area of search was applied to Gloucestershire it covered the majority of the county and therefore a smaller search area was drawn around the two principal settlements of Cheltenham and Gloucester (this also included two of the larger named settlements of Tewkesbury and Stroud). The search area was then sub-divided geographically into the four Zones A-D. Zones B and D were broadly discounted for environmental reasons (flooding & AONB) and Zone A considered to be less favourable than Zone C on sustainable transport grounds. This was in conformity with the SA objectives as outlined in the Preferred Options SA report (CD 3.4). In particular SA objectives 1, 9, 10 and 12 (page 37 of CD3.4). This meant that Zone C was considered in principle to be a realistic area to consider for a locational strategy for waste management. Zones A-D were not "Preferred Options", the creation of the zones formed part of the evidence base to Preferred Options stages as outlined within Section 4 of CD10.6 and were simply a less complicated way of sub-dividing and describing the geographical area 16km from Cheltenham and Gloucester and not in any way intended to be potential options. (For example "Zone

D" is less complicated than "Area within a 16km radius of Cheltenham and Gloucester, situated within the eastern section of the 16km radius and containing land predominantly identified as AONB"). This formed the starting point for the broad search area under preferred options WPO7a (CD3.1 Section 6). More narrowed down options WPO7b-7d were also considered which explored variations and sub-divisions of Zone C. In simple terms WPO7a represented the broadest of search areas. Preferred options WPO7b to WPO7d provided increasing narrowed down variations of zone C whereas WPO7d represented a focus on the most closely defined locations within parts of zone C.

6.8 It should be noted that at the time the evidence for Preferred Options was being prepared, the WPA was not looking to formally allocate strategic sites and the preferred options WPO7a-7d were consulted upon as options for a locational strategy to attempt to direct strategic waste sites close to the main waste arisings. Section 4 of Technical Evidence Paper WCS-C (CD10.6) was used as a basis for Section 6 of the Preferred Options paper (CD3.1). The actual four potentially realistic and deliverable preferred options can be found in both of these respective sections. To create the four actual preferred Options, Zone C itself was then further sub-divided into five smaller areas labelled C1-C5 and each of these areas was discussed prior to coming up with the four Preferred Options A-D (CD3.1). These preferred options were all considered to be deliverable and realistic and consultees were asked to provide comments on them (CD3.2). Throughout all of the options only Strategic waste management facilities were referred to, as the broad locational options were specifically for strategic sites. Paragraph 128 of Technical Evidence Paper WCS-C (CD10.6) states that smaller local facilities could potentially occur in any location (subject to meeting other planning requirements).

6.9 When sites were being considered for Site Options (CD4.1) the entire county was initially researched before applying constraints. When the 13 sites were consulted upon, 10 were within Zone C and 3 outside. This is detailed within paragraphs 3.24-3.28 of the Site Options consultation document (CD4.1) and the responses are summarised within CD4.4 pages 12-13. Ultimately, in light of these consultation responses and combining with the consultation undertaken with the earlier Preferred Options stage (CD3.1), Zone C became an integral part of the WCS (CD1.1 paragraph 4.83 – 4.89).

Question 2.14 Is 50,000 tonnes per annum capacity an appropriate scale for a 'strategic site'?

6.10 The origin of the 50,000 tonnes per annum capacity was the Waste Local Plan (CD11.8 paragraph 4.4), which in turn arose from paragraph A36 of Circular 02/99 (CD 13.36) and the threshold used to determine the need for an EIA. As this was based on existing government policy and taken from adopted local policy which has been through a public local inquiry process (November 2001 – January 2002), it was considered an appropriate starting point to define the boundary between strategic and non-strategic sites.

6.11 However, as the Core Strategy was a new process, consultees were invited through the Issues and Options consultation stage to state whether a differentiation should be made between strategic and local sites and if so whether the 50,000 tpa was an appropriate threshold (questions 4.6 & 4.7 on page 87-88 of CD2.2) 76% of respondents stated that there should be a distinction and out of those respondents who answered the question about the 50,000 tpa threshold, the response was mixed with the higher number of respondents thinking there should be varying levels according to the type of waste handled. (see CD2.4 pages 19 and 36). The consultation responses contributed to how this matter was considered in the WCS, these are highlighted within pages 13-15 of CD10.9.

6.12 Pages 6-8 of Technical Evidence Paper WCS-F (CD10.9) discuss the difficulty in making the definition and it is here that the decision is made to use the already established definition of 50,000tpa. It is evident through all of the early consultation stages and documentation that a distinction should be made to direct larger sites to the broad location search area which became later identified as "Zone C" and that any smaller sites could be located throughout the county with applications to be determined on a criteria basis. This is also in accordance with RSS Policy W2 (CD11.34) and Policy P10.3 of the Regional Waste Strategy (CD11.36). As 50,000tpa could clearly be traced back to existing adopted policy (both national and local) it is considered that it is a more appropriate threshold to use than an alternative made up figure with no established policy framework or appropriate justification.

Question 2.15 Having regard to the questions posed under Questions 1 to 3 is it accurate to say that the CS addresses the County's 'needs' CD1.3 FC10)? Does it simply not perpetuate current non-MSW waste management patterns? Or is it aiming for (net?) self sufficiency in waste management capacity?

6.13 Historically Gloucestershire has been a net importer of waste due to the landfill facilities that the County has (CD 10.3 section 7). In particular C&I waste has been imported by private waste operators under commercial contracts. It should be noted that in previous years the C&I imported figure has actually included a large % of MSW waste imported from places such as the West of England under contracts existing at the time. The WPA has had no control or influence over that part of the waste market. The importation is identified in CD10.3 Section 7 Figure 7. The amount of waste coming into the County may have reduced recently due to the downturn in the economy and changes in waste contract arrangements with waste that may have formerly come to Gloucestershire. With the development of treatment facilities within neighbouring authorities and as a result of them becoming increasingly self-sufficient this process is likely to decrease even more.

6.14 The proposed FC10 was informed by a number of factors, including the importance of providing sufficient waste management capacity to meet the needs of the County. This is an aspiration of the WPA and is an aspiration of PPS 10 (CD12.31 page 5). As discussed under Question 2 the WPA does not have control over the destination of waste streams other than for MSW. The policies in the WCS have been developed to provide a mechanism for waste management facilities to be developed within the County for all of the waste streams. In the case of MSW the responsibility for collection, recycling, management and disposal is with the WDA/WCA and therefore is easier to ensure self-sufficiency. There is always going to be movement of waste either into or out of the County. Even though MSW is collected and managed in the county source segregation and bulking of recyclates means that most of these are transferred out of county to specialist processing centres (CD10.3 Table 1). This is due to the location and economies of scale of certain re-use and reprocessing facilities. The movement of waste and its implications in and out of Gloucestershire are considered in detail in section 7 of CD10.3 and also highlighted under Section 10 of CD10.4

6.15 In summary there will be flows of C&I waste in and out of Gloucestershire, as this is a commercial matter beyond the control of the WPA. The issues relating to hazardous waste are discussed above under Issue 2 Question 3. Overall the County accepts that both C&I waste and hazardous waste comes from outside and is also exported and over the years Gloucestershire has generally been a net importer of waste. This

however does not mean that it is wrong to try and deal with Gloucestershire's future needs. It should be noted that both the vision and the strategic objectives relate to future needs and provision. The aim is for net self-sufficiency for waste management needs while accepting that inevitably the waste market is not tied to administrative boundaries.

Question 2.16 How does the C+I recovery requirement in Strategic Objective 3 relate to waste arising in the County or is this providing capacity for waste imported to the County now for landfill?

6.16 The aim of the policies contained within the WCS is to enable the County to become self-sufficient in terms of waste management. This does (and cannot) not exclude or prevent waste being imported into the County. The principle is to ensure that there is enough waste capacity to deal with the amount of waste in Gloucestershire. For example currently there is waste being imported into the County from Bristol and elsewhere (CD10.3 Section 7 and question 2.15 discussion above).

6.17 Strategic Objective 3 states 'Recovery facilities with the capacity to divert a proportion of the 143,000 – 193,000 tonnes/year of C&I waste that needs to be diverted from landfill.' Past trends suggest that this will include some imported waste. However if facilities are in place to move waste up the hierarchy this can potentially break the trend. In any event there will still be a large % of Gloucestershire C&I waste arisings that require management. Providing sites within the county for the development of waste treatment facilities will provide the opportunity for C&I waste to be treated and therefore reducing the amount being sent to landfill.

Question 2.17 What is meant by an 'integrated sustainable waste management system'?

6.18 This is a frequently used term which evolved from a need to address common waste management problems in low and middle income countries. It recognises the importance of stakeholders, the sustainability aspects including the waste hierarchy and waste system elements such as transfer, collection, disposal and treatment. In the context of the Vision for Gloucestershire it is defined as a 'joined-up' system of waste management whereby different technologies, scale of facilities, operators and waste producers all play an important role in managing Gloucestershire's various streams waste by using appropriate sustainable methods which move waste up the waste hierarchy. For example sorting, bulking and transfer will enable composting/digestion and recycling to be maximised and recovery for residual wastes is to be provided for. All of these individual elements combine together to form a complete, sustainable solution for Gloucestershire's waste.

Question 2.18 The very last line of the Vision recognises the continuing role of landfill as does Strategic Objective 4. How is the absence of any landfill policy in the CS consistent with these twin statements or the requirement to give guidance to other plans yet to be prepared as implied by CD1.1 paragraph 4.129?

6.19 The consideration of the evidence and the relative need for a landfill policy is considered in CD13.11 and through Question 4 of this paper. The WCS has an aim of moving waste up the waste hierarchy and therefore landfill is the last option for waste as stated within the vision. The WPA does not want to encourage the use of landfill; however Strategic Objective 4 (CD1.1) recognises that there will be need for landfill for certain residual and hazardous wastes.

6.20 The WPA does not consider that a lack of a landfill policy would have an impact of other plans to be prepared as suggested by CD1.1 paragraph 4.129. The landfill DPD is described above under Issue 2 Question 4. It would be produced to deal with the residual or hazardous waste that cannot be moved up the waste hierarchy. The WPA considers that it has demonstrated that landfill can last at least 10 – 13 years and potentially beyond the timeframe of the WCS of 2027 (CD13.11). The discussion through some of the other questions suggests that a percentage of this has historically been imported waste (CD10.3 section 7). Therefore the absence of a policy on landfill appears to meet Objective 4 of the WCS in that respect of reducing reliance on landfill in the future. Therefore if a criteria-based policy for landfill was included in the WCS as discussed in Question 4 above an additional criteria could be added so that *Xx Any proposal for new or extended landfill will need to demonstrate that it principally for Gloucestershire waste disposal needs.*

Appendix 1: Total Household Waste Arisings for Disposal Authorities 2009/10

Rank	Authority	kg/hh
1	Western Riverside Waste Authority	767
2	North London Waste Authority	866
3	Norfolk County Council	958
4	West London Waste Authority	992
5	East Sussex County Council	1012
6	Dorset County Council	1032
7	Greater Manchester WDA (MBC)	1034
8	Gloucestershire County Council	1037
9	Lancashire County Council	1044
10	Lincolnshire County Council	1048
11	Worcestershire County Council	1052
12	Derbyshire County Council	1054
13	Oxfordshire County Council	1068
14	Suffolk County Council	1073
15	Cumbria County Council	1076
16	Essex County Council	1080
17	East London Waste Authority	1081
18	Somerset County Council	1081
19	Hampshire County Council	1082
20	Hertfordshire County Council	1084
21	Kent County Council	1091
22	Nottinghamshire County Council	1093
23	Devon County Council	1106
24	West Sussex County Council	1107
25	Cambridgeshire County Council	1111
26	Surrey County Council	1118
27	Northamptonshire County Council	1124
28	Merseyside WDA (MBC)	1124
29	North Yorkshire County Council	1130
30	Warwickshire County Council	1134
31	Buckinghamshire County Council	1152
32	Staffordshire County Council	1167
33	Leicestershire County Council	1171

Source: Derived from: Municipal Waste Statistics 2009/10. Final estimates of municipal waste generation and management for England and the regions in 2009/10 published on 4th November 2010 in Statistical Release 192/10