

West Midlands Regional Assembly – Regional Planning Body

This report has been prepared on behalf of the West Midlands Regional Assembly, the Regional Planning Body, as technical advice to inform the Regional Spatial Strategy Revision process. It is one of a suite of technical reports commissioned to inform the development of spatial policy as part of Phase Two of the Revision of the West Midlands Regional Spatial Strategy.

Every effort has been made to verify and check the contents of this report including all figures and tables. However the West Midlands Regional Assembly can not accept any responsibility for errors or inaccuracies.

Further information and details of the West Midlands Regional Strategy and the Revision process can be found on our web site www.wmra.gov.uk



**Waste Treatment Facilities and Capacity Survey
West Midlands Region**

**Final Report
Client Reference : RA56**

**West Midlands
Regional Assembly**
Speaking out for the region

**May 2007
SLR Ref: 402-1422-00001**



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EXECUTIVE SUMMARY

SLR Consulting Limited (SLR) was commissioned by the West Midlands Regional Technical Advisory Body (WMRTAB) on behalf of the West Midlands Regional Assembly (WMRA) to undertake a study of waste treatment facilities (i.e. non landfill facilities) and their respective capacities.

In excess of 400 facilities were identified as fitting the project scope, with 265 facilities being identified as a priority for the telephone survey. In addition to the telephone survey, 40 facilities were visited in order to obtain a more detailed understanding of operations and constraints at the facilities. A detailed consultation with the steering committee and the Regional Minerals and Waste Officers Group (RMWOG) was undertaken to select facilities for survey, with regular progress updates provided throughout the project to report initial finds and success. Transfer stations, although often performing some separation, sorting and recycling of waste, are not included within the scope of this study. A capacity survey of waste transfer stations is recommended at a future date to complete the regional recycling capacity picture.

In total 265 facilities were contacted via the telephone survey, 128 facilities responded with some degree of information, therefore representing a positive response rate of 48%. When adding the information from the EA incinerator survey to the results the response rate exceeds 50%. Proportional response rates by facility type illustrates that composting facilities (A22), accredited reprocessors (AR), materials recycling facility (A15) and End of Life Vehicles facilities (A19a) all performed well¹. Metal recycling sites (vehicle dismantlers) (A19a) and biological treatment facilities (A23) scored less than a 30% proportional response rate. For proportional response rate by WPA, Solihull has the best proportional response; this is due to the small number of facilities within the WPA.

Of the 43 facilities visited during the second stage of surveying, access was gained to 34 (equating to 80% of all sites visited), one of the contributing factors to this success was the operators receiving a prospective letter to remind people about the survey, and providing a reference point (and validation of the role of the team members) if questioned. The primary aim of the site visits was to build on the number of priority questions answered. Most (nearly 76%) of the sites to which access was gained answered additional priority questions (over and above those answered during the telephone survey).

Of the 256 priority facilities surveyed, 179 facilities contain information regarding the actual throughputs (either as a result of the EA RATS system, or updated survey capacity data). The surveyed throughput for the 179 facilities is 5.1 million tonnes per annum. Metal recycling sites (MRS) (Mixed) (A20) is the most dominant treatment facility type in the West Midlands in terms of surveyed capacity; this is followed by Incineration (A18). These figures also correspond with the fact that A20 is the largest non vehicle dismantling 'A' code in the region. Birmingham, Sandwell and Walsall are the three WPA's with the largest amount of surveyed throughput in the West Midlands; Telford and Wrekin, Herefordshire and Solihull have the lowest surveyed throughput.

The main waste type managed at the facilities that were surveyed is metal, with 53% collecting a form of metal (including vehicles) as their main material type. Of this proportion, 19% collected mixed metals, 15% vehicles, 11% non-ferrous and 8% ferrous metals as their main material type. The next most commonly collected materials were green waste, with 9% of the facilities as a main input, closely followed by plastic, which is collected by 8%. A lower proportion of facilities collect materials such as oil, sludge, paper or inert waste as their main

¹ Incinerators (A18) resulted in 100% response rate due to the EA incinerator survey.

material type. The spread of materials across the region shows a fairly even distribution across WPAs, with limited trends in areas handling one particular material type. Similar trends are obtained when assessing the main materials handled by tonnage; however Sludge becomes a more dominant material than when assessed by facility number.

Availability of waste and markets for outputs were consistently the most significant constraints when analysed by facility type, with only Composting facilities (A22) and accredited reprocessors (AR) both quoting the size of facility as the most significant constraint to operations. The second most significant constraint reported for composting facilities was licence and planning restrictions, whereas accredited reprocessors matched the response of the majority of facility types in answering 'availability of markets' as being a principal constraint.

A projection for existing throughput is required for the facilities where no information is present in order to calculate a best estimate of the total treatment capacity in the West Midlands; Table ES1 illustrates surveyed and projected capacity by facility type, with the figures being carried forward to the gap analysis calculations.

Figure - ES1
Summary of Surveyed and Projected Capacity (million tonnes) in the West Midlands by Facility Type

Code	Facility Type	Surveyed capacity	Estimated projected regional capacity
A15	Material recycling facility	0.25	0.33
A16	Physical treatment facility	0.40	0.63
A17	Physico-chemical treatment facility	0.34	0.57
A18	Incinerator (EA Incinerator Survey)	1.09	1.09
A19	Metal recycling site (vehicle dismantler)	0.01	0.07
A19a	End of Life Vehicles facility	0.02	0.13
A20	Metal recycling site (MRS)(Mixed)	2.05	3.34
A21	Chemical treatment facility	0.00	0.00
A22	Composting facility	0.31	0.33
A23	Biological treatment facility	0.15	0.21
AR	Accredited reprocessor	0.41	0.64
RMWOG	Miscellaneous	0.07	0.12
Total		5.09	7.46

A gap analysis calculation was undertaken utilising revised RSS waste forecasts for MSW and C&I illustrating the amount of diversion from landfill required. Calculations indicate in 2025/26 there would be a minimum gap of 1.7 million (projected regional capacity plus expansion, C&I low and MSW 1 scenario) and a maximum gap of 6.25 million tonnes (surveyed capacity, C&I high, MSW 3 scenario).

The capacity outlined in Figure ES1 is based on an aggregation of all capacity to the regional level. Current RSS waste projection and capacity requirements are subdivided to WPA for C&I (diversion) and MSW (Recycling and Recovery). Further division of RSS data by treatment type (similar to the EA 'A codes') would allow gap analysis to be undertaken by facility type, which would highlight the shortfall in particular recycling or recovery treatment areas.

Although the capacity figures on a regional level suggest that by 2025/2026 there will be a significant capacity gap, some WPAs will experience a deficit, thus requiring cooperative waste treatment between WPAs. The gap calculations by WPA, as with the regional figures assume that capacity can be transferred directly to those processes which may have a deficit, i.e. metal recycling capacity change of use to biological treatment. The analysis also assumes that facilities in a particular WPA treat waste from within that WPA, excluding waste imports and exports, this in reality is unrealistic. The figures do however provide an indication as to where the majority of capacity lies, and tenuous links to assess which WPAs may have the largest deficit. The Draft RSS recognises the movements of waste between WPAs and that some wastes require handling by larger facilities which need waste from a large area to be economical; as such the RSS principle states that each WPA will not have all the facilities to be able to manage its own waste, but should have enough capacity to manage the equivalent amount of waste as that produced locally.

This study has collated a large amount of information regarding re-use, recycling and recovery facilities in the West Midlands region, which has involved sorting and appending information from various EA sources and taking on board comments and input from planning officers in addition to consultation with the waste facilities. It is important that this information is stored in a suitable location, that the information contained is made widely accessible to all interested parties (as long as confidentiality of the facility operators is not breached) and that the information is maintained and updated on a regular basis.

Updates via survey or facility visits could be undertaken throughout the year by waste planning and or EA officers (as and when they have contact with the facilities) or through a complete survey (such as the survey undertaken in February/March 2007) undertaken by the regional assembly, planning/EA officers or an external source.

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1 INTRODUCTION, BACKGROUND AND SCOPE OF WORKS

SLR Consulting Limited (SLR) was commissioned by the West Midlands Regional Technical Advisory Body (WMRTAB) on behalf of the West Midlands Regional Assembly (WMRA) to undertake a study of waste treatment facilities (i.e. non landfill facilities) and their respective capacities.

While the overarching objective of the study was to identify an accurate picture of the current re-use, recycling and recovery capacity within the region, additional sub-objectives were to:

- produce a database of waste treatment facilities and design a mechanism for the regular updating of capacity; and
- develop a baseline for future monitoring of data used to support the Regional Spatial Strategy.

The principal aims of the study (as clearly stated in the project brief) include:

- development of a methodology to survey existing and planned waste management treatment and recovery capacity;
- apply the methodology and collate up to date data on re-use, recycling and recovery;
- develop an approach for regular and easy data updates.

The West Midlands Regional Assembly has commissioned similar studies in the past, with varying degrees of survey response and data completeness. Due to the limited success of earlier studies, this project is based on the most up to date list of facilities (from the Environment Agency) rather than a base level of data collated from previous studies. In addition to this study of re-use, recycling and recovery facilities, the WMRA has simultaneously commissioned a study to survey landfill facilities and remaining void in the West Midlands region. It is noted at this stage that transfer stations were not included in either study (due to the numbers of facilities in the region and the project timescales and resources available). It is recognised that although classified as 'transfer' many transfer stations undertake a degree of sorting, separation and recycling prior to onward movement of waste (for treatment or disposal). As such the recycling capacity that transfer stations offer is not captured within this study, a recommendation of this study is for a separate capacity study to be undertaken for waste transfer stations to quantify recycling activities and highlight any potential opportunities for change of facility use.

The scope of works, as outlined in SLR's proposal, consists of 3 stages of work which can be broadly categorised into preparation, data collation and data analysis. The following outlines the scope of work in more detail :

- Stage 1 – Preparation and project inception
 - Inception meeting
 - Baseline review
 - Data sorting and prioritisation of action
- Stage 2 – Consultation, Surveys and Site Visits
 - Consultation and GIS mapping
 - Undertaking the survey
 - Facility visits
- Stage 3 - Modelling, Reports and Meetings
 - Modelling and gap analysis
 - Final Report, supporting spreadsheets and GIS
 - Project closure meeting

This study was part funded through the Defra BREW (Business Resource Efficiency and Waste) programme and part funded by the Defra LASU (Local Authority Support Unit) funding.

A WMRTAB steering group was set up to be informed and consulted with throughout the project. Members of the steering group included the Regional Assembly, Strategic Advisor - Regional Planning, Environment, the Policy Lead - Waste and representatives from the Environment Agency (EA) and the National Industrial Symbiosis Programme (NISP). In addition, the Regional Minerals and Waste Officers Group (RMWOG) were consulted during project development and execution for their detailed 'on the ground' knowledge.

The report is compiled of the following sections:

Chapter 2: Methodology – Provides a summary of the methodology employed to select the facilities for survey, develop the questionnaire proforma, along with identification of the priority questions to be asked during the telephone survey and facility visits.

Chapter 3: Data Analysis – Provides a summary of facilities in the region and an analysis of the telephone survey and facility visit response rates. The chapter analyses the results of the survey including throughputs, materials handled, constraints and future expansion plans.

Chapter 4: Regional Gap Analysis – Utilising regional waste arising projections for MSW and C&I, and the information analysed in Chapter 3, regional treatment capacity gaps are analysed.

Chapter 5: Database Gate Keeper and Updates – A key element of this most recent survey work is to ensure the data does not become outdated. There is therefore a need to designate a keeper for the database, and identify a methodology for periodic update of the information contained within the database.

Chapter 6: Conclusions and discussions – Finalises and summarise the headline outputs from this study and recommendations for future updates and revisions.

2 METHODOLOGY

This section outlines the source of facility data, which is a necessary baseline for a study of this nature, and the development of a suitable methodology and survey proforma to obtain maximum response and the information required.

2.1 Refining the project scope

A priority during the inception meeting was to consult with the steering committee and refine the exact scope of the project to ensure that all parties understood the facilities to be included under the umbrella of the term 'waste treatment facility' or 're-use, recycling and recovery facility'. Following discussion and agreement the following facilities were considered to come within the scope of this study:

- Operational and planned waste management facilities which handle municipal, commercial or industrial waste streams (construction and demolition facilities were excluded from the study²);
- Operational licensed waste facilities in A codes³ 15 to 23 (described in more detail in Table 2-1);
- Accredited reprocessors⁴; and
- Incinerators included in the EA Incinerator survey⁵.

**Table 2-1
EA 'A' Code Listing**

'A' Code	Facility Process Description
A15	Material recycling facility
A16	Physical treatment facility
A17	Physico-chemical treatment facility
A18	Incinerator
A19	Metal recycling site (vehicle dismantler)
A19a	End of Life Vehicles facility
A20	Metal recycling site (MRS)(Mixed)
A21	Chemical treatment facility
A22	Composting facility
A23	Biological treatment facility

The RMWOG was contacted to identify any facilities which were due to open in the near future, had recently been granted planning permission, or were in an advance stage of planning discussions in order to build and future proof the database developed.

A summary of the number and nature of facilities in the West Midlands is found in Section 3, with a detailed list of facilities in Appendix 1 to this report.

² On the basis that a national study relating to C& D wastes is regularly undertaken. However it is noted that some facilities handle a combination of waste types, and as such some C&D waste capacity may be included in the results

³ The EA assigns an 'A' code classification system' to each licensed facility based on its activity type

⁴ The Packaging Waste Directive requires all obligated companies to recover a proportion of their packaging waste, either by recovering the waste themselves, or joining a compliance scheme. Facilities which recover packaging waste can register with the EA in order to distribute Packaging Recovery Notes (PRN).

⁵ Large incinerators are covered by the Integrated Pollution Prevention and Control (IPPC) regulations, with the facility details being located on a separate database system. The EA undertook a capacity survey of incinerators during 2005, this throughput and capacity data was incorporated into the survey database to ensure a complete understanding of the regional capacity was obtained.

2.2 Collation of existing data

In order to undertake a survey of waste treatment facilities it is vital to obtain base data documenting the type of facility, location and contact details. Due to the outdated nature of previous capacity studies, the steering group decided that previous databases developed would not be utilised, and that a new list of facilities would be obtained ostensibly through the EA.

The Environment Agency hold a national database of all licensed waste facilities in a system titled Regis (Regulation Information System). Tonnage data returns for the facilities are held in a system called RATS (Regis Attached Tonnage System). Information from Regis was provided by EA for licensed sites in the West Midlands region, where possible, and this information was supplemented with throughput information (for the year 2004/05) from the RATS database. The Regis (and RATS) data formed the background facility list and contact information for those operational facilities with a waste management licence. Details of the accredited reprocessors and incinerator facilities were also obtained from other EA sources. A recent 'cleansing' of the Regis database has been undertaken by the EA lending further weight to using this more robust, up to date dataset.

Section 3 outlines the number of facilities in the region, the distribution between the various 'A' codes and the spatial distribution of sites in the West Midlands. Section 2.4 briefly describes how facilities were prioritised for the telephone survey.

2.3 Survey development

The project brief outlined an aspirational list of key data requirements, including:

- Existing and planned facilities
- Waste treatment and recovery capacity
- Easy updates of data

This key data has been further expanded to produce a comprehensive survey template which contained questions enabling the survey to be expanded and built upon in future survey years. The survey template was divided into several sections (which roughly flow from high priority to lower priority information, including:

- Contact details (Name, address and telephone number of contact);
- Site details (address⁶, grid reference, licence number of facility);
- Facility details (type of facility, source of waste, materials handled);
- Facility throughput (actual throughputs, licence maximum, theoretical throughputs⁷ and constraints on achieving throughputs); and
- Future expansion plans (details of ability or plans to expand).

A draft survey template was circulated to the project steering committee for comment, and then subsequently shown to the RMWOG before being finalised. A blank survey template is contained within Appendix 2 to this report.

⁶ Contact details and site address may in some instances be different

⁷ Definition of theoretical throughput

2.4 Priority requirements

2.4.1 Priority facilities to survey

In excess of 400 facilities were identified as fitting the project scope identified in Section 2.1; these facilities are presented in GIS Drawing Number 1 (with supporting GIS Data Table 1 identifying the basic facility details). showing the spatial distribution across the region (Section 3 provides analysis on the composition of the facility types in the region).

Due to the project timescales and resource allowance, all facilities could not be contacted as part of the telephone survey. Therefore, a requirement for prioritisation of facilities arose. The regions facilities could be broadly divided into vehicle dismantling facilities (A19 and A19a) and non vehicle dismantling facilities (all others). The non vehicle dismantling facilities were selected as being of higher priority for surveying, and as such those facilities were contacted first during the telephone survey.

Vehicle dismantling facilities were deemed as being of a lower priority for a variety of reasons, including:

- experience from previous surveys in the West Midlands indicated that responses from the vehicle dismantlers was fairly poor (and therefore valuable resource maybe misguided),
- vehicle dismantlers (due to the nature of the business and their strong link with market prices) will generally expand or shrink to fit open market commercial needs,
- they often do not view themselves as part of the waste management industry.

Despite vehicle dismantling facilities being given a lower priority, it is still important to sample a representative selection of facilities. In order to maximise potential response, and capture the main players in the vehicle dismantling industry the list of vehicle dismantling facilities in the West Midlands was sent to the Motor Vehicle Dismantling Association (MVDA) for comment to aid the selection of a representative sample of A19 and A19a facilities to survey.

The full list of waste facilities in the West Midlands (in excess of 400) was prioritised for the telephone survey stage, a summary of the facilities chosen for survey are summarised in Table 2-2, the full list of facilities surveyed are contained in GIS Data Table 1 and presented in GIS Drawing Number 1 as a coloured symbol (those facilities not identified as priority are coloured grey).

Table 2-2
Summary of facilities identified as a priority for telephone survey

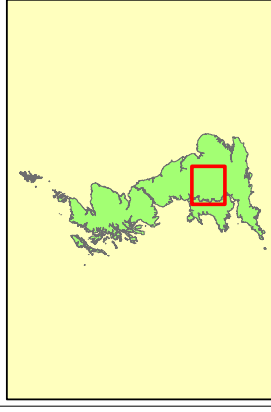
Source of Facility Details	No. Facilities
Non Vehicle Dismantling 'A' Coded Facilities	197
Vehicle Dismantling 'A' Coded Facilities	31
Accreditted Reprocessors	27
Facilities identified by the RMWOG	10
Total Selected for Telephone Survey	265

2.4.2 Priority information to obtain from surveys

The survey proforma (as described in Section 2.3 and presented in Appendix 2) contains space for a large amount of information to be provided. During the project inception an

LEGEND

- Facility Type**
- Surveyed Sites
 - A15
 - A16
 - A17
 - A18
 - A19
 - A19a
 - A20
 - A21
 - A22
 - A23
 - AR
 - RMWOG
 - Non-Surveyed Sites
 - A18
 - A19
 - A19a



Geodetic Information
 British National Grid
 Transverse Mercator
 False Easting = 400,000m
 False Northing = 600,000m
 Central Meridian = 2°
 Scale Factor = 0.9996
 Latitude Of Origin = 49°

0 2.5 5 10 15 20 25
 Kilometres

REPRODUCED FROM THE ORDNANCE SURVEY MAP WITH THE PERMISSION OF THE CONTROLLER OF HER MAJESTY'S STATIONARY OFFICE. CROWN COPYRIGHT. LICENCE NUMBER AL1001285

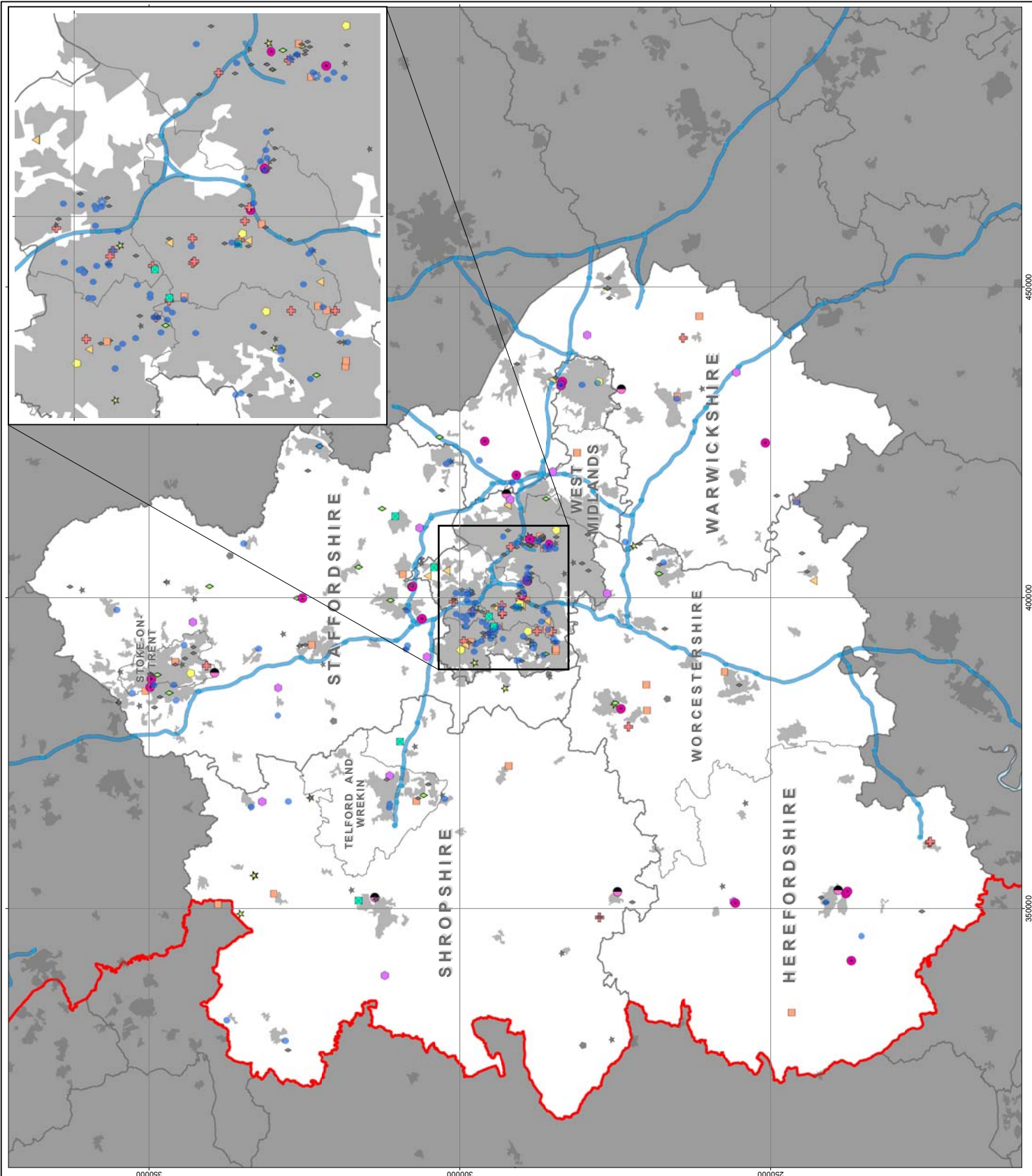
Drawing

Waste Management Facilities in the West Midlands

Project	IWMRTAB	Drawing No.	1
Date	MAY 2007		
Scale	1:600,000		

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350000 400000 450000

000000 300000 250000

WML	Name	WPA	A Code	Telephone Survey	Site Visit
3070	Main Organisation Ltd	Herefordshire A15			
30729	Egh Wash Management Centre	Herefordshire A23			
30924	Duncan Cannon & Sons Ltd	Herefordshire A16			
30988	The Main Organisations Fri	Herefordshire A15			
30311	Bogmax Ltd	Herefordshire A22			
37000	Wilson G & Sons	Shropshire A20			
37269	Bless S&J Stags Ltd	Shropshire A16			
40006	Bla Waste Services Ltd - Newstead	Stoke-on-Trent A15			
40009	A.T. Stacion	Birmingham A20			
40019	Dumcare Ltd	Sandwell A15			
40032	W & J Smith Metal Stockists Ltd	Walsall A20			
40194	T.J Metals Ltd	Sandwell A20			
40201	D.H. E Tyres Ltd	Staffordshire A16			
40203	Oversted Farm	Staffordshire A22			
40259	Secure IT Deposits Ltd	Birmingham A16			
40284	Mil Farm	Staffordshire A22			
40273	Simple Ltd	Wolverhampton A22			
41416	Central Waste Oil Collections Ltd	Sandwell A15			
41706	Bla Waste Services Ltd -	Sandwell A17			
41833	O.B Metals	Walsall A20			
42008	J.J Crowther Ltd	Birmingham A20			
42125	A.G. S Zinc Alloy Ltd	Walsall A20			
42138	J.A Williams & Sons Ltd	Sandwell A20			
42442	Consolidated Services Recycling Ltd - Phosco Complex Alloy Ltd	Sandwell A20			
42370	F. Mc Guinness & Son Ltd	Stoke-on-Trent A20			
42386	W.H Warren Ltd	Walsall A20			
42393	J.Walton Scrap Metals	Wolverhampton A20			
42200	S & H Wilson	Sandwell A20			
42203	Stone Brn	Wolverhampton A20			
42207	M.R James	Stoke-on-Trent A20			
42216	Erlonhill Ltd	Staffordshire A20			
42226	Leese Brothers E Colwell Ltd	Staffordshire A20			
42226	Shilla Metallals Midlands Ltd	Wolverhampton A20			
42270	Castle Environmental - Castle Oil	Staffordshire A16			
42286	Shedde Castings Ltd	Birmingham A20			
42301	Welder Of Wrecksby Ltd	Dudley A20			
42316	Remston & White Ltd	Sandwell A15			
42338	Mount Alloy Ltd	Staffordshire A20			
42372	Moore Stoke On Trent Ltd	Stoke-on-Trent A20			
42373	Foundry Services - Helman Avenue	Wolverhampton A16			
42374	F Wilson & Son	Staffordshire A20			
42451	Kang Refinery Services Ltd	Birmingham A21			
42458	Mark Taylor Scrap And Metal	Staffordshire A20			
42460	Maurice Hughes Cooney Ltd	Dudley A20			
42460	Teg Metals Ltd	Birmingham A20			
42493	Black Country Environmental Services Ltd	Birmingham A15			
42516	Greedy Ltd	Birmingham A20			
42529	Copey Of Eimwood Ltd	Warrackshire A20			
42534	Concoba Metals Recycling Ltd	Sandwell A20			

WML	Name	WPA	A Code	Telephone Survey	Site Visit
42557	J & D Industrial	Wolverhampton A20			
42559	T.J.A Trading Ltd	Sandwell A20			
42591	A Hampsons	Staffordshire A20			
42605	M G R Barrow Yard A	Staffordshire A20			
42626	Allied Bay Ltd	Birmingham A16			
42633	A.P.A Metals	Walsall A20			
42640	Green Pastures Fat Crumation	Staffordshire A18			
42642	Seven Trent Water - Shropdog Sewage Treatment Works	Stoke-on-Trent A20			
42701	S & P Refrines Ltd - Crescent	Walsall A15			
42703	Wentall Commercial	Walsall A20			
42619	D Shakespeare and Co Ltd -	Dudley A20			
42684	Shakespeare M R S	Dudley A20			
42686	Millers LCM R S	Dudley A20			
42689	H.O Thompson & Son M R S	Dudley A20			
42679	Shropshire Recycling Services Ltd -	Sandwell A20			
42690	T.F. Stockley & Sons Limited M R	Dudley A15			
42696	M & G Alloy Ltd M R S	Dudley A20			
42701	B.S. Bhatt G Co Ltd Transfer	Wolverhampton A17			
42742	Pearwood Pkt Comality Technology	Staffordshire A18			
42770	Orion Recycling Ltd	Dudley A15			
42788	N.M.G. Glass Ltd	Dudley A16			
42800	Ow Hl Bungalow	Worcestershire A18			
42780	Oskey Arnold M R S	Telford and Wre A20			
42796	D.J. & P. Penn M R S	Shropshire A20			
42704	Shropshire Recycling Services Ltd	Shropshire A16			
42743	Swan Pts Pkt Crumation	Staffordshire A18			
42764	Bicycle South Shropshire Ltd	Shropshire A20			
42891	Hunt Bros Smocking Ltd - P V C	Warrackshire A16			
42831	Veolia Storage Claydon	Warrackshire A20			
42832	Cleaning Services Group Ltd -	Eccall County A17			
42838	A.A Metals	County A20			
42847	Jackson Dnm Ltd - Wreath Stings	County A20			
42859	Arrow Metals Redditch Ltd	Worcestershire A20			
42861	Cleaning Services Group Ltd -	Worcestershire A17			
42849	Grease Management Ltd	Warrackshire A16			
42857	Simple Ltd - Kingston Garage Fm	Warrackshire A22			
42858	Block Metals	Staffordshire AR			
42841	K. Jones Metals	Walsall A20			
42844	Wooden Metals	Walsall A20			
42800	C.M.C	Wolverhampton A20			
42810	J.E. Jones & Sons Ltd	Birmingham A15			
42837	Alexander Brothers	Walsall A20			
42838	Castle S A Ieys	Walsall A20			
42838	Walsall Iron & Steel	Walsall A20			
42843	Short Heath Iron & Steel Ltd	Walsall A20			
42831	RCS Waste Oil Ltd - Stourport Treatment Facility	Worcestershire A16			
42844	Kidderminster Car Dominators M R	Worcestershire A18			
42854	Veolia Works P C I F	Sandwell A17			
42860	Brookside Metals M R S	Sandwell A20			
42861	E.R. Coyle Steel LDM R S	Dudley A20			

WML	Name	WPA	A Code	Telephone Survey	Site Visit
40333	Cedential Environmental Ltd	Sandwell A15			
40350	Critical Waste Management Ltd	Staffordshire A16			
40381	Seven Trent Water - Wreath	Birmingham A23			
40373	Advanced Special Waste Ltd	Staffordshire A20			
40390	Asia Free Special Waste Ltd -	Wolverhampton A20			
40391	B.V.H Ltd	Birmingham A20			
40116	Quintony Holdings Ltd	Sandwell A16			
40151	Bacon Metals	Staffordshire A16			
40156	Autocemetal Ltd	Staffordshire A16			
40158	Equival Ltd	Wolverhampton A16			
40161	108 Mackdown Lane	Birmingham A16			
40176	Safety Autoclavators Ltd	Birmingham A16			
40177	Newcastle Autoclavators Ltd	Staffordshire A16			
40197	Manor Farm	Staffordshire A22			
40200	Sheffield Ltd	Wolverhampton A16			
40232	Robert Coates Ltd	Staffordshire A16			
40240	Canon Hygiene Ltd - Birmingham Service Centre	Sandwell A17			
41308	Veolia - Empire Bioworks	Walsall A17			
41316	Veolia - Empire Bioworks	Walsall A17			
41233	Shanks Waste Solutions - Card	Birmingham A17			
42015	Metro Alloy & Residual Ltd -	Dudley A20			
42010	Empic Ltd	Sandwell A15			
42103	Environmental Concern Ltd	Birmingham A21			
42105	Greenvale Waste Management Ltd	Wolverhampton A15			
42108	T.J Turner & Son	Wolverhampton A20			
42110	Singapore Metals	Walsall A20			
42112	Cook Con	Walsall A20			
42119	G.D Metal Recycling Ltd - Park Road	Birmingham A20			
42126	J Smith Metals Ltd	Wolverhampton A20			
42156	J Lawrence Metals	Walsall A20			
42173	G.D Metal Recycling Ltd - Jub	Walsall A20			
42174	Far Metals Ltd	Birmingham A20			
42177	R Network & Sons	Staffordshire A20			
42221	Gladhill Metals	Sandwell A20			
42477	T.I. Harvey & Sons Ltd - Whitworth	Walsall A19			
42501	UK Oil	Birmingham A15			
42504	George Johnsons Metal	Dudley A20			
42541	K. Jones Metals	Walsall A20			
42544	Wooden Metals	Walsall A20			
42600	C.M.C	Wolverhampton A20			
42610	J.E. Jones & Sons Ltd	Birmingham A15			
42637	Alexander Brothers	Walsall A20			
42638	Castle S A Ieys	Walsall A20			
42638	Walsall Iron & Steel	Walsall A20			
42643	Short Heath Iron & Steel Ltd	Walsall A20			
42631	RCS Waste Oil Ltd - Stourport Treatment Facility	Worcestershire A16			
42644	Kidderminster Car Dominators M R	Worcestershire A18			
42654	Veolia Works P C I F	Sandwell A17			
42660	Brookside Metals M R S	Sandwell A20			
42661	E.R. Coyle Steel LDM R S	Dudley A20			

WML	Name	WPA	A Code	Telephone Survey	Site Visit
42655	Motor Spares Dudley Ltd M R S	Dudley A19			
42670	Hudsons Oil Dudley M R S	Dudley A20			
42677	Reg Mors (Brady HI) M R S	Dudley A20			
42678	Reg Mors (Brady HI) M R S	Dudley A20			
42683	S.J. Bester (Mebis) M R S	Wolverhampton A20			
42684	S.J. Bester (Mebis) M R S	Wolverhampton A20			
42692	L.R.R Metals M R S	Dudley A20			
42620	Church Road Moore Breame Ltd	Wolverhampton A19			
42624	ADP-2000 M R S	Dudley A20			
42658	Hills Metals & Waste Ltd - Local	Worcestershire A15			
42676	Comma 38	Worcestershire A16			
42682	Hewitt International Salvage Management	Staffordshire A19			
42692	Embold Recycling Ltd	Dudley A16			
42018	Seven Trent Water Ltd Biological Treatment Facility	Shropshire A23			
42642	Stourton Ltd Homebar	Shropshire A18			
42644	Telford Motor Spares M R S	Telford and Wre A16			
42697	D.W. Harrington & Son M R S	Telford and Wre A20			
42699	Ramsey Metals	Shropshire A20			
42119	Unit 4 - 6 Lower Works	Shropshire A16			
42137	Bonfield Industrial Services Ltd	Shropshire A15			
42152	Sutton Farm	Shropshire A22			
42178	Aspold Ltd	Shropshire A22			
42120	Seven Trent Water Ltd - Fimham	Warrackshire A23			
42620	Green Waste Recycling	Birmingham A22			
42608	Comex UK Cement Ltd - Southern	Warrackshire A15			
42609	Conroy Lane	Warrackshire AR			
42609	Mount Street	Birmingham AR			
42609	Blackburn Road	County AR			
42609	110 B Congress Street	Stoke-on-Trent AR			
42609	54 Stokers Street North	Birmingham AR			
42609	Bridge Street North	Staffordshire AR			
42609	Downing Street	Staffordshire AR			
42609	Brady Sawmill	Warrackshire AR			
42609	Metal & Waste Recycling Ltd	Walsall N/A			
42609	Units 5,6,7 Trent Valley Trading Estate	Staffordshire N/A			
42609	Recycle Plastic Ltd	Sandwell N/A			
42609	Green Biobase Ltd	Walsall A17			
42609	Canock Auto Salvage	Staffordshire A16			
42609	Units 5,6,7 Arwal Business Park	Worcestershire AR			
42609	Long Marston - Worcestershire A20				
42609	Chads Eccall M R	Shropshire A19			
42609	WJ Fuler Ltd	Shropshire A19			
42609	J&J Abels	Staffordshire A16			
42609	C Fulant Metal Ltd	Walsall A20			
42609	Tyford Road	Herefordshire AR			
42609	Sims Group U K Ltd	Warrackshire A16			
42609	W J Fisher M R S	Shropshire A19			
42609	Longport Mill & Goods Yard	Stoke-on-Trent AR			
42609	Sims Group U K Ltd - M R S	Worcestershire A20			

WML	Name	WPA	A Code	Telephone Survey	Site Visit
42251	Silver Brothers - Cognition Road	Birmingham	A20		
42094	Whitall Motor Spray and MRS	Shropshire	A19		
42847	John Hill & Sons Walsall Ltd	Walsall	A20		
42094	STV UK - Packaging Compositing Facility	Worcestershire	A20		
42285	Hobsons Of Blowedon Ltd	Walsall	A20		
42185	Sime Group UK Ltd	Staffordshire	A20		
48224	Motor Services (Rodriguez) Ltd	Worcestershire	A19a		
48182	New Locks Vehicle Barnetters	Dudley	A19a		
42225	B & A Metals Midlands Ltd	Wolverhampton	A20		
42093	Avon Environmental Services Ltd	Sandwell	A15		
RWYDGT	Widex Boxer Recyclers	Shropshire	NA		
42709	Jack Moody Ltd	Staffordshire	A22		
42643	HW Taitor Metals Ltd	Birmingham	A19		
48189	Ethich Europe Ltd	Worcestershire	A18		
47067	Millfields Yard MRS	Staffordshire	A18		
47045	Kingpin Tyre Ltd	Shropshire	A18		
47098	Alu-alpage MRS S	Shropshire	A20		
41516	Roberts Metals Refinements Ltd - Goose Road	Shropshire	A18		
40747	Johnathan Lloyd Commercial Salvage Ltd	Staffordshire	A19a		
48210	J V Demitrios Services Ltd	Worcestershire	A18		
42317	Dunn Brothers	Sandwell	A20		
40726	CP Motors	Worcestershire	A19a		
ERW2005518	Holywell Farm	Wolverhampton	AR		
ERW2002358	Holywell Farm	Wolverhampton	AR		
40735	Henry James Motor Spares	Birmingham	A19a		
48234	A. Aston Compound Services	Worcestershire	A22		
48017	Veolia - Empire Blockworks	Walsall	A17		
42811	Colman & Co - Menden Quarry	Solihull	A16		
48114	Waste Tyre Solutions	Sandwell	A18		
42645	OJ Invention Ltd	Walsall	A15		
42165	Isaac Shaw Ltd	Staffordshire	A20		
47033	Kingpin Tyre Ltd	Shropshire	A18		
48234	Commercial Environmental Ltd (Viv Balle Pk)	Worcestershire	A18		
42249	Hutch Street Metals	Wolverhampton	A20		
42669	Pottery Motor Services Ltd	Worcestershire	A19		
47179	Jack Moody Ltd	Shropshire	A22		
ERW2000448	Offices Way	Sandwell	AR		
ERW2000448	Whitton Court	Headcote	AR		
42808	All Metal Recovery Ltd	Sandwell	A20		
40441	European Metal Recycling - Daleton	Walsall	A20		
44118	Valgrove Ltd	Wolverhampton	A15		
48062	E. Millad Metals Ltd MRS	Dudley	A20		
40099	European Metal Recycling Ltd - Romsey Ayles	Walsall	A15		
48148	European Metal Recycling - Romsey Ayles	County	A20		
42536	Prestart Ltd	Worcestershire	A20		
42249	European Metal Recycling Midlands Shires Ltd - Lander Street	Birmingham	A20		
42243	AJ S Metals Ltd	Walsall	A20		
48110	European Metal Recycling - Dudley Forge Storage	Walsall	A20		
42171	Arthur Wright & Son	Shropshire	A20		
48075	D & W Metals	Dudley	A20		

WML	Name	WPA	A Code	Telephone Survey	Site Visit
ERW1991602	Norian Green Lane	Staffordshire	AR		
48180	Owton Recycling Ltd	Dudley	A16		
4802	Owton Recycling Ltd	Dudley	A16		
40729	Reedway Spares Ltd	Birmingham	A19a		
42841	Richards & Irons Ltd	Sandwell	A20		
42813	Darlington Global Trading Co Ltd	Dudley	A20		
42614	European Metal Recycling Ltd	Worcestershire	A20		
42634	European Metal Recycling M R - Smeck	Sandwell	A20		
ERW2001518	Wolverhampton	County	AR		
42602	Maas Metals Ltd	Sandwell	A20		
ERW199975	Unit 6 Godsole Business Park	Worcestershire	AR		
48216	Avon Autopares Ltd	Worcestershire	A19a		
42672	EA Innomator Study	Shropshire	A18		
B38676	EA Innomator Study	Sandwell	A18		
A0337	EA Innomator Study	Worcestershire	A18		
B54316V	EA Innomator Study	Sandwell	A18		
B19738W	EA Innomator Study	Sandwell	A18		
A07801	EA Innomator Study	County	A18		
XX9751	EA Innomator Study	Dudley	A18		
XX9760	EA Innomator Study	Wolverhampton	A18		
A07900	EA Innomator Study	Shropshire	A18		
AS8216	EA Innomator Study	Birmingham	A18		
A8602	EA Innomator Study	Dudley	A18		
AF2877	EA Innomator Study	Worcestershire	A18		
B17284H	EA Innomator Study	Worcestershire	A18		
	Evans Mechanical Ltd		A18		
47056	Central Car Spares MRS	Shropshire	A19		
47090	Jackfield Car & Light Commercial Ltd	Shropshire	A19		
47081	Knighton Car Spares MRS	Shropshire	A19		
47085	Asley Recovery Services MRS	Shropshire	A19		
47114	Shelton Motor Spares Ltd	Shropshire	A19		
47170	S&G Car Brakes Ltd	Shropshire	A19		
48146	Sandera Brothers MRS	Staffordshire	A19		
48107	Blackbrook Salvage MRS	Dudley	A19		
48121	M R C. Jensen	Dudley	A19		
48186	E L V Recycling (Midlands) Ltd	Worcestershire	A19		
48225	Hutchings Lane Brakes And Discs Ltd	Walsall	A19		
48225	Brownhills Motor Spares	Walsall	A19		
42658	Renovor Motors	Birmingham	A19		
42656	M F Paine	Staffordshire	A19		
42226	Fenton Motor Depot	Staffordshire	A19		
42260	Auto Recalm	Staffordshire	A19		
42235	K J Barnes Commercial	Staffordshire	A19		
42168	Moving Metal Co Ltd	Staffordshire	A19		
42256	Auto-Line Motor Salvage	Staffordshire	A19		
42819	M R A. Jenkinson	Staffordshire	A19		
42268	L T R Recovery Services	Staffordshire	A19		
42636	M R F Powell	Staffordshire	A19		
42609	Nison Scrap Metals	Staffordshire	A19		
42233	Green Lane Motor Salvage	Walsall	A19		
42268	L L Harvey Ltd	Dudley	A19		

WML	Name	WPA	A Code	Telephone Survey	Site Visit
42196	Blackhead Vehicle Demolition Ltd	Wolverhampton	A19		
42566	T & M Commercials	Birmingham	A19		
42532	H U S Autos	Birmingham	A19		
42530	Henry Taron	Birmingham	A19		
42511	Kender Motor Spares	Birmingham	A19		
42257	Motor Salvage F C Ltd	Wolverhampton	A19		
42519	Stracey Spares	Birmingham	A19		
42539	Beeson Trading	Wolverhampton	A19		
42380	Sven Dry Parts	Birmingham	A19		
53739	Alens Spares & Salvage	Staffordshire	A19		
53769	Wagwood Works	Staffordshire	A19		
30272	P & T Motors Vehicle Barnetters	Headcote	A19		
30378	UK Bus Demolition Ltd	Headcote	A19		
47162	Walker Larry Brown	Shropshire	A19a		
47157	Angulas Car Barnetters	Shropshire	A19a		
47158	Sassy Car Brakes Ltd	Shropshire	A19a		
47164	Joe Smith	Shropshire	A19a		
47180	Che HI Motor Spares	Shropshire	A19a		
47146	Carl Slogoswick	Shropshire	A19a		
47186	Naimode Car Spares Ltd	Shropshire	A19a		
47186	Tekol Commercial Vehicles	Shropshire	A19a		
48180	Stalling Lane Car Spares Ltd	Dudley	A19a		
48179	R K Kludor Car Spares Ltd	Worcestershire	A19a		
48181	A To Z Steps	Worcestershire	A19a		
48186	Azz Nawozid	Staffordshire	A19a		
48190	Rey Jagan Reghad	Dudley	A19a		
48234	Trackbeates (Reby) Ltd	Worcestershire	A19a		
48218	Arche Lane Autopares	Worcestershire	A19a		
48215	Devene Motors	Worcestershire	A19a		
48219	Common Road Demolition	Worcestershire	A19a		
48222	Wilson Motor Spares	Worcestershire	A19a		
48213	D J Crockett & Sons	Worcestershire	A19a		
48211	Evham Auto Spares	Worcestershire	A19a		
48220	Ensoy (Midlands) Ltd	County	A19a		
48223	Starley Elements	Worcestershire	A19a		
40146	W W Commercial	Staffordshire	A19a		
40167	European Metal Recycling Ltd	Birmingham	A19a		
40168	Swan Sheet Salvage Ltd	Wolverhampton	A19a		
40723	A B C Auto Salvage	Sandwell	A19a		
40198	V V Spares	Staffordshire	A19a		
40208	Voivo & Muzel Auto Parts	Birmingham	A19a		
40178	Scally Car Brakes	Staffordshire	A19a		
40219	A S C Autocentre	Birmingham	A19a		
40186	T S Bassell	Staffordshire	A19a		
40225	Armedong Vehicle Recycling Ltd	Staffordshire	A19a		
40122	A & A Auto Demolition	Birmingham	A19a		
40164	Katibuck Ltd	Sandwell	A19a		
40159	M Morel Vehicle Demolition	Solihull	A19a		
40151	Viking Co Rover Spares Ltd	Birmingham	A19a		
40277	E & S Motors	Walsall	A19a		

WML	Name	WPA	A Code	Telephone Survey	Site Visit
40195	Mucom Hussain Shah	Staffordshire	A19a		
40198	John Crockett Ltd	Staffordshire	A19a		
40225	Midland Crown & Peugeot	Sandwell	A19a		
40193	John Farmer Trading	Walsall	A19a		
40212	M S C. Onite Ltd	Birmingham	A19a		
40227	M R G. Gales	Wolverhampton	A19a		
40143	Phillip White	Birmingham	A19a		
40171	Harshaj Dabson	Worcestershire	A19a		
40220	Robert Baker	Birmingham	A19a		
40298	Card AutoWater	Staffordshire	A19a		
40190	Martin Harford	Worcestershire	A19a		
40121	David Scudell	Birmingham	A19a		
40186	Brewes & Edington	Birmingham	A19a		
40288	Taiti Shub	Sandwell	A19a		
40221	Stuart Regh Johnson	Staffordshire	A19a		
40145	Steven Perkins	Birmingham	A19a		
40206	Mao Zhai	Sandwell	A19a		
40223	Mr Winston Sutherland	Birmingham	A19a		
40142	Mohammed Raif	Birmingham	A19a		
40270	Nen Parker	Staffordshire	A19a		
40234	John Brett	Birmingham	A19a		
40183	Audrie Motors Ltd	Staffordshire	A19a		
40183	Jody Lee	Staffordshire	A19a		
40189	Seby West	Staffordshire	A19a		
40172	Richard Atkinson	Sandwell	A19a		
40223	J D Commercials Ltd	Staffordshire	A19a		
40197	Anthony Thomas Hill	Birmingham	A19a		
40298	Renovor Motors Ltd	Worcestershire	A19a		
40182	Nasir Mohammed	Birmingham	A19a		
40231	Ronald Mills & Carol Mills	Walsall	A19a		
40178	Anthony Chubbald	Birmingham	A19a		
40294	Great Barr Auto Recovery Ltd	Birmingham	A19a		
40131	Sathidegi Math	Birmingham	A19a		
40252	Douglas Car & Restaurant cur	Walsall	A19a		
40226	A J S Metals Ltd	Walsall	A19a		
40218	Paul Falcher	Walsall	A19a		
40286	Midland E M Ltd	Sandwell	A19a		
40149	Birmingham Cui Company Ltd	Birmingham	A19a		
40294	Hilwood Auto Engineering Ltd	Staffordshire	A19a		
40293	John Keeling	Staffordshire	A19a		
40293	M K Auto Salvage	Birmingham	A19a		
40296	The Cod	Staffordshire	A19a		
40209	New King Street Breakers Ltd	Staffordshire	A19a		
40183	Taqi Haseem	Birmingham	A19a		
40296	Jagdeep Chahra	Sandwell	A19a		
50305	Lanvan Breakers	Staffordshire	A19a		
30330	J & F Recovery	Headcote	A19a		
30308	Raim Motors	Headcote	A19a		
30321	Avonon Metals Ltd & Hilwood Auto Salvage Ltd	Headcote	A19a		

agreement that all survey questions would not be completed during the telephone survey⁸. The full survey proforma would be progressively completed during future surveys.

As with prioritising the facilities to be surveyed, it is important to prioritise those questions which are of high priority to ensure these answers are obtained during the first round of surveying. The prioritisation of answers is presented in Table 2-3 and discussed and agreed by the project steering group and the RMWOG.

Table 2-3
Illustration of how survey questions were prioritised.

HIGH	MEDIUM	LOW
Throughput 04/05 (or alternative year)	Licence maximum	Future plans for expansion
Source of waste handled (MSW, commercial, industrial, other)	Theoretical maximum	Source of additional materials handled
Principal materials handled	Operational constraints	Materials and estimated quantity of additional materials handled
Approximate proportions/tonnages of the above materials	Constraints to expansion	

The methodology for surveying the facilities involved a combination of telephone consultation with the facility operators and follow up visits to the facility. The two survey methods are described briefly below, with the results of the facility consultation presented in Section 3 of this report.

2.5 Telephone survey

Telephone questioning represented the first phase of the facility surveys. Initial contact via telephone allowed a large number of facilities to be contacted in a relatively short period of time. This resulted in collection of as much information as possible required from the survey proforma, whilst remaining focused on the priority questions. Resource allocation resulted in the following methodology being adopted for the initial telephone consultation stage:

- Telephone contact
- Transfer information to proforma and update records (using available information)
- Updated proforma sent to facility for verification (via e-mail/fax/post, accompanied with an introductory letter from the WMRA)
- Survey responses added to the output database

Agreement on the resource requirements and allocations for the survey enabled the study to be assessed on its methodology as well as the results obtained (as surveys can often yield low responses, even though the methodology is valid). The resource allocation for the telephone survey allowed:

- Two initial contact attempts;
- If a response was not obtained, then the facilities were set aside until all priority facilities had been contacted at least twice; and

⁸ (it should be regarded as a first round, or pass to complete as much information as possible)

- Following contact of all priority facilities at least twice, those where a response was not obtained were re-contacted for further attempts.

A resource allowance of 30 minutes for each facility to be contacted was provided, to encompass calling, processing the information, sending information for verification, (updating information if the facility sent back further details after reviewing the survey), and updating the main database. Initial resourcing for this study made provision for a total of 300 facilities to be contacted in the telephone survey.

Part way through the telephone survey, summary results were provided to the steering group. A relatively large proportion of facilities (approximately 30% of the survey stock) had requested that the survey be sent (e-mail, fax or post) rather than responding to questions over the telephone. A recommendation to the steering group at this stage that available resources should be redirected to those facilities with which either contact had already been made (but answers to the survey had not been obtained) or facilities where so far the correct contact could not be located. Concentration of remaining resources on the 265 priority facilities resulted in the long term response rate increasing by approximately 17% (Section 3 outlines the response rate performance).

2.6 Facility visits

The study proposals included two stages of data collection, an initial telephone survey, followed by a series of facility visits. The purpose of the visits is to focus on areas of greatest interest as well as gaining a more detailed information relating to / concerning:

- Current throughput, available capacity, potential plans for expansion
- Site location / surrounding land use
- Constraints on throughput and expansion
- Ability to handle alternative waste types / change of process

In addition, facility visits allowed a number of observations to be collated to gain valuable site information pertaining to:

- Site size
- Accessibility
- Road routing
- Surrounding land use compatibility
- Proximity to sensitive receptors
- Visual intrusion
- Constraints

This additional anecdotal information is useful when concerning possible future expansion and ability to accept new waste types, and would have been difficult to obtain through the telephone survey alone.

Following completion of the telephone survey, and initial analysis of data, a number of potential areas for facility visits was drafted. The high response rate achieved during the telephone survey enabled the focus of the visits to be on improving the level of understanding the quality of information, rather than improving the response rate. During a meeting with the Environment Agency and RMWOG, the initial facilities list was discussed producing a final priority list for site visits. The prioritised list identified 57 potential sites and consisted of:

- Priority 1 – Facilities of interest to the RMWOG
- Priority 2 – Facility types with a low response rate (A19, A21, A23)
- Priority 3 – Facilities that completed a low proportion of priority questions (only answered 1 or 2 of the 4 priority questions identified in Table 2-3)
- Priority 4 – A19 and A19a – original selection was 20% of total facility stock (A19 included within Priority 2)

Facilities identified in the above priority list were sent a letter to inform them that members of SLR would be visiting the region during a two week period, and may briefly be calling into their facility. Section 3.3 details the success of the facility visits, a spatial plan of those facilities visited is presented in GIS Drawing Number 3.

3 DATA ANALYSIS

3.1 Existing facilities in the West Midlands

The information from the EA (Regis) detailed in excess of 1,100 licensed facilities in the West Midlands encompassing operational and closed facilities within 'A' codes 01 to 24. Operational facilities in 'A' codes 15 to 23 resulted in 354 facilities; Table 3-1 provides the distribution between the 10 'A' code categories, as well as sub dividing the licensed facility by WPA.

Table 3-1
Distribution of operational facilities between 'A' code and WPA

A' Code	Birmingham	Coventry	Dudley	Herefordshire	Sandwell	Shropshire	Solihull	Staffordshire	Stoke-on-Trent City	Telford and Wrekin	Walsall	Warwickshire	Wolverhampton	Worcestershire	Total
A15	2		2	2	8	1			1		3	1	2	1	23
A16	2		4	1	2	5	1	3	1			4	1	3	27
A17	1	1			3						3		1	1	10
A18						1		3						1	5
A19	8		5	2		11		14			4	1	4	2	51
A19a	26	1	3	3	8	8	1	28		1	6	7	4	10	106
A20	10	3	18	2	14	4		11	4	3	22	4	13	3	111
A21	2														2
A22	1			1		3		4				3	1		13
A23	1			1		2			1			1			6
Total	53	5	32	12	35	35	2	63	7	4	38	21	26	21	354

The EA incinerator survey lists 14 incinerators within the region; these are further sub classified by a suffix letter (as shown in Table 3-2):

- A – municipal waste incinerator
- B – sewage sludge incinerator
- C – hazardous incinerator
- D – clinical animal carcass incinerator
- E – clinical other incinerator
- F – other incinerators

Table 3-2
Distribution of incinerator sub-types by WPA

A' Code	Birmingham	Coventry	Dudley	Herefordshire	Sandwell	Shropshire	Solihull	Staffordshire	Stoke-on-Trent City	Telford and Wrekin	Walsall	Warwickshire	Wolverhampton	Worcestershire	Total
A18a	1	1	1						1				1		5
A18b			1									1			2
A18c					2	1						1			4
A18d						1									1
A18e					1									1	2
Total	1	1	2	0	3	2	0	0	1	0	0	2	1	1	14

A list of Accredited Reprocessors in the region has been obtained from the EA website (January 2007). Reprocessors are described by a size indicator (Small or Large) and the main material reprocessed identified (for example, Aluminium, Paper/Board, Other (MSW)). Of the 27 accredited reprocessors in the region, 18 are classed as “large” and 9 are “small”. Table 3.3 illustrates the materials reprocessed, categorised by the facility size.

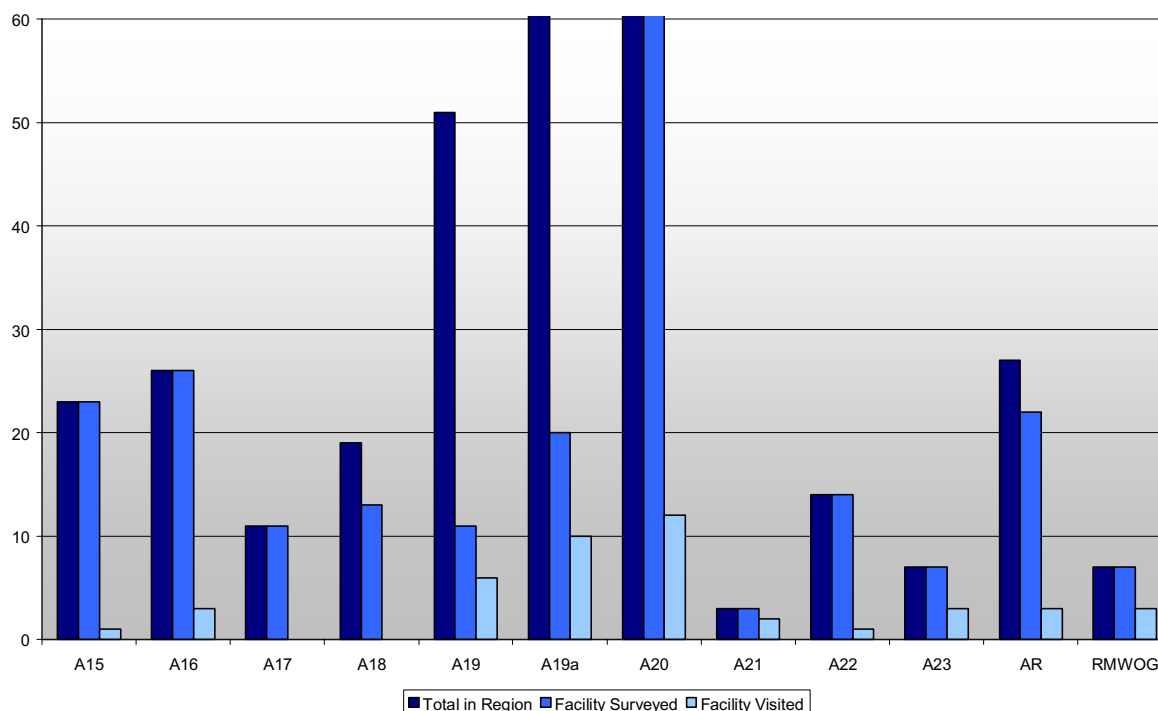
**Table 3-3
Breakdown of facility sizing and respective materials processed**

	Large	Small	Total
Aluminium	2	3	5
Composting (Paper)		1	1
Glass	1		1
Other (MSW)	5		5
Paper/board	2		2
Plastics	5	5	10
Wood	3		3
Total	18	9	27

GIS Supporting Data Table 1 lists all operational facilities in the West Midlands in ‘A’ codes 15 to 23, plus incinerators in the EA survey, accredited reprocessors from the EA list, plus facilities identified by the RMWOG. These facilities are mapped in GIS Drawing Number 1.

GIS Supporting Data Table 1 identifies those facilities prioritised for the telephone survey, with GIS Drawing Number 1 showing the facilities by type across the region represented by coloured symbols (non prioritised facilities are shown in grey). Figure 3-1 illustrates the number of facilities to be surveyed from each facility type, with AR representing Accredited Reprocessors, and RMWOG representing the facilities identified which do not hold a WML.

**Figure 3-1
Chart showing the distribution of facilities to be sampled by facility type**

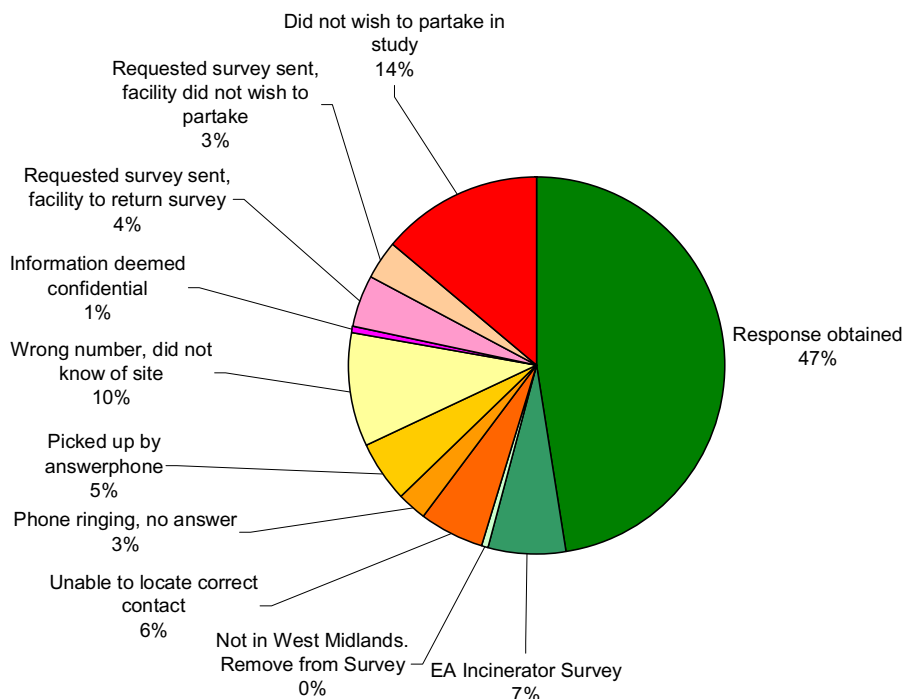


Note: Figures are truncated at 60 facilities. Actual facility numbers for A19a = 106; A20 = 111 (in region and surveyed).

3.2 Telephone survey response

In total 265 facilities were contacted via the telephone survey, 128 facilities responded with some degree of information, therefore representing a positive response rate of 48%. When adding the information from the EA incinerator survey to the results the response rate exceeds 50%. Figure 3-2 summaries the total response results from the telephone survey, including a detailed analysis of reasons for non-response to the survey. The spatial distribution of positive responses is presented in GIS Drawing Number 2 below. Summary of response by facility type and WPA are presented in Figure 3-3 and Figure 3-4 respectively.

Figure 3-2
Summary of Telephone Survey Results



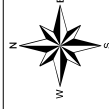
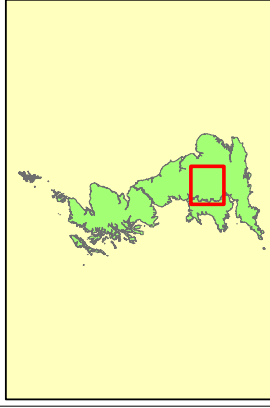
Those responses highlighted orange hold the most potential for gaining information in future surveys, as the operators did not refuse to take part in the study, however no information was returned when the survey was sent to them.

At least one response was obtained from each 'A' code grouping and from each WPA; the level of response varied considerably by facility type and WPA. Due to the different numbers of facilities in each 'A' code group and WPA, analysis of results by proportions of response is more revealing.

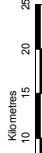
LEGEND

Response

- Response obtained
- EA Incinerator Survey
- No longer a waste management facility
- Unable to locate correct contact
- Wrong number, did not know of site
- Picked up by answerphone
- Phone ringing, no answer
- Did not wish to partake in study
- Requested survey sent, facility did not wish to partake
- Requested survey sent, facility to return survey
- Information deemed confidential



Geodetic Information
 British National Grid
 Transverse Mercator
 False Easting = 400,000m
 False Northing = 600,000m
 Central Meridian = 2°
 Scale Factor = 0.9996
 Latitude Of Origin = 49°



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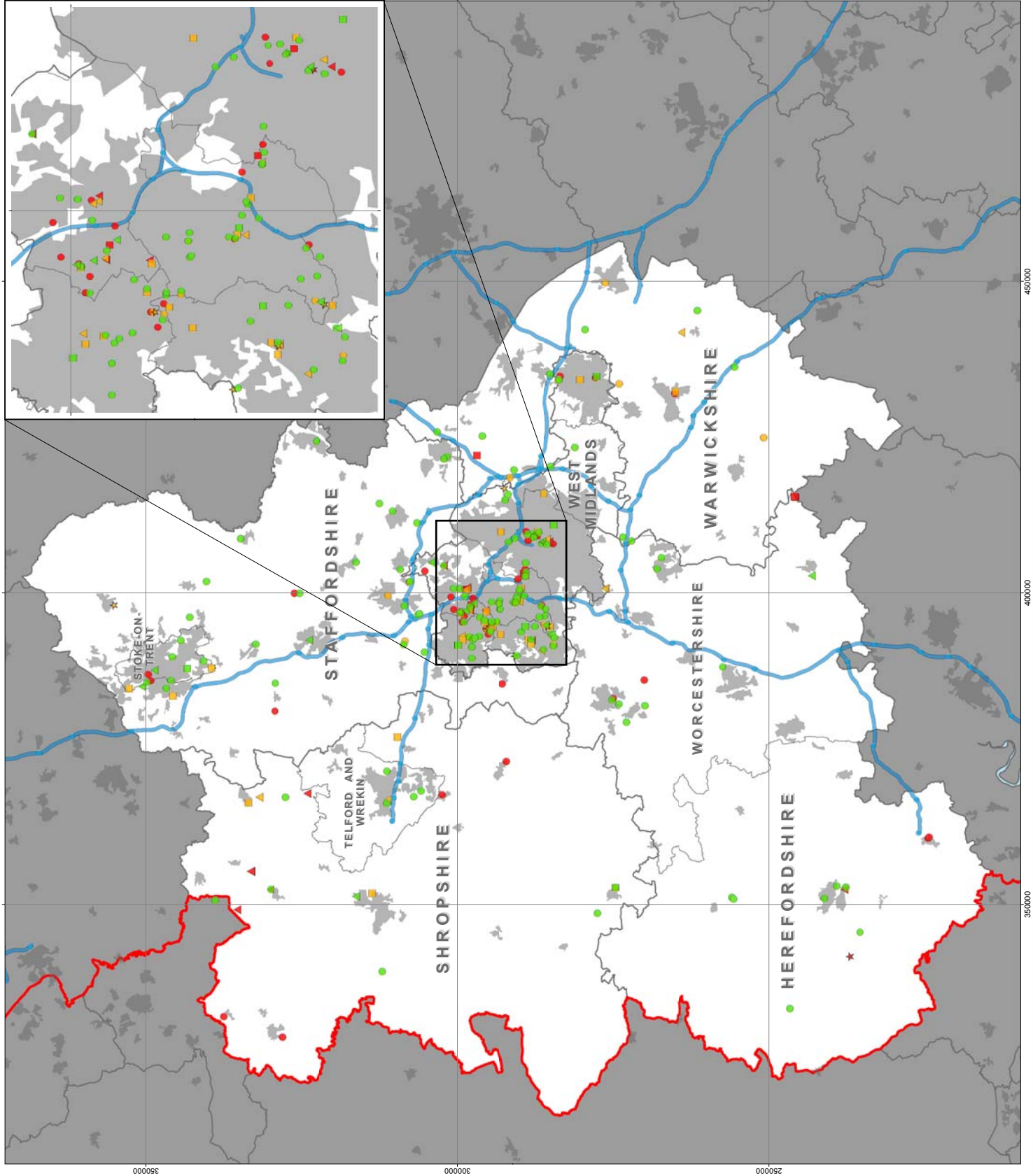
Drawing

Surveyed Waste Management Facilities in the West Midlands - Response Type

Project	IWMRTAB	Drawing No.	2
Date	MAY 2007		
Scale	1:600,000		

402.1422.00001_0407_403LVI

TREENWOOD HOUSE
 ROWDEN LANE
 BRADFORD ON AVON
 WILTSHIRE BA15 2AU
 T: 01225 308400
 F: 01225 308401
 www.slrconsulting.co.uk



450000

400000

350000

Figure 3-3
Summary of response by facility type

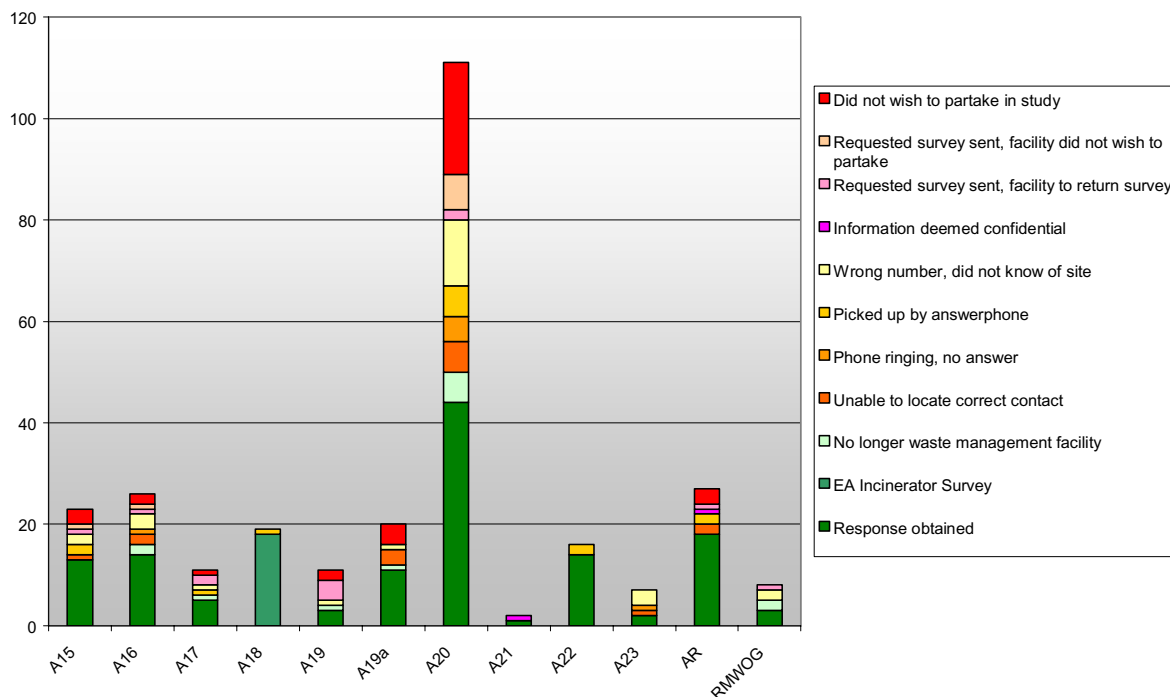
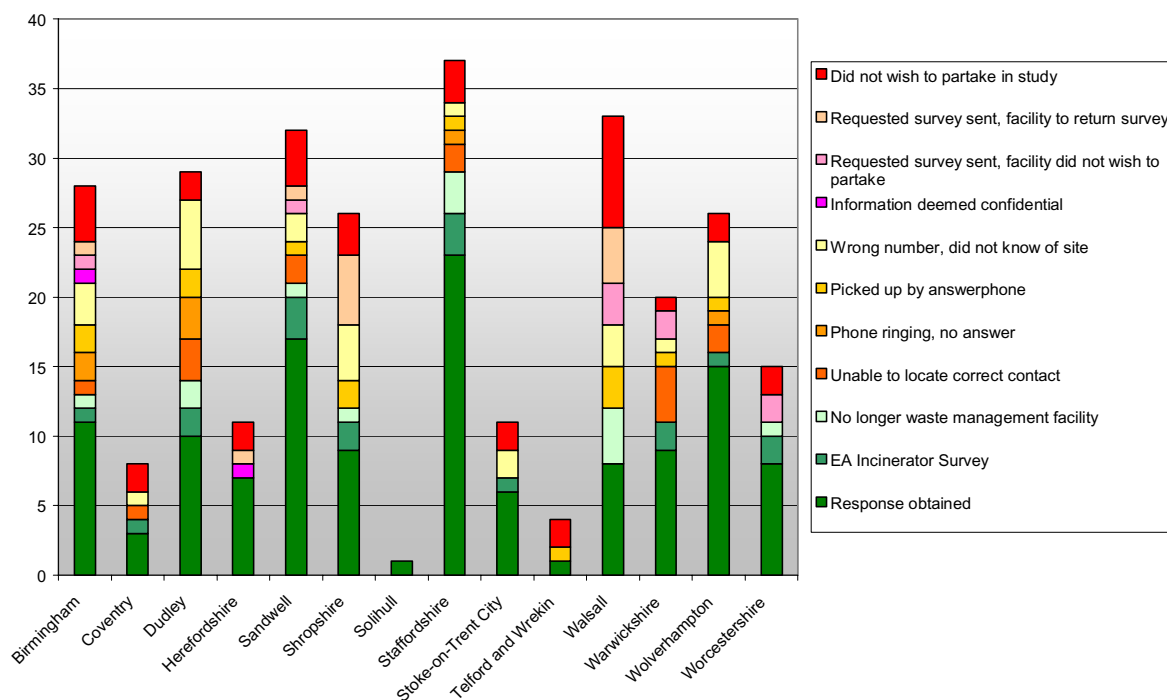


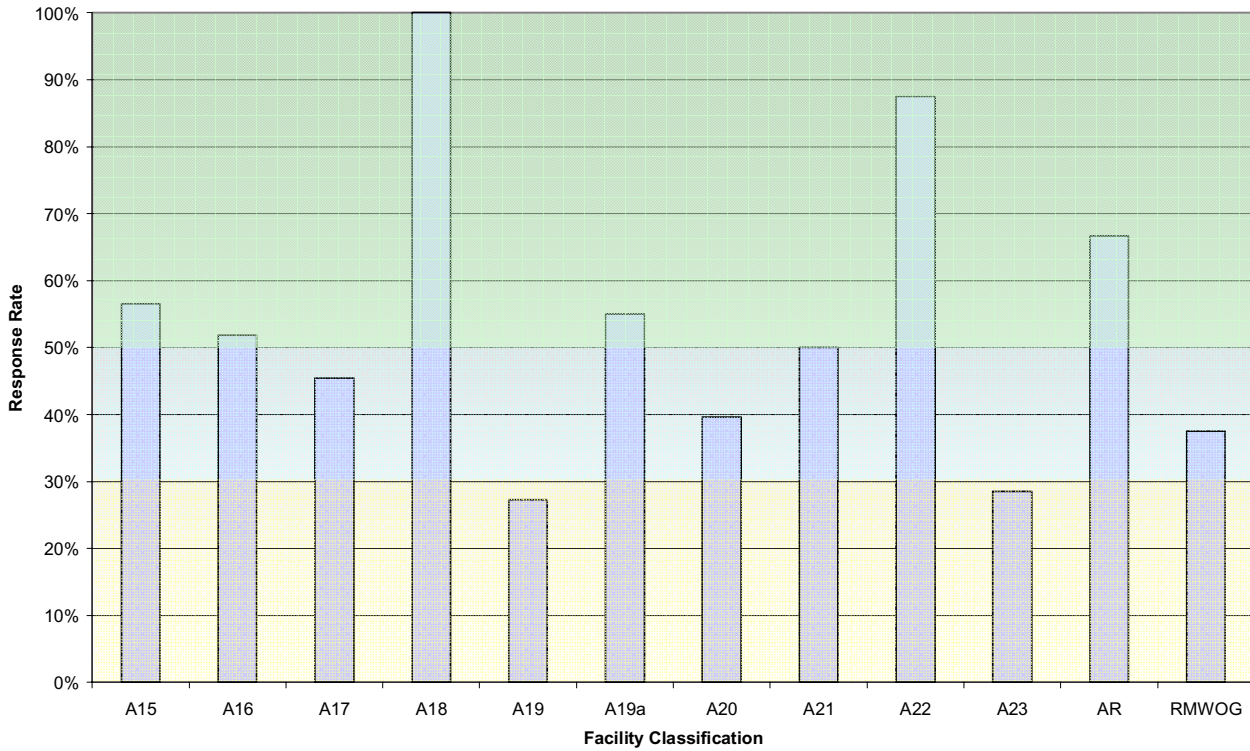
Figure 3-4
Summary of response by WPA



Due to the differing numbers of each facility type surveyed, success by facility type or WPA area can be analysed by presenting the proportional response rates. Proportional response rates by facility type (Figure 3-5) illustrates that composting facilities (A22), accredited reprocessors (AR), materials recycling facility (A15) and End of Life Vehicles facilities (A19a)

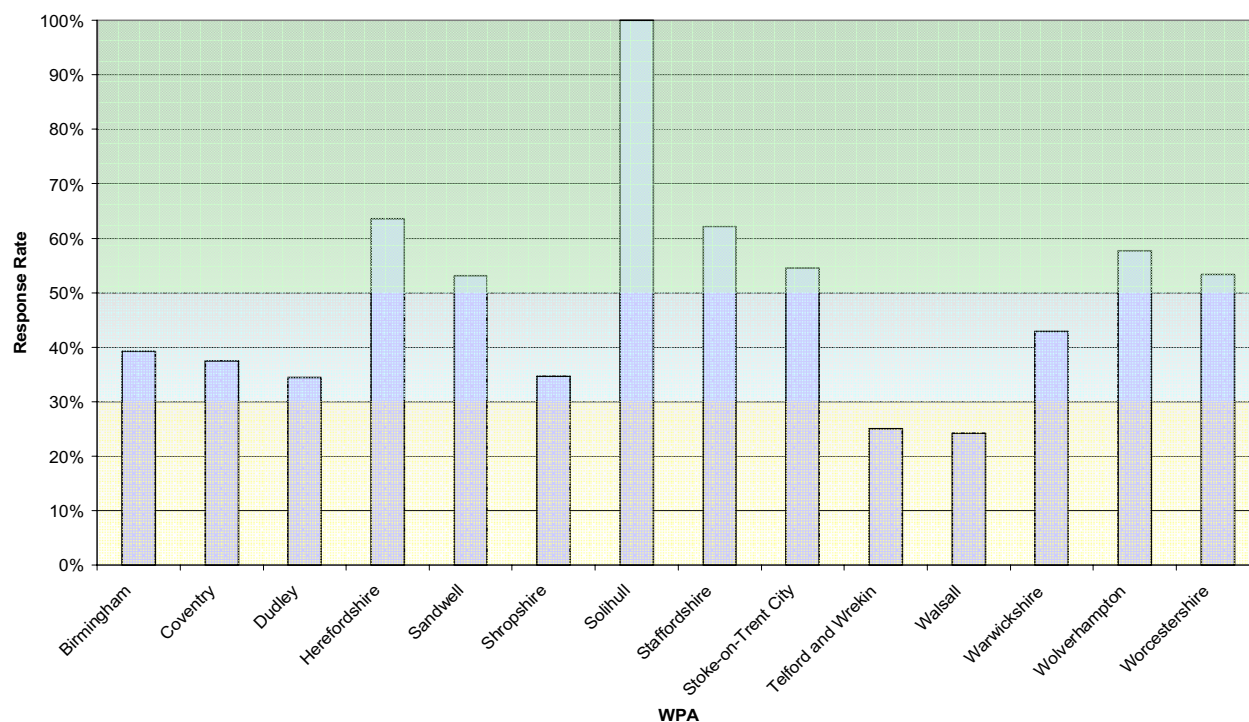
all performed well⁹. Metal recycling sites (vehicle dismantlers) (A19a) and biological treatment facilities (A23) scored less than a 30% proportional response rate. Figure 3-6 illustrates the proportional response rate by WPA, with Solihull having the best proportional response, this is due to the small number of facilities within the WPA.

Figure 3-5
Proportional response rates by facility type



⁹ Incinerators (A18) resulted in 100% response rate due to the EA incinerator survey.

Figure 3-6
Proportional response rates by WPA



3.3 Facility visit response

A total of 43 facilities were visited as part of the second stage of surveying (as described in Section 2.6). The location and summary of response at each facility is presented in GIS Drawing Number 3 below. Of the 43 facilities visited, access was gained to 34 (equating to 80% of all sites visited), with the remaining 20% declining access (detailed reasoning can be found on GIS Drawing Number 3). One of the contributing factors to gaining access to a high proportion of the facilities was the operators receiving a prospective letter (see Section 2.6), as it reminded people about the survey, and it provided a reference point (and validation of the role of the team members) if questioned by the operators.

After careful thought and discussion, it was decided that facilities would not be informed via telephone of the facility visits, and no appointments made. There were numerous reasons behind this decision, the main reasons included:

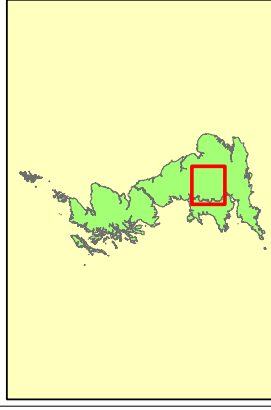
- reduce the resource utilised booking appointments
- consolidate the visits into a short period to reduce overhead costs associated with team members staying in the West Midlands
- prevent teams criss-crossing the region in order to make the appointment times, essentially wasting valuable time and resource;
- reduce the likelihood of people declining a site visit.

Only 1 facility out of the 43 visited decline access quoting that an appointment would be required, this represents 2%, therefore illustrating that not booking appointments was not a limiting factor on the results obtained from the facility visits. If undertaking facility visits in the future, it may be appropriate to make appointments at some of the larger treatment facilities, as access is often limited due to specific members of staff being unavailable to provide a tour or the required information.

LEGEND

Site Visits

- Site Successfully Visited
 - No Co-operation
 - Security Reasons
 - ▲ Appointment Required
 - ★ Closed for Maintenance
 - ◆ Closed when visited
- ## Sites Not Visited
- Surveyed
 - Not Surveyed



Geodetic Information
British National Grid
Transverse Mercator
False Easting = 400,000m
False Northing = 600,000m
Central Meridian = 2°
Scale Factor = 0.9996
Latitude Of Origin = 49°

0 2.5 5 10 15 20 25
Kilometres

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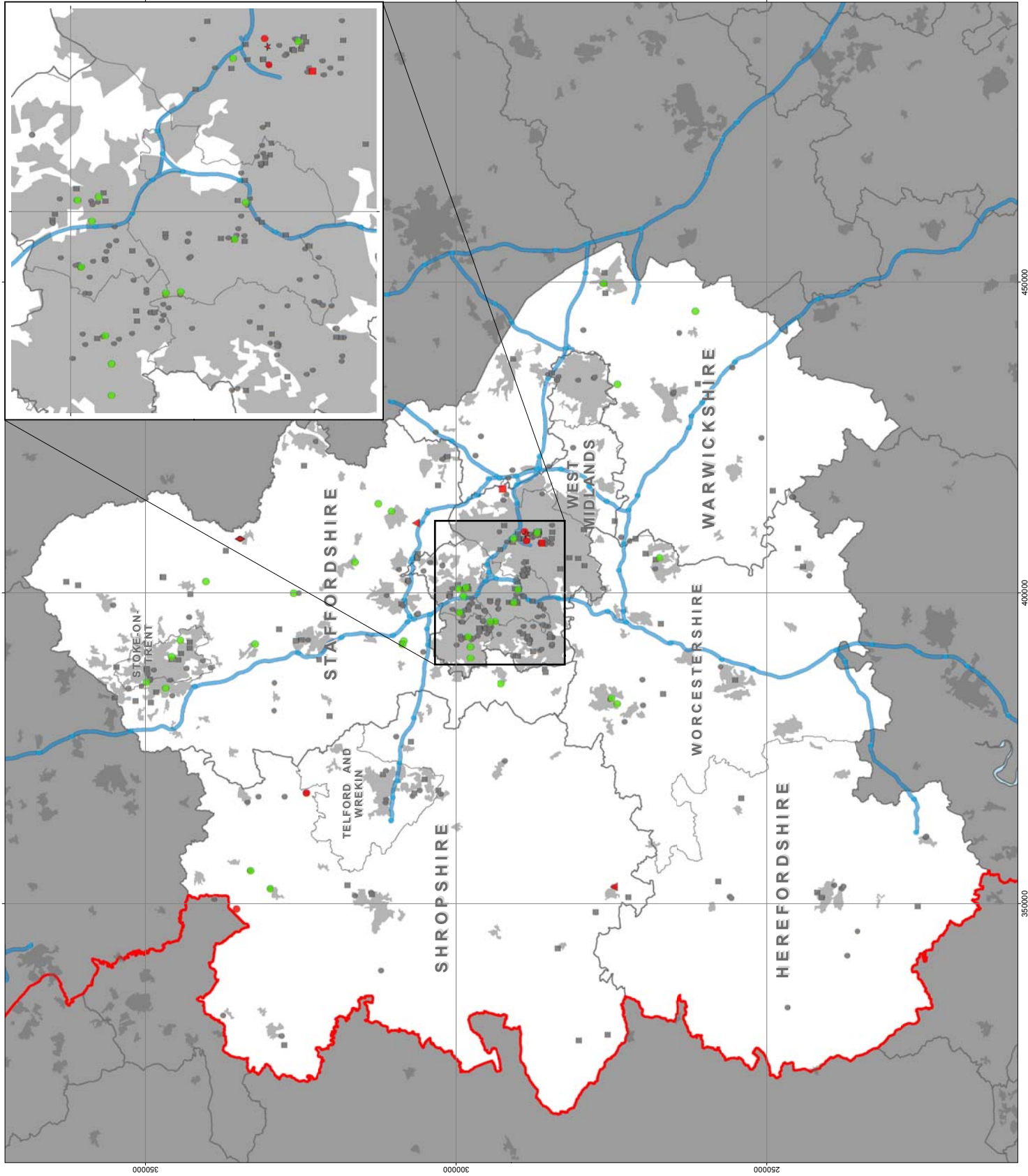
Drawing

Facility Visits

Project	IWMRTAB	Drawing No.	3
Date	MAY 2007		
Scale	1:600,000		

402.1422.00001_0507_403LVI

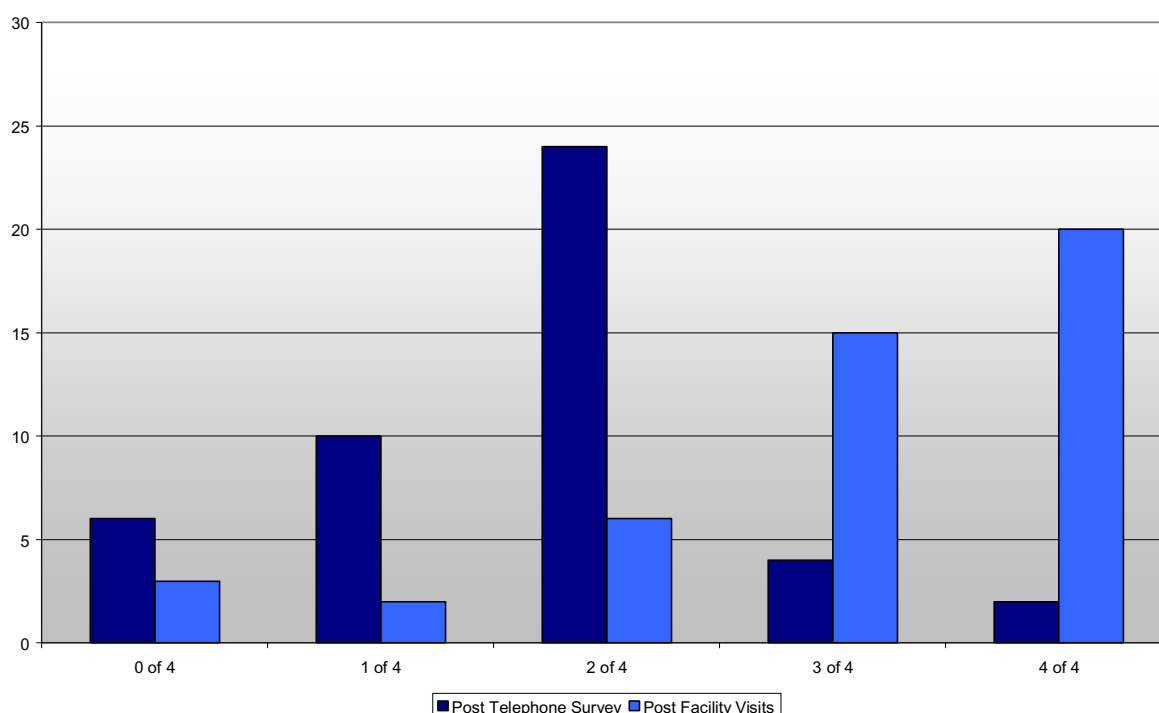
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www.slrconsulting.co.uk



Of the 34 sites where access was gained, 88% of the visits added value to the telephone survey, 'adding value' was deemed as answering further priority questions or providing information relating to expansion plans. In addition, anecdotal information was obtained through conversations with the operators and through observations by the survey team.

The primary aim of the site visits was to build on the number of priority questions answered. Most (nearly 76%) of the sites to which access was gained answered additional priority questions (over and above those answered during the telephone survey). Fourteen facilities answered an additional 1 priority question, and an additional 9 facilities answered 2 further priority questions. Figure 3-7 presents the reduction in the number of facilities answer zero, one or two of the four priority questions, and the subsequent increases in the number of facilities answer three or four questions. Of the 46 facilities visited, 76% have completed 3 or more of the four priority questions.

Figure 3-7
Performance of Facility Visits with regard to priority questions



In terms of understanding potential expansion plans 52% of the 34 facilities provided further information when visited by a member of the survey team. Information obtained from the site observations (information was gathered irrespective of whether access was gained) and discussions with the operators are summarised In Appendix 3 to this report with site observation proformas presented in Appendix 4.

In summary, it can be concluded that the two approaches of telephone surveying and site visits both have their merits and their disadvantages. The table summarises some of the key differences.

Telephone Surveys		Facility Visits	
Less resource intensive when surveying large numbers	+	Greater window of opportunity for longer discussions	+
Do not have to be located in the survey region	+	Operators less likely to refuse to answer questions	+
Higher probability of non participation	-	Results in a more open and frank discussion	+
Limited window of opportunity to gain information	-	Advantage of visual survey of the facility and operations	+
		Potential to drive a long distance to a site, only to find the person is unavailable or the site is closed.	-
		More resource intensive	-

It would be recommended that future updates of the survey database are undertaken via the facility visit process (perhaps by the local planning or EA officers, who maybe able to build these into their weekly schedules to reduce the potentially intensive resource requirement). Alternatively, it is suggested that future telephone surveys are backed up by focused facility visits to target the greatest areas of concern. Planning and or EA officers (if given the responsibility to update the database) may find that they receive a higher level of response due the established relationship already achieved.

3.4 Actual throughput in the region

Obtaining an understanding of the current activities in the West Midlands is one of the primary study objectives, and as such actual throughput identified as a high priority questions asked of facilities during the survey. Of the 256 priority facilities surveyed, 179 facilities contain information regarding the actual throughputs (either as a result of the EA RATS system, or updated survey capacity data). The surveyed throughput for the 179 facilities is 5.09 million tonnes per annum.

Figure 3-8 and Figure 3-9 present surveyed throughput analysed by facility type and by WPA respectively. Metal recycling sites (MRS) (Mixed) (A20) is clearly the most dominant treatment facility type in the West Midlands in terms of surveyed capacity; this is followed by Incineration (A18). These figures also correspond with the fact that A20 is the largest non vehicle dismantling 'A' code in the region (Refer Figure 3-1).

Figure 3-8
Surveyed Actual Throughput by Facility Type

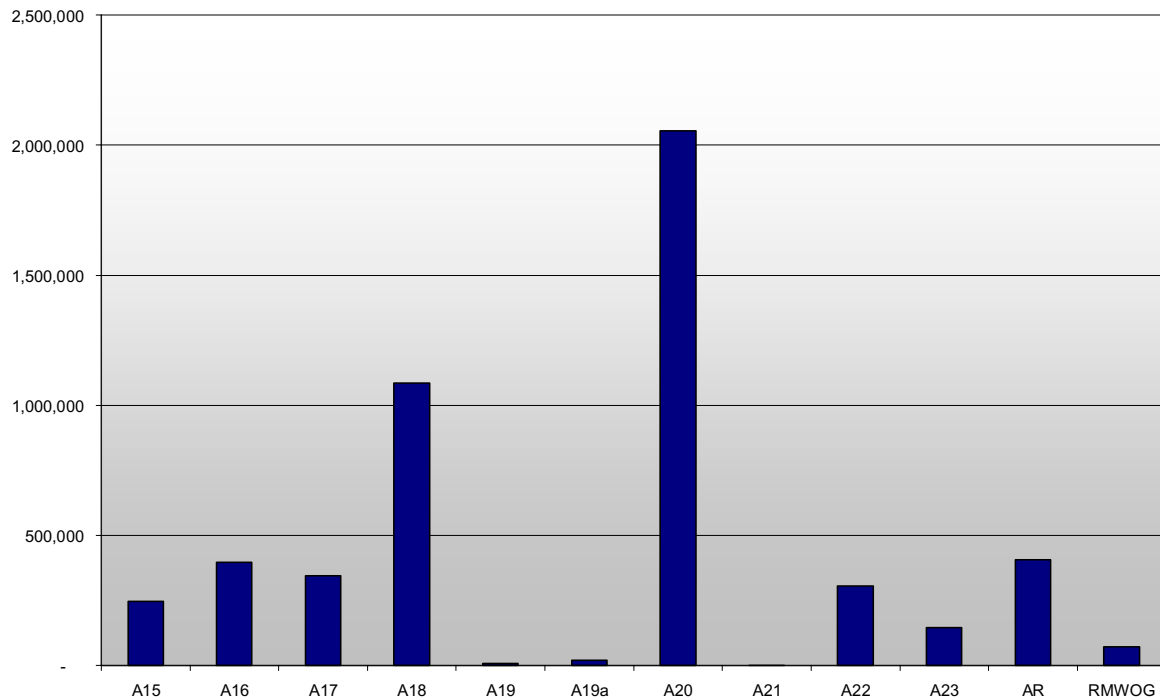
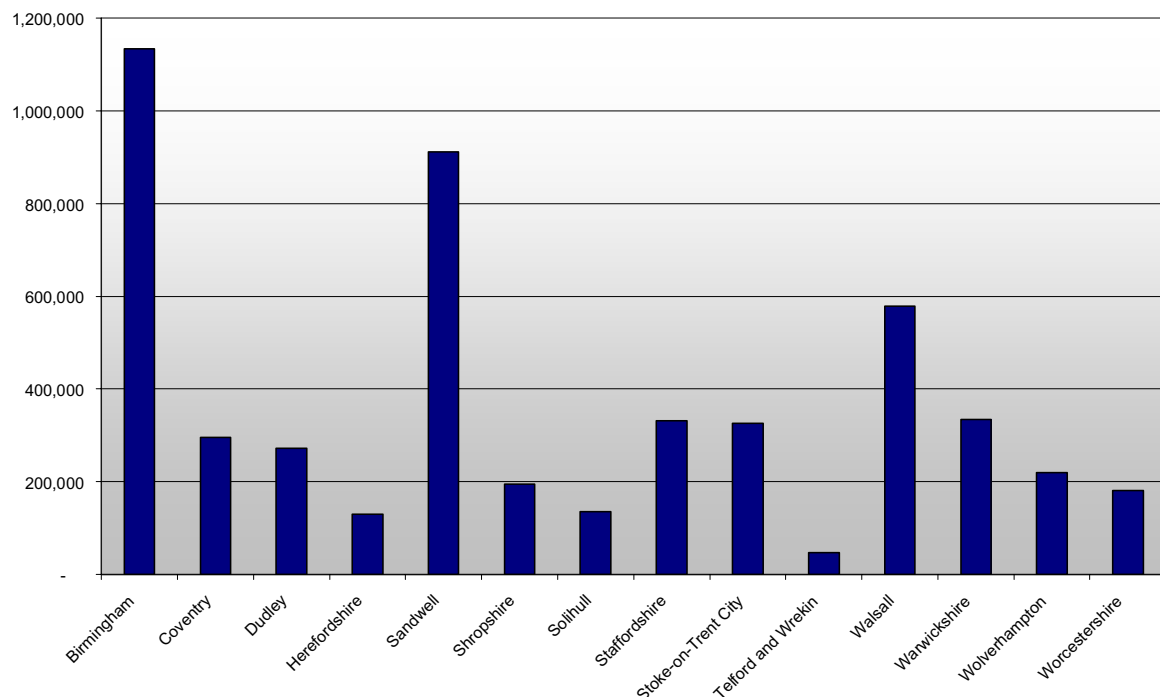


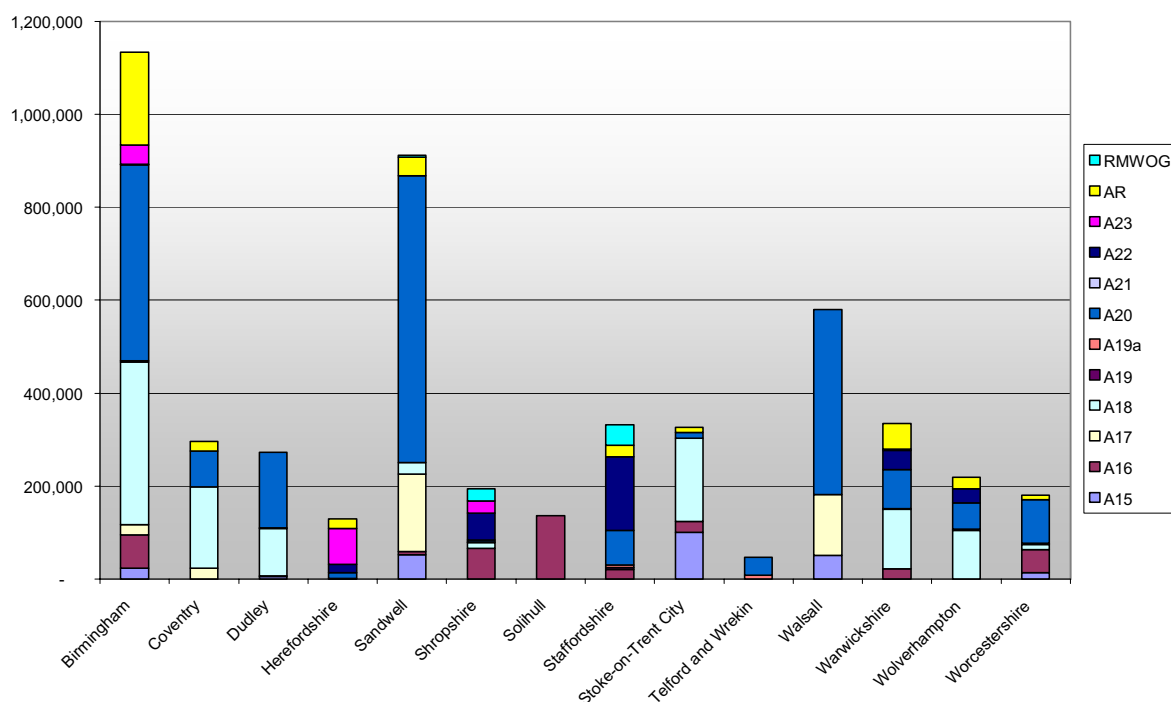
Figure 3-9
Survey Actual Throughput by WPA



Birmingham, Sandwell and Walsall are the three WPA's with the largest amount of surveyed throughput in the West Midlands, with Telford and Wrekin, Herefordshire and Solihull having the lowest surveyed throughput. Figure 3-10 illustrates that a large proportion of surveyed throughput in Birmingham is from Metal recycling sites and Incinerators (A20 and A18 respectively); the majority of surveyed throughput in Sandwell is due to Metal recycling sites

(3 facilities with excess of 75,000 tpa throughputs), Metal recycling sites are the predominant facility type in Walsall.

Figure 3-10
Surveyed throughput by WPA illustrating component facility types.



3.5 Waste types managed

The treatment facilities survey focused on facilities handling municipal and commercial and industrial wastes. Due to the nature of waste management, some facilities surveyed handled some construction or demolition wastes; however the incorporation of these sites into the study will not have adversely affected the study or its results.

A total of 149 facilities responded to the survey with some information on the types of materials handled at the facility, some responding with more than one type of material. Table 3-4 summarises the main material handled at the facilities surveyed, which indicates that metals are the main material handled in the region, this information confirms throughput figures (Refer Figure 3-8) and the breakdown of facilities in the region (Refer Figure 3-1). The main waste type managed at the facilities that were surveyed is metal, with 53% collecting a form of metal as their main material type. Of this proportion, 19% collected mixed metals, 15% vehicles, 11% non-ferrous and 8% ferrous metals as their main material type. The next most commonly collected materials were green waste, with 9% of the facilities as a main input, closely followed by plastic, which is collected by 8%. A lower proportion of facilities collect materials such as oil, sludge, paper or inert waste as their main material type. The spread of materials across the region illustrated a fairly even distribution of materials handled across WPA, with limited trends in areas handling one particular material type. Clearly, this assessment is based on facilities numbers and not related to tonnage.

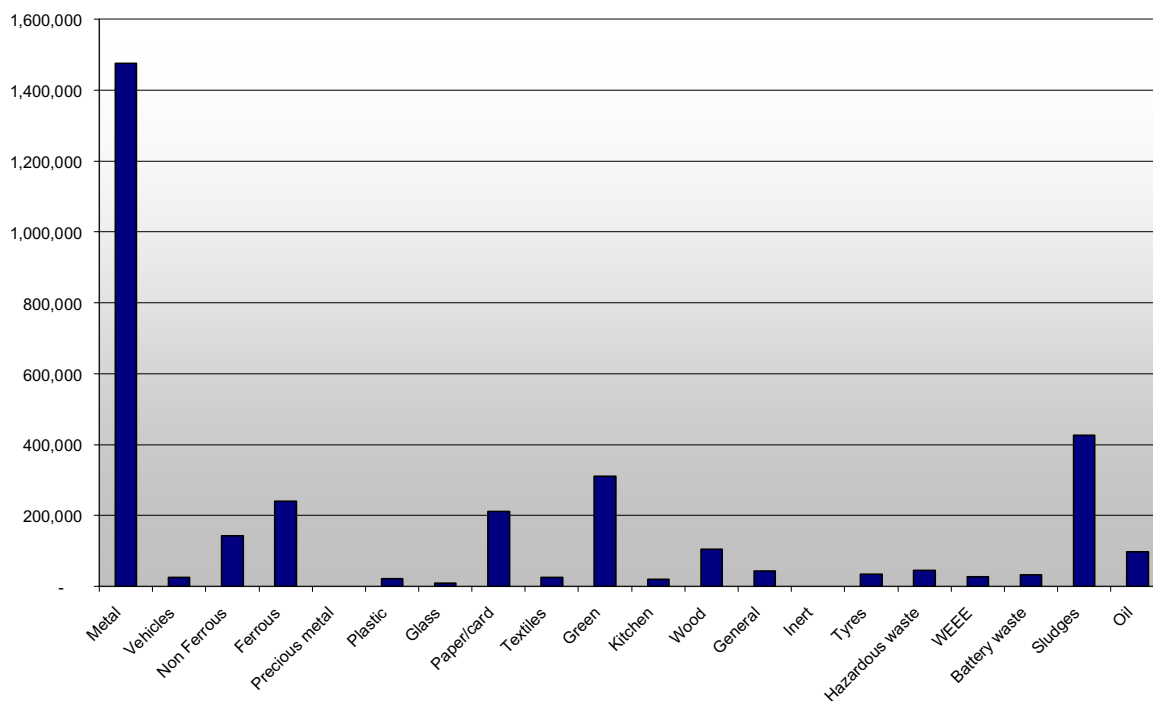
An indication of the main waste types handled by tonnage is presented in Figure 3-11, with the trends broadly following those described above. The main exceptions to this trend are plastics (most likely due to the higher volume to weight ratio) and the tonnage of sludge treated, which is higher than indicated by the facility numbers, this due to the small number

of Biological treatment facilities (A23, generally sewage treatment works) handling a relatively large tonnage of sludge.

Table 3-4
Summary of main materials handled (number of facilities)

Main Material Handled	No. of Facilities	%
Metal	32	21%
Vehicles	21	14%
Non Ferrous	16	11%
Ferrous	11	7%
Precious metal	1	1%
Plastic	12	8%
Glass	1	1%
Paper/card	3	2%
Textiles	1	1%
Green	13	9%
Kitchen	1	1%
Wood	3	2%
General	4	3%
Inert	5	3%
Tyres	4	3%
Hazardous waste	3	2%
WEEE	4	3%
Battery waste	1	1%
Sludges	6	4%
Oil	7	5%

Figure 3-11
Summary of Main materials handled (estimated tonnage)



3.6 Actual and theoretical capacity

As highlighted in Section 3.4 the surveyed actual throughput for the region is 5.09 million tonnes per annum, this figure includes all facilities who provided data returns to the Environment Agency and the updated information received during the telephone survey and facility visits. In addition to throughput, facility operators were asked to provide information on their Waste Management Licence (WML) maximum, many operators did not have this information readily available (for future surveys it may be able to obtain this information from the EA). Only 52 facilities provided both a numerical throughput and WML maximum figure. The total throughput for those facilities was 1.93 million tonnes, with a WML maximum of 3.29 million tonnes, indicating that the facilities were working at approximately 59% of their licence maximum. This reduced throughput recorded may reflect optimum operating capacities to account for facility down time, changing demand and other operational issues that prevent operators working to their maximum licence capacities. This reduced capacity may need to be factored in to any future planning provision.

Operators were then asked what their maximum theoretical throughput would be, based on their existing site and operations (ignoring any restriction of the WML), again, there was a limited response to this question, with 52 facilities providing a definitive numerical answer, and 50 facilities answering both the existing throughput and theoretical maximum question. The total throughput for those facilities is 1.28 million tonnes with the total theoretical maximum of 2.15 million tonnes, representing facilities utilising 59% of their theoretical maximum. This anecdotal information may suggest that intensification and re-organisation at existing facilities may provide some increased capacity being yielded, which is something for consideration when making future planning provision.

Therefore, it can be concluded that from the limited data available, the WML maximum is similar to the theoretical maximum. However, this could be due to facility operators not wishing to inform third parties that they could process more waste than their WML permit allows. Further rounds of survey work should attempt to obtain WML details and theoretical maximum figures to allow further analysis and conclusions to be drawn.

3.7 Future expansion and the certainty of expansion plans

Of the 265 facilities surveyed, 93 responded to the question regarding the ability of their facility to expand. Of these 93 facilities, 60 facilities (65%) indicated that the facility had the potential to expand its throughput; the remaining 33 of the facilities (35%) were currently at their maximum throughput and could not expand any further.

Information concerning future expansion plans was provided by 89 facilities. 30 of these facilities had some form of expansion plan in place (34%), 55 facilities (61%) had no plans and 5 of the facilities (6%) had plans to close in the next 5 years (2 of which identified the site as having the potential to become a new waste management facility).

Quantification (tonnage increase) of expansion plans was supplied by 29 facilities, resulting in 0.48 million tonnes of increased throughput capacity by future expansion.

When asked about how they would achieve an expansion of their throughput, 18 facilities provided a response. The most common method involved improving existing or purchasing new equipment (33%), the second most common methods was an increase in facility size to increase the space available and improving overall efficiency (17% each). Increasing the hours of operation was the response from 11% of the respondents; other methods mentioned included increasing manpower or funding, moving to a new site or expanding markets (each 6%).

When asked to quantify their expansion plans / provide an indication of how advanced the expansion plans were, 22 facilities provided a response. The summary results of certainty of expansion as follows:

- good certainty (planning has already been granted but the expansion is not yet fully commissioned) – 36%;
- moderate certainty - submitted their applications, but application not determined – 23%;
- low certainty - no application submitted yet, but have well advanced plans – 23%; and
- Uncertain – no application submitted, plans at a conceptual stage – 18%.

3.8 Constraints on the operation and potential expansion of facilities

Facility operators were asked to comment upon the constraints which impacted on the business and overall facility performance, or which may impact future expansions. Facility operators were asked to list the constraints in order of importance (from most significance to least significance). A total of 74 facilities completed the constraint section of the survey, the most common constraint (of most significance) was the availability of waste (20 of 74 responses) followed by available markets and the size of the facility (14 of 74 responses each). Figure 3-12 summarises the main constraints with Table 3-5 providing further details of the main, second and third constraints as quoted by the operators.

Figure 3-12
Summary of main constraints preventing future facility expansion

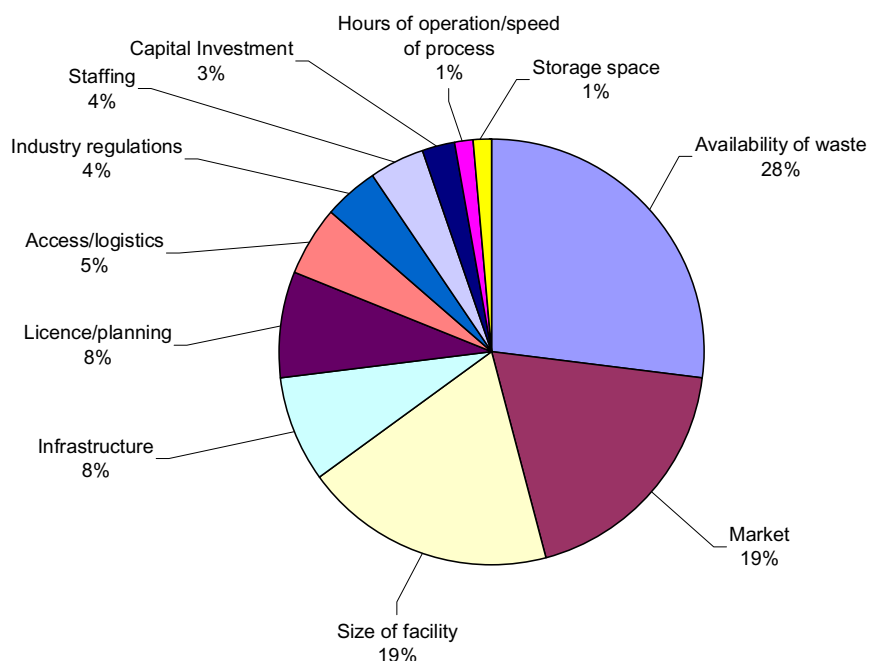


Table 3-5
Detailed summary of main, second and third most significant constraints on the business

Constraint	Main	2nd	3rd	Total
Availability of waste	20	0	2	22
Market	14	5	0	19
Size of facility	14	3	0	17
Infrastructure	6	4	2	12
Licence/planning	6	1	1	8
Access/logistics	4	4	1	9
Industry regulations	3	1	0	4
Staffing	3	2	0	5
Capital Investment	2	1	0	3
Hours of operation/speed of process	1	0	0	1
Storage space	1	2	1	4
Weather	0	1	0	1
Total	74	24	7	105

Availability of waste and markets for outputs were consistently the most significant constraints when analysed by facility type, with only Composting facilities (A22) and accredited reprocessors (AR) both quoting the size of facility as the most significant constraint to operations. The second most significant constraint reported for composting facilities was licence and planning restrictions, whereas accredited reprocessors matched the response of the majority of facility types in answering 'availability of markets' as being a principal constraint.

During conversations held whilst visiting the facilities, additional information was obtained regarding constraints. The results collated were similar to those obtained through from the operations during the telephone survey; with the most common limitation facing each type of facility being the availability of waste and the market for the outputs. Storage space and license restrictions are also limiting factors; however, these affect a lower proportion of businesses.

3.9 Transferability / flexibility of facility

When facilities were surveyed regarding the potential of the facility to expand, questions were also asked as to whether new materials would be accepted; the aim of this question was to gauge the flexibility of existing facilities in the West Midlands. Section 3.7 details the number of facilities with plans to expand and the certainty of these plans. Only 30 facilities responded to the question regarding handling of new materials, positive and negative response gaining equal numbers with 47% each, the remaining facilities responding with having a 'potential' to handle new materials.

The poor number of response to this particular question would indicate that facilities have a fairly limited flexibility. Where the new types of materials were provided, it confirms the limited nature of the flexibility to change process to any great degree (i.e. composting sites taking kitchen waste as a new material, metal sites to take new types of metals, vehicle dismantlers to recycle plastics and tyres).

During the site visits, 2 facility operators informed the survey team that their facility was likely to close within the next 2 years, however these 2 facilities have historically been waste management sites, and therefore there is the potential to keep the site as a waste management site, albeit potentially as a different process. The waste planners should

consider safe guarding waste sites if at all possible for future waste management use. Discussions with a different facility operator revealed that the facility had recently moved, and that the old site had already been redeveloped for offices (in this particular case the site was close to a city centre, so safeguarding the site maybe more difficult).

Although any treatment capacity has the potential to change use or process with enough time and money, any change of use would potentially result in a limited net gain of treatment capacity. Were the region to become more self sufficient, the need for transfer stations should decline as greater quantities of material would be treated at or close to source. Transfer stations therefore should be the focus for any transferability in terms of process.

As mentioned in Section 1, in parallel to this study of treatment facilities is a study of landfill capacity within the region. The results of these two studies will provide a capacity gap analysis. It may be possible for transfer facilities accommodate any capacity shortfall identified for treatment facilities. It is recommended a study of transfer stations in the West Midlands is commissioned to gain an understanding of the ability for change of use.

3.10 Data projection

Section 3.4 discusses the surveyed throughput in the West Midlands, representing those priority facilities surveyed who responded to the survey, plus some facilities who had provided throughput figures to the EA which were contained on the RATS system, the total throughput for which was 5.09 million tonnes per annum. The above figure does not account for those facilities who did not provide responses to the survey, and which were not identified as a priority for the survey. Therefore a throughput of 5.09 million tonnes is likely to be an underestimate for the regional throughput.

A projection for existing throughput is therefore required for the facilities where no information is present in order to calculate a best estimate of the total treatment capacity in the West Midlands.

Using existing survey data, a mean throughput has been calculated for each facility type. The percentage of facilities of each type providing a positive response, the surveyed sample size and the variation factor¹⁰ were used to determine the level of confidence in the projection calculations, this information is summarised in Table 3-6.

Table 3-6 indicates that there are varying degrees of confidence with regard to projecting throughputs from the mean. Facility types with a high level of confidence are incinerators, material recycling facilities, metal recycling sites (Mixed), composting and biological treatment facilities and accredited reprocessors. A low level of confidence for the capacity projections are defined for Physico-chemical treatment facilities, metal recycling sites (vehicle dismantling) and end of life vehicle dismantlers and those facilities highlighted by the RMWOG (as they represent a small collection of unlicensed facilities with a range of processes). Further discussion regarding A19 and A19a facilities is contained within Section 3.10.1.

¹⁰ See note below Table 3-6.

Table 3-6
Statistical analysis of surveyed throughput data, with indicative confidence limits

Code	Facility Type	Total Number of Facilities	Number of Facilities with known Throughputs	Total Surveyed Throughput (tonnes)	Variation Factor ¹	Level of Confidence	Comments
A15	Material recycling facility	23	17	245,893	1.72	High	High proportion sampled
A16	Physical treatment facility	24	15	396,496	1.30	Medium	Adequate number sampled for statistics
A17	Physico-chemical treatment facility	10	6	344,019	1.08	Low	Too few samples for statistics, however 60% with known throughputs
A18	Incinerator (EA Incinerator Survey)	13	13	1,086,601	1.09	High	100% coverage
A19	Metal recycling site (vehicle dismantler)	49	6	8,393	1.26	Low	Low proportion sampled, however results backed up with ELV estimate
A19a	End of Life Vehicles facility	105	16	19,777	1.63	Low	Low proportion sampled, however results backed up with ELV estimate
A20	Metal recycling site (MRS)(Mixed)	104	64	2,054,727	2.10	High	High sample number
A21	Chemical treatment facility	3	2	1,108	0.93	Medium	Negligible capacity contribution
A22	Composting facility	14	13	306,033	1.44	High	High proportion sampled
A23	Biological treatment facility	7	5	146,505	1.06	High	High proportion sampled
AR	Accredited reprocessor	22	14	407,200	1.63	High	High proportion sampled
RMWOG	Miscellaneous	5	3	72,540	0.58	Low	Encompasses different facility operations
Total		379	174	5,089,292			

Note:

¹ This is the coefficient of variation, which gives an indication of the variability of the surveyed data. A lower value indicates less variable data.

To project the overall regional capacity the mean calculation for each facility type was used for any facilities without throughput data (205 facilities, approximately 54% of the total facility stock in the West Midlands).

Table 3-7
Summary of mean calculation by facility type

A code	Type of facility	Total number of facilities	Numer of facilities with known throughput data	Sum of surveyed throughput (tonnes)	Mean throughput (tonnes)	Estimated projected Regional throughput (tonnes)
A15	Material recycling facility	23	17	245,893	14,464	332,679
A16	Physical treatment facility	24	15	396,496	26,433	634,394
A17	Physico-chemical treatment facility	10	6	344,019	57,337	573,365
A18	Incinerator (EA Incinerator Survey)	13	13	1,086,601	83,585	1,086,601
A19	Metal recycling site (vehicle dismantler)	49	6	8,393	1,399	68,543
A19a	End of Life Vehicles facility	105	16	19,777	1,236	129,789
A20	Metal recycling site (MRS)(Mixed)	104	64	2,054,727	32,105	3,338,931
A21	Chemical treatment facility	3	2	1,108	554	1,662
A22	Composting facility	14	13	306,033	23,541	329,574
A23	Biological treatment facility	7	5	146,505	29,301	205,107
AR	Accredited reprocessor	22	14	407,200	29,086	639,886
RMWOG	Miscellaneous	5	3	72,540	24,180	120,900
Total		379	174	5,089,292		7,461,430

Table 3-7 represents the basic data to calculate the mean throughput. Utilisation of the mean throughput by facility type enabled calculation of an estimated total capacity for the region

which takes into account every operational facility identified in Section 3.1¹¹. Where no surveyed capacity data was available, a projection using the mean throughput by facility type has been made. This has resulted in a total estimated regional throughput of 7.46 million tonnes, an increase of 47% on the surveyed throughput.

3.10.1 A19 and A19a Facilities

Vehicle dismantling facilities (A19 and A19a) were identified as non-priority facilities for the telephone survey (refer Section 2.4.1). Therefore a relatively low proportion of facilities were surveyed, and a low proportion of known throughputs have been obtained from the survey; this has resulted in an overall low level of confidence for both facility types.

In order to increase the confidence of the projections for vehicle dismantling facilities, a small piece of independent research has been undertaken to provide initial 'ball park' reality check. The estimate takes a total number of ELVs in the UK as approximately 2 million, divides this figure by the total number of households in the UK¹², to provide an average generation rate for ELVs per household. The total number of households in the West Midlands¹³ was multiplied by the ELV generation per household to produce an estimate number of ELVs per year in the region (179,273 vehicles), the number of vehicles was then multiplied by the average weight of vehicle¹⁴ (passenger car) to provide an estimated tonnage of vehicles in the West Midlands. The total estimated mass of vehicles produced in the West Midlands is calculated to be 204,729 tonnes, although this figure is more likely to be an underestimate, due to the fact that it does not account for the mass of larger commercial vehicles. Estimated vehicle dismantling capacity using the mean throughputs results in an overall projected throughput of 198,332, within 3% of the independent review figure.

3.11 Summary of Regional Treatment Capacity

Based on the above analysis and assumptions a summary of throughput and capacity within the region can be presented. Table 3-8 presents this information by 'A' code, detailing the actual surveyed throughput, the projected throughput (when projecting up to all facilities in the region) and a maximum capacity (utilising the assumption that current facilities are only 59% utilised). GIS Drawings Numbers 4 and 4i below illustrate surveyed and projected capacity for the region. Appendix 5 to this report contains GIS Drawings of surveyed and projected capacity by facility type.

¹¹ The difference in total numbers between Section 3.1 and 3.10 represent facilities removed from the survey because the respondent declared them as no longer operational waste facility sites.

¹² <http://www.communities.gov.uk/index.asp?id=1156099>

¹³ <http://www.communities.gov.uk/index.asp?id=1156099>

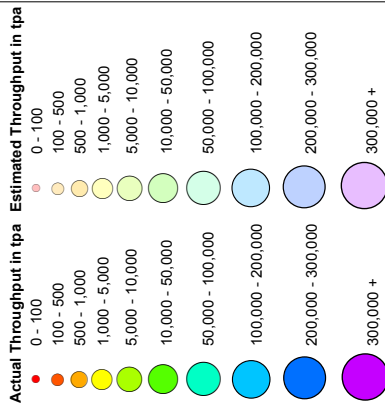
¹⁴ 1.142 tonnes <http://www.dti.gov.uk/files/file30652.pdf>

Table 3-8
Summary of Throughput and Capacity (million tonnes) within the West Midlands Region

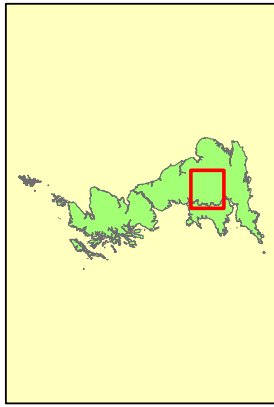
Code	Facility Type	Surveyed capacity	Estimated projected regional capacity	Estimated Theoretical Maximum Regional Capacity
A15	Material recycling facility	0.25	0.33	0.56
A16	Physical treatment facility	0.40	0.63	1.08
A17	Physico-chemical treatment facility	0.34	0.57	0.97
A18	Incinerator (EA Incinerator Survey)	1.09	1.09	1.84
A19	Metal recycling site (vehicle dismantler)	0.01	0.07	0.12
A19a	End of Life Vehicles facility	0.02	0.13	0.22
A20	Metal recycling site (MRS)(Mixed)	2.05	3.34	5.66
A21	Chemical treatment facility	0.00	0.00	0.00
A22	Composting facility	0.31	0.33	0.56
A23	Biological treatment facility	0.15	0.21	0.35
AR	Accredited reprocessor	0.41	0.64	1.08
RMWOG	Miscellaneous	0.07	0.12	0.20
Total		5.09	7.46	12.65

Once again, attention is drawn to Section 3.10 and 4.2 for assumptions and caveats with respect to projecting regional capacity. A capacity of 5.09 million tonnes has a reasonable level of certainty due to the collection methodology to obtain data. The projected capacity of 7.46 million tonnes has inherent assumptions utilised to project capacity for facilities which did not form part of the survey, or whom did not respond; therefore there is a certain amount of inherent uncertainty in the figures presented. A theoretical projected maximum capacity of 12.65 million tonnes incorporates further assumptions (all facilities operating at only 60% of their maximum), therefore a gap assessment using the theoretical projected maximum capacity is not presented in the main report due to the level of uncertainty (this information is presented in Appendix 7 to this report).

LEGEND



Total Actual Throughput **310,600**
 Estimated Mean Throughput - for WPA in tpa **147,569**
 Total Estimated Throughput **458,169**



Geodetic Information
 British National Grid
 Transverse Mercator
 False Easting = 400,000m
 False Northing = 600,000m
 Central Meridian = 2°
 Scale Factor = 0.9996
 Latitude Of Origin = 49°

REPRODUCED FROM THE ORDNANCE SURVEY MAP WITH THE PERMISSION OF THE CONTROLLER OF HER MAJESTY'S STATIONARY OFFICE. CROWN COPYRIGHT. LICENCE NUMBER AL1001283

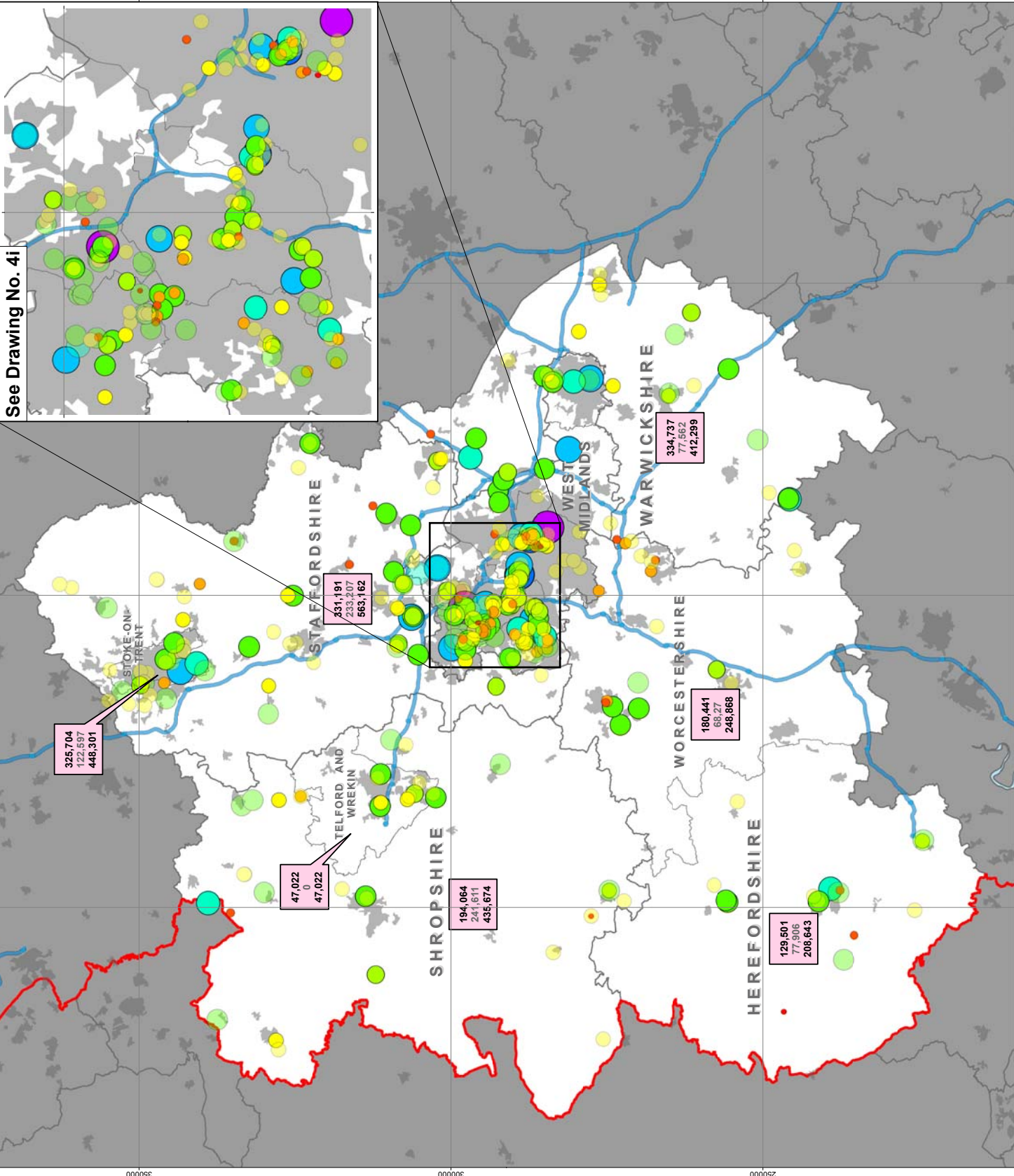
Drawing

Waste Management Facilities - Surveyed and Projected Throughput

Project	IWMRTAB	Drawing No.	4
Date	MAY 2007		
Scale	1:600,000		

402.1422.00001_0507_403LVI
 TREEWOOD HOUSE
 ROWDEN LANE
 BRADFORD ON AVON
 WILTSHIRE - BA15 2AU
 T: 01225 308400
 F: 01225 308401
 www.slrconsulting.co.uk

See Drawing No. 4i

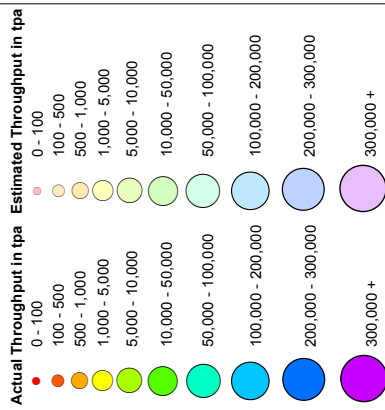


450000

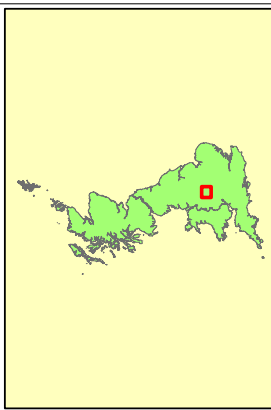
400000

350000

LEGEND



310,600	Total Actual Throughput
147,569	Estimated Mean Throughput - for WPA in tpa
458,169	Total Estimated Throughput



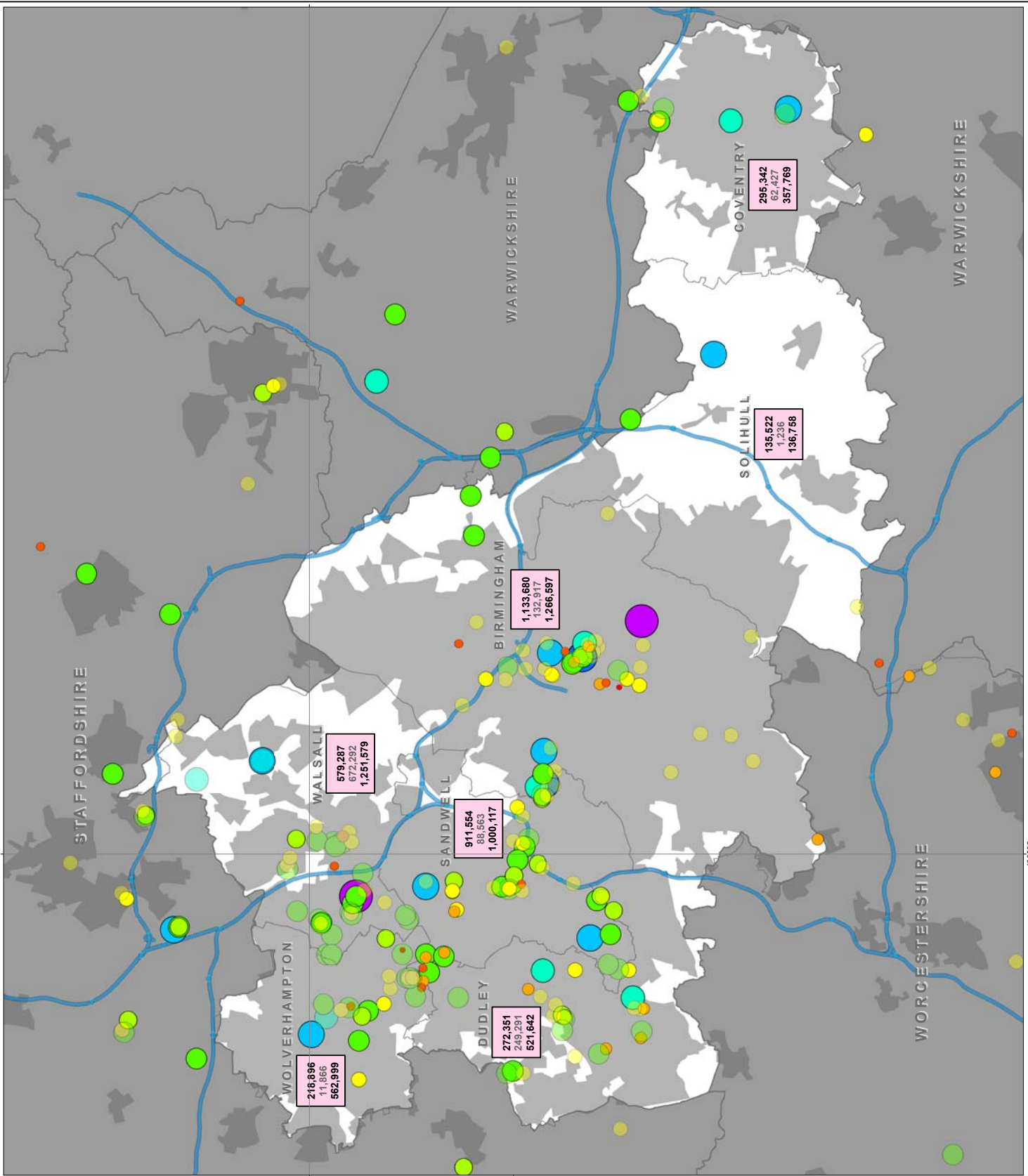
Geodetic information
 British National Grid
 Transverse Mercator
 False Easting = 400,000m
 False Northing = 600,000m
 Central Meridian = 2°
 Scale Factor = 0.9996
 Latitude Of Origin = 49°

REPRODUCED FROM THE ORDNANCE SURVEY MAP WITH THE PERMISSION OF THE CONTROLLER OF HER MAJESTY'S STATIONARY OFFICE. CROWN COPYRIGHT. LICENCE NUMBER AL10001285

West Midlands Waste Management Facilities - Surveyed and Projected Throughput

Project	WMRTAB	Drawing No.	41
Date	MAY 2007		
Scale	1:175,000		

402.1422.00001_0507_403LVI
 TREEWOOD HOUSE
 ROWDEN LANE
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000006

400000

4 REGIONAL GAP ANALYSIS

This section of the report aims to calculate the shortfall, or 'gap' in treatment capacity for the West Midlands. The methodology for this calculation is to take published waste arising projections for MSW and C&I (refer Section 4.1) which highlight 'capacity need', subtract the capacity already in place (i.e. the results of this survey, refer Section 3.4 and 3.10) which equals the amount of additional treatment capacity required to meet the targets utilised in the waste forecasts. The resultant 'gap' in capacity can be calculated at a regional and WPA level, although this discounts any net waste imports and exports from WPAs. It also assumes each WPA will be self sufficient in waste treatment capacity.

Actual survey throughput results (and projected throughputs) can be subdivided by facility type (as illustrated in Table 3-7 of Section 3.10), however regional waste arisings and treatment capacity requirements have not been calculated to such a level (as this can potentially be a spurious level of accuracy when projecting figures 15 to 20 years in the future), therefore any attempt to assess the gap by facility type is limited in its approach. Regional waste projections are divided into the source of the waste (MSW or C&I). This facility survey attempted to gain information regarding the source of the waste arising, however our findings indicate that facility operators found it difficult to assess the proportion of waste from different sources and the amounts of waste arising from specific authorities; this is particularly the situation if waste has passed through a transfer station prior to delivery at the recycling/recovery facility. An assessment of the split between municipal or commercial and industrial waste handled is therefore difficult to sensibly achieve. It is recommended that future surveys attempt to gain an indication of the tonnages of waste handled from each source, although it is recognised that further questions regarding tonnages may not be received in a positive manner.

Therefore, based on the above information and limitations, the gap analysis presented in the report is a high level regional gap analysis based on total treatment capacity of all waste sources. The gap information presented in this Section is calculated for the year 2025/26 (as a long term need for capacity).

4.1 Waste forecasts and treatment capacity need

A range of waste forecast scenarios have been prepared for the Regional Spatial Strategy (RSS) revisions. Three scenarios have been taken forward for municipal arisings, and three scenarios have been taken forward for commercial and industrial arisings. Currently there is no indication of a preferred scenario for either waste stream, or a preferred pairing of an MSW and C&I scenario. Figures provided by the Regional Assembly highlight the capacity need by WPA for MSW and C&I respectively for the variety of scenarios.

In summary, municipal waste arising scenarios are based on the number of new dwellings excepted to be built using the latest RSS options:

- Option 1 – Continuation of Current WMRSS;
- Option 2 – Opportunities and Constraints; and
- Option 3 – High Level Demand.

Waste management for MSW is based on moving from the 2002/03 recycling and composting targets to a 50% rate by 2010. Detailed projection assumptions, as provided by the Regional Assembly, are contained with Appendix 6 to this report.

Commercial and Industrial waste arising projections are based on WMRA Phase 2 Capacity Study figures. Projections are based upon assumptions adopted by the Government in National Waste Strategy Review (February 2006). The different management options are described in Table 4-1, with detailed assumptions, as provided by the Regional Assembly, contained within the Appendix 6 to this report. Figures detailing diversion required have been divided by an assumed factor of 95% to calculate capacity requirement.

Table 4-1
Diversion assumptions for C&I waste projections

Diversion from Landfill as a % of total commercial and Industrial waste	Existing Performance 2002* %	2010 %	2015 %	2020 %	2025 %
Low	58	59	60	61	61
Medium	58	63	64	65	65
High	58	65	70	75	75

* Existing Performance measured using average quantity of I&C waste landfilled in the region (EA SWMA Update 2002-03) as a proportion of the projected quantity of I&C waste arising in the region (Phase 2 Capacity Report)

Full waste arising projections and capacity requirements are detailed in contained on the CD-ROM found in Appendix 8 to this report, Table 4-2 summarises the regional information for each scenario for the year 2025/26. Capacity gap tables are presented for all permutations of MSW and C&I arising projections for the region in Section 4.2 with gap by WPA presented for the worst case scenario (i.e. the permutation with the largest capacity gap) in Section 4.3.

Table 4-2
Summary arising and diversion requirements for each waste arising scenario for the year 2025/26 (million tonnes)

	MSW - Option 1	MSW - Option 2	MSW - Option 3	C&I - Low	C&I - Medium	C&I - High
Projected Future Arisings	3.57	3.80	3.86	10.46	10.46	10.46
Recycling – Annual Capacity Required	1.31	1.34	1.35	-	-	-
Recovery – Annual Capacity Required	1.58	1.60	1.66	-	-	-
Total Treatment Required	2.89	2.94	3.01	6.71	7.15	8.25

4.2 Gap analysis on a regional level

A comparison of the regional capacity treatment need with the surveyed capacity results indicates a considerable deficit (or gap) for all scenario pairings. The gap ranges in magnitude from 4.5 million tonnes (for C&I low – MSW 1) to in excess of 6.2million tonnes (C&I High – MSW 3). The treatment gap for the surveyed capacity is presented in Table 4-3. This deficit is not unreasonable, given the fact that the survey contains quantifiable throughput information for approximately 46% of the regional facilities (included during the refinement of the project scope), and that the treatment capacity need is for 2025/26, with higher levels of recycling and recovery than is currently being achieved or targeted.

Table 4-3
Gap analysis utilising the surveyed capacity figure for the region (million tonnes)

Projection Option	Treatment Capacity Required	Surveyed Capacity	Treatment Gap
C&I low - MSW 1	9.60	5.09	4.51
C&I low - MSW 2	9.65	5.09	4.56
C&I low - MSW 3	9.80	5.09	4.71
C&I Medium - MSW 1	10.04	5.09	4.95
C&I Medium - MSW 2	10.09	5.09	5.00
C&I Medium - MSW 3	10.24	5.09	5.15
C&I High - MSW 1	11.14	5.09	6.05
C&I High - MSW 2	11.19	5.09	6.10
C&I High - MSW 3	11.34	5.09	6.25

Projecting the capacity from the 46% of facilities where data was obtained, to the full complement of facilities in the region (as described in Section 3.10) resulted in a projected capacity of 7.46 million tonnes. Utilising the estimated regional capacity figure, the gap falls to a range of 2.1 to 3.9 million tonnes as detailed in Table 4-4 (scenario range C&I low – MSW 1 with the lowest gap, and C&I High – MSW 3 with the highest capacity gap).

Table 4-4
Gap analysis utilising the projected capacity for the region (million tonnes)

Projection Option	Treatment Capacity Required	Estimated Projected Regional Capacity	Treatment Gap
C&I low - MSW 1	9.60	7.46	2.14
C&I low - MSW 2	9.65	7.46	2.19
C&I low - MSW 3	9.80	7.46	2.33
C&I Medium - MSW 1	10.04	7.46	2.58
C&I Medium - MSW 2	10.09	7.46	2.63
C&I Medium - MSW 3	10.24	7.46	2.77
C&I High - MSW 1	11.14	7.46	3.68
C&I High - MSW 2	11.19	7.46	3.73
C&I High - MSW 3	11.34	7.46	3.87

The recent survey obtained information from facilities regarding future plans for expansion, and the level of certainty (reference Section 3.7), 29 facilities also provide quantitative figures for increased capacity as a result of their expansion plans, which amounted to just under 0.5 million tonnes. Table 4-5 presents the projected capacity (for the West Midlands region) plus the additional quantitative planned capacity. The final result being that the capacity gap reduces by approximately 0.5 million tonnes by 2025/26, however the gap still exists.

Table 4-5
Gap analysis utilising the projected regional capacity plus quantifiable expansion plans (million tonnes)

Projection Option	Treatment Capacity Required	Projected Regional Capacity + Quantified Expansion	Treatment Gap
C&I low - MSW 1	9.60	7.94	1.66
C&I low - MSW 2	9.65	7.94	1.71
C&I low - MSW 3	9.80	7.94	1.85
C&I Medium - MSW 1	10.04	7.94	2.10
C&I Medium - MSW 2	10.09	7.94	2.15
C&I Medium - MSW 3	10.24	7.94	2.29
C&I High - MSW 1	11.14	7.94	3.20
C&I High - MSW 2	11.19	7.94	3.25
C&I High - MSW 3	11.34	7.94	3.40

Therefore it can be concluded that in 2025/26 there would be a minimum gap of 1.7 million (projected regional capacity plus expansion, C&I low and MSW 1) and a maximum gap of 6.25 million tonnes (surveyed capacity, C&I high, MSW 3)

The above figures are based on an aggregation of all capacity to the regional level rather than apportioned on the basis of specific treatment type requirements. Current RSS waste projection and capacity requirements are subdivided to WPA for C&I (diversion) and MSW (Recycling and Recovery). Further division of RSS data by treatment type would allow gap analysis to be undertaken by facility type, which would highlight the shortfall in particular recycling or recovery treatment areas

4.3 Gap analysis by sub region/WPA level

The scenario pairing producing the highest capacity gap from Section 4.2 of the regional gap assessment was C&I high – MSW3. As this scenario provided the most conservative estimate (i.e. the greatest gap), it has been utilised to disaggregate to a WPA level, to highlight which areas have the greatest deficit. The other permutations could be disaggregated in a similar manner, however WPA's with the greatest gap would be the same, with the only difference being in the magnitude of the gap.

A comparison of the treatment capacity need with the surveyed capacity results for each WPA indicates a considerable deficit (or gap) for all WPAs except Sandwell¹⁵. The gap ranges from over 1.7 million tones in Staffordshire and Stoke-on-Trent, down to 21,000 tonnes in Walsall. The treatment gap for the surveyed throughput for each WPA is presented in Table 4-6.

¹⁵ There were a total of 31 priority facilities in Sandwell to sample, only facilities were without a capacity figure. The Sandwell WPA also has 3 facilities with capacities in excess of 150,000 tonnes per annum, therefore the methodology assumes that all waste from Sandwell could be treated by the current facilities, however the reality is that waste will be imported into the WPA for treatment, especially at the facilities with the larger capacities.

Table 4-6
Gap analysis by WPA utilising the surveyed capacity figures (million tonnes)

Projection Option - C&I High - MSW 3	Treatment Capacity Required	Surveyed Capacity	Treatment Gap
WEST MIDLANDS REGION	11.34	5.09	6.25
Birmingham	1.81	1.13	0.68
Coventry	0.62	0.30	0.32
Dudley	0.60	0.27	0.33
Herefordshire	0.29	0.13	0.16
Sandwell	0.80	0.91	-0.11
Shropshire	0.61	0.19	0.41
Solihull	0.30	0.14	0.16
Staffordshire & Stoke-on- Trent	2.39	0.66	1.73
Borough of Telford & Wrekin	0.54	0.47	0.49
Walsall	0.60	0.58	0.02
Warwickshire	1.04	0.33	0.71
Wolverhampton	0.53	0.22	0.31
Worcestershire	1.22	0.18	1.04

Table 4-7 illustrates how the gap is reduced when the estimated projected regional capacity figures are included in the calculations. Using these projections, by 2025/2026, Walsall, Wolverhampton and Sandwell will be capable of managing their diversion requirements (based on no imports of waste) with the projected capacity. With a gap of approximately 1.4 million tonnes, Staffordshire and Stoke-on-Trent remain the area with the greatest deficit, closely followed by Worcestershire (approximately 1 million tonnes).

Table 4-7
Gap analysis by WPA utilising the projected throughput figures (million tonnes)

Projection Option - C&I High - MSW 3	Treatment Capacity Required	Projected Throughput	Treatment Gap
WEST MIDLANDS REGION	11.34	7.46	3.87
Birmingham	1.81	1.27	0.55
Coventry	0.62	0.36	0.26
Dudley	0.60	0.52	0.08
Herefordshire	0.29	0.21	0.08
Sandwell	0.80	1.00	-0.20
Shropshire	0.61	0.44	0.17
Solihull	0.30	0.14	0.16
Staffordshire & Stoke-on- Trent	2.39	1.01	1.37
Borough of Telford & Wrekin	0.54	0.05	0.49
Walsall	0.60	1.25	-0.65
Warwickshire	1.04	0.41	0.63
Wolverhampton	0.53	0.56	-0.03
Worcestershire	1.22	0.25	0.97

When taking into account the information obtained regarding quantified future plans for expansion, the total regional gap is reduced by approximately 0.5 million tonnes. Although the WPA with the greatest planned expansion is Staffordshire, the gap still remains highest for Staffordshire and Stoke-on-Trent. The deficit also remains high for Worcestershire, regardless of the 0.06 million tonnes of expansion indicated by the survey response, Table 4-8 presents this data.

Table 4-8
Gap analysis by WPA utilising the estimated projected capacity plus quantifiable expansion plans (million tonnes)

Projection Option - C&I High - MSW 3	Treatment Capacity Required	Projected Throughput + Quantified Expansion	Treatment Gap
WEST MIDLANDS REGION	11.34	7.94	3.40
Birmingham	1.81	1.27	0.54
Coventry	0.62	0.36	0.26
Dudley	0.60	0.52	0.08
Herefordshire	0.29	0.21	0.08
Sandwell	0.80	1.09	-0.29
Shropshire	0.61	0.45	0.15
Solihull	0.30	0.26	0.04
Staffordshire & Stoke-on- Trent	2.39	1.13	1.25
Borough of Telford & Wrekin	0.54	0.05	0.49
Walsall	0.60	1.25	-0.65
Warwickshire	1.04	0.45	0.60
Wolverhampton	0.53	0.58	-0.05
Worcestershire	1.22	0.31	0.91

It can be concluded that although the capacity figures on a regional level suggest that by 2025/2026 there will be a significant capacity gap, some WPAs will experience a deficit, thus requiring cooperative waste treatment between WPAs. The above calculations, as with the regional figures assume that capacity can be transferred directly to those processes which may have a deficit, i.e. metal recycling capacity change of use to biological treatment. The analysis also assumes that facilities in a particular WPA treat waste from within that WPA, excluding waste imports and exports, this in reality is unrealistic. The figures do however provide an indication as to where the majority of capacity lies, and tenuous links to assess which WPAs may have the largest deficit.

5 DATABASE GATE KEEPER AND UPDATES

This study has collated a large amount of information regarding re-use, recycling and recovery facilities in the West Midlands region, which has involved sorting and appending information from various EA sources and taking on board comments and input from planning officers in addition to consultation with the waste facilities. It is important that this information is stored in a suitable location, that the information contained is made widely accessible to all interested parties (as long as confidentiality of the facility operators is not breached) and that the information is maintained and updated on a regular basis.

Updates, additions and data cleansing is vital if this facility database is remain a useful source of information for future years, rather than becoming outdated and limited in its worth. In order to maximise use and benefit from the work undertake to date, we propose utilisation of a 3 stage methodology:

- Stage 1: Designate a 'gate keeper' for the database, who maintains a master copy of the database;
- Stage 2: Update information and facility details (planned, new or closed facilities) on a regular basis;
- Stage 3: Periodic data reviews, comparisons with EA licence registers and additional surveys to elicit additional information as necessary.

The West Midlands consists of 14 waste planning authorities, if each planning authority had its own copy of the database, quickly there would become little continuity of information and the ease with which information could be aggregated to a regional level would be reduced. Therefore, in order to maintain a useful database for future years it is suggested that one person with a regional perspective takes responsibility for holding the information and updating to create a certain level of consistency. The selected gate keeper could be one of the WPA officers, or could be a member of the regional assembly, considering that the regional assembly holds a range of other data sources, it maybe sensible for the WMRA to hold the waste facilities database.

The chosen gate keeper would store the database, update information (when provided), be the main point of contact for any interested parties and distribute copies of the database (when required). It would be the duty of the WMRA (as project client) to distribute copies of the database to interested parties (planning officers, RTAB members, others) as they see fit; however it should be remembered that some of the information provided by facility operators and contained within the database maybe of a commercially sensitive nature, and this should be reviewed prior to distributing the database to a wider audience.

It is suggested that the planning and or EA officers are in the best position to provide regular updates for Stage 2, as they will receive site details and planning applications and would therefore being aware of any proposed facilities or change of use. A decision by the database gatekeeper and the planning officers will be required regarding the frequency that updates should be fed through to the gatekeeper. It maybe decided that information should be fed through on a case by case basis; however, it is probable that this high frequency would be too high a frequency for the gate keeper, with the other duties they may hold. A more suitable frequency might be a discussion and update during the Region Minerals and Waste Officers Group meetings that take place on a regular (perhaps annual) basis.

Following feedback from the planning and or EA officers, it would be the responsibility of the gatekeeper to update and cleanse the database, at which time it might be deemed appropriate to re-issue the latest version. Version control can sometimes be a difficulty when databases are regularly updated, it is suggested that a postscript using the month and year

would be the most simple and fail-safe methodology to use, for example 'West Midlands Re-use, Recycling and Recovery Facilities_April2007.xls'. In addition to providing regular updates to the facility database, any facility closures identified should be noted by the planning officers and if appropriate safe guard the waste facility site for continued future use.

In addition to maintaining and cleansing the database (as outlined in Stage 2 of the update methodology) the database would benefit from periodic updates (as an independent cross check of data) to ensure that the facility list is accurate, capacity information is up to date, new expansion plan information has been captured and generally improve on the sound building blocks that this study has provided. This process could be undertaken in a variety of ways:

- Obtain Regis database cuts (cross reference the list of facilities to ensure all operating facilities have been captured, any facilities closed have been removed);
- Obtain copies of the RATS database (cross reference facility throughputs to ensure an accurate regional throughput picture); and
- Surveys or facility visits (check areas of uncertainty or to obtain answers to the more complex latter questions of the survey proforma).

Updates via survey or facility visits could be undertaken throughout the year by waste planning and or EA officers (as and when they have contact with the facilities) or through a complete survey (such as the survey undertaken in February/March 2007) undertaken by the regional assembly, planning/EA officers or an external source.

6 CONCLUSIONS AND RECOMMENDATIONS

The preliminary conclusions and recommendations from the study of waste treatment facilities and capacity in the West Midlands are as follows:

6.1 Conclusions

Facility in the West Midlands

- Refined survey scope resulted in approximately 400 facilities for potential survey;
- Scope included EA licensed facilities in the 'A' codes A15 to A23, Incinerators surveyed by the EA, accredited reproprocessors, and selected facilities highlighted by the Regional Minerals and Waste Officers Group (RMWOG);
- Metal recycling sites (A20) followed by vehicle dismantling sites (either A19 or A19a) are the most common facility types in the West Midlands region, chemical treatment facilities (A21) are the least common type;
- Staffordshire followed by Birmingham City had the largest number of facilities within the WPA boundaries while Solihull had the fewest number of facilities;
- Consulting with the steering group, RMWOG and the Motor Vehicle Dismantlers Association (MVDA) the facilities were prioritised to under 300 for the telephone survey; and
- Via consultation with the RMWOG 40 facilities were selected from the prioritised facilities for a facility visit in addition to telephone consultation.

Response from Survey

- Telephone survey resulted in a 54% response rate (48% response if the EA Incinerator survey is excluded);
- Proportional response by facility type varied from approximately 30% (A19 – Metal recycling site (vehicle dismantler)) to 100% (A18 - Incinerators);
- Proportional response by WPA also varied considerably from 25% (Walsall) to 100% (Solihull, only 1 facility surveyed), although the majority of WPAs fall within a range of 30% to 60%;
- Of the facilities visited, 80% granted access and made time to talk to the survey teams;
- Anecdotal information was noted for all facilities visited, even those who denied access; and
- Of the facilities where access was gained, 88% provided additional information which could be included in the survey proforma and 76% answered additional questions identified as priority.

Regional Capacity for Diversion from Landfill

- Surveyed capacity in the region is 5.1 million tonnes (based on a quantitative figure provided for 70% of facilities identified as priority);
- Metal recycling sites (Mixed) (A20) results in the largest surveyed capacity in the region;
- Surveyed capacity demonstrates that Birmingham and Sandwell have the largest capacity by WPA;
- Metal is the most common material handled (by those facilities who responded to the question), with all metals plus vehicles accounting for 54% of the response;
- Main materials handled (by tonnage) broadly follow the trend of the number of facilities, however the amount of sludge treated is higher than indicated by the number of facilities process that material;

- Survey response indicates that facilities are working to 59% of their Waste Management Licence, with a similar figure for working to the theoretical maximum capacity;
- Quantifiable expansion plans were provided by 29 facilities, with a total expansion of 0.5 million tonnes per annum;
- The main method quoted for achieving expansion was through improving existing or purchasing new equipment;
- The main constraint quoted to operating at full capacity or expanding operations was the availability of waste;
- Transfer stations are likely to be the best opportunity for change of use to a treatment facility and therefore expand the regions capacity; and
- Projecting capacity to all facilities in the region results in an estimated capacity of 7.5 million tonnes.

Potential Regional Capacity Gap

- Recently revised RSS arising and treatment capacity projections for MSW and C&I wastes were utilised to calculate the capacity gap for the region;
- Capacity gap (when utilising surveyed capacity – Good certainty) ranges from 4.5 to 6.25 million in the year 2025/26;
- Utilising the project regional capacity (moderate certainty) the capacity gap is within the range of 2.1 to 3.9 million in the year 2025/26;
- Capacity gap by WPA (utilising the surveyed capacity data) indicates that Staffordshire and Stoke on Trent City have the largest capacity gap (1.7 million tonnes), while Sandwell has an excess of capacity in 2025/26; and
- Utilising projected total capacity for the region, Staffordshire and Stoke on Trent City have the largest capacity gap (1.4 million tonnes) while Walsall has the largest excess of capacity (0.7 million tonnes) in 2025/26 (Sandwell and Wolverhampton also have an excess of treatment capacity).

6.2 Recommendations

- To complete the waste management capacity picture for the West Midlands and investigate potential flexibilities in terms of change of use, it is recommended that a survey of Transfer Stations in the West Midlands is undertaken;
- Annual survey updates are undertaken to maintain the validity of capacity figures, and update the list of facilities to identify closed facilities or newly licensed facilities;
- Survey undertaken by WPA or EA Officers may improve the results of the survey, as they can utilise relationships already developed;
- Would suggest the priority for further investigation should be:
 - Chemical treatment facility (A21) – 1 facility without capacity data;
 - Composting Facility (A22) – 1 facility without capacity data;
 - Biological treatment facility (A23) – 2 facilities with out capacity data;
 - Physico-Chemical Treatment facility (A17) – 4 facilities without capacity data;Investigation of the above would help to complete the regional datasets for those 4 groups, these groups also represent the more specialised processes.