Approved Criteria Based Screening Methodology

Provision of Professional Planning Advisor Services

Merseyside Joint Waste Management Strategy Procurement Project

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Produced for
MWDA and the Chief Executives and Senior Planning Officers of the Merseyside Metropolitan Borough Councils

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1 Introduction

This document identifies the criteria based screening process whereby sites which have the potential to be used in the delivery of the MSW "Reference Project" are reviewed against various engineering and planning criteria.

The output of this screening methodology will be a portfolio of potential sites which will then undergo further screening according to the Sites Deliverability Assessment.

In terms of the development of this document, the finalised methodology included in the following appendices is a based upon the methodology used to assess sites as part of the Broad Site Search (BSS) report prepared by SLR Consulting on behalf of St Helens Council as the lead council for the Waste Development Plan Document (Waste DPD) Steering Group. The BSS methodology was reviewed, some information gaps plugged and some of the screening criteria revised. This revised methodology was then discussed with and approved by the 11th Waste DPD Steering Group at the meeting held on 13th February 2006.

The approved criteria based screening methodology is shown in Appendix 1 with details of the modifications to BSS proposed screening criteria in appendices 2 and 3.

2 Appendix 1 – Criteria Based Screening Methodology

MERSEYSIDE WASTE DISCPOSAL AUTHORITY (MWDA)

MSW SITE SELECTION STUDY

PROPOSED SCREENING METHODOLOGY

1. Introduction

The MSW site selection study is a screening process whereby sites which have the potential to be used in the delivery the MSW "Reference Project" are reviewed through levels of screening which consider various aspects of the site and their ability to be delivered in terms of engineering and planning considerations. The potential sites will be derived from a data set extracted from the Broad Site Search (BSS) report that includes existing licensed, exempt, PPC permitted, reprocessing sites, Waste Planning Authority planned sites, old landfill sites and those landfill sites currently undergoing restoration and potential new sites. This study will take the details of the MSW "Reference Project" and seek to identify which portfolio of sites would be suitable for further consideration and use.

The MSW "Reference Project" definition work undertaken by Enviros on behalf of MWDA takes into consideration the consented capacity of existing facilities to deliver the "Reference Project" and will identify the need for additional facilities to bridge the gap. Therefore this site selection study is for new waste management facilities only. There are various elements which comprise the MSW "Reference Project" ranging from Household Waste Recycling Centres (HWRC's) to Thermal Processes. Each different element in the strategy for dealing with Merseyside MSW has differing needs in terms of the site selection process and will also give rise to differing issues to be resolved. For example the critical selection criteria for a large thermal or MBT process will be the size and shape of land available, whereas this is less critical for HWRC's as they require substantially less land. Conversely HWRC's should ideally be located close to urban environments to encourage their use. But, large processes such as thermal and MBT facilities will be more difficult to place in such urban environments.

As a result of this there will be a need to consider the selection criteria for each type of process in the Merseyside MSW strategy. The following is a proposed criteria based on selecting the sites for the larger process first and then the next smaller and so on with HWRCs last as these are likely to be easiest to find suitable sites for. Also there is a need to consider whether the larger sites can be used for more than one process. This aspect will be considered once the screening is undertaken and a portfolio of sites is available for each process.

2. Data Sources for Screening

The data for the site screening is that gathered for the Broad Site Search (BSS) report produced by SLR Consulting Limited together with a list of old landfill sites and those landfill sites currently undergoing restoration provided by MWDA. This data is in three differing forms. The information gathered for the BSS report relating to existing licensed, exempt, PPC and reprocessing sites was predominately taken from the Environment Agency's database at the time the data was gathered in 2005. This data is combined with information regarding planned sites which was gathered during consultation with each local authority Planning Officer. Again the data is relative to the time it was gathered. There are limits to the information that can be extracted from the EA database. The second set of data is information gathered for the BSS report regarding potential new sites which was gathered in a structured way from a number of different sources ***(clarification being sought from the author of the report as to how this data was collected)*** and includes information regarding the suitability of each site with regard to various environmental or planning factors. Again this data was gathered during the early part of 2005. It is apparent that this level of detail is not available for the data extracted from the EA's database. Therefore the two sets of data contained in the BSS report are distinctly different. The information on old landfill sites and landfill sites currently undergoing restoration provided by MWDA is in differing form to the sets of data provided in the BSS report. Therefore further information will have to be gathered on all three data sources in order to establish a common set of data to be able to undertake the screening process.

2.1 Existing Licensed, Exempt, PPC, Reprocessing and Planned Sites – BSS Data

For the existing licensed, exempt, PPC, reprocessing and planned sites, the base data will be that contained in the BSS Report Appendix K spreadsheet entitled "Appendix K Merseyside licensed sites (primary, secondary, te.xls" under the following tabs:

"all sites" tab. Here there are 125 number sites
"PPC" tab. Here there are 5 sites within Merseyside.
"Reprocessors" tab. Here there are 19 sites within Merseyside.
"Internal WPA's" tab. Here there are no sites.

Therefore for the existing licensed, exempt, PPC and reprocessing sites there are a total of 149 sites within Merseyside.

2.2 Potential New Sites – BSS Data

For the potential new sites the base data will be taken as that contained in the spreadsheet entitled "Potential_Sites_deleted_and_retained_sites.xls" and combining all the sites under the tabs entitled:

"Deleted Sites Primary Screening"
"Deleted Sites Tertiary Screening"
"Retained Sites Tertiary Screening"

It is considered necessary to use the combination of these tabs as the base data. The screening that was applied in the BSS report to derive each of the tabs is considered to be slightly different from that proposed below. Therefore, it was considered

necessary to ensure that the base data contained all potential new sites so that a common screening process could be adopted. Consequently for the potential new sites there are a total of 1452 within Merseyside.

2.3 Old Landfill Sites and Sites Currently Undergoing Restoration – MWDA Data

For the existing old landfill sites and landfill sites currently undergoing restoration a spreadsheet entitled "la sites.xls" was provided by MWDA. There are 51 sites contained in this spreadsheet.

2.4 Data Suitability

Within the data sets stated above, there are gaps in the existing information which need to be plugged in order to undertake a common approach in the screening process for all data sets. If all sets of data contained the same level of detail as that available for the potential new sites, the following would be the recommended methodology for the screening process:

3. Screening Methodology

Please refer to attached MSW Site Selection Search Criteria tables.

3.1 Primary Screening – Critical Engineering Needs

The size and shape (aspect ratio) of a site is a fundamental factor in the suitability of the site for the proposed waste management facility. The size of site required for each process is taken from the MSW "Reference Project" information provided by Enviros. Information on area requirements is indicative and will assist in screening-out sites which are not likely to be suitable for specific processes. However, some degree of margin should be considered as there will be a number of sites just under the area threshold limit which may be suitable for use and should not be discounted at this first stage. It is proposed that a 10% margin is applied which means that all sites within 90% of the required area are taken for further consideration. The aspect ratio of a site may have bearing on its suitability, particularly for the larger process. However, a very large site with an irregular shape may be just as suitable as a smaller site with a regular aspect ratio. Therefore, the aspect ratio of any particular site will have to be considered separately after the screening process based on the proposed use. For the purposes of screening it is proposed that the following minimum areas of site should be used for each process:

Size of site

1. MBT/Large Thermal - > 5ha (allowing margin >4.5ha)
2. Small/Medium Thermal - > 2.6ha (allowing margin >2.34ha)
3. MRF - > 1.2ha (allowing margin >1.08ha)
4. IVC - > 0.8ha (allowing margin >0.72ha)
5. HWRC - > 0.5ha (allowing margin >0.45ha)

Information regarding site areas for the existing licensed, exempt, PPC, reprocessing and planned sites is not currently available. This information needs to be gathered before any primary screening can take place. Some information is available in the

GIS model, but this is often represented as a single point and the extent of the site boundary is undefined and difficult to interpret. It is planned that this information will be gathered through accessing the information retained by the Environment Agency.

3.2 Secondary Screening – Land Designation "Absolute Constraints"

These items are considered to be absolute constraints to a site being used for a waste management function. The purpose of this screening is to reduce the output from the Primary Screening to a portfolio of sites which all have the potential to be developed but of varying degrees depending on a whole host of planning, engineering and environmental constraints. The criteria for this screening will be the same as the Primary Screening process used in the BSS report with the exception that the screening for proximity to sensitive receptors will be considered here under the Tertiary Screening. Therefore the criteria for this screening process will be:

1. The Absolute Constraint criteria used in BSS Report related to sites within national or international site of nature conservation interest eg. SSSI, Ramsar, NNR, SAC, SPA.
2. The Absolute Constraint criteria used in BSS report related to buildings or sites of international or national heritage importance eg. World heritage site, scheduled monument, ancient monument, listed building.

Refer to "MWDA MSW Proposed Screening.xls" spreadsheet for details.

The above information is available for the data set of potential new sites, but is not currently available for the existing licensed, exempt, PPC, reprocessing, planned and old landfill sites and those landfill sites currently undergoing restoration. However, such existing or old sites will have already undergone such a review prior to their use as waste management facilities. Therefore it can be considered that no further information would need to be obtained for this level of the screening process and all existing licensed, exempt, PPC, reprocessing, planned sites and old landfill sites and those landfill sites currently undergoing restoration should be carried forward to the next phase.

3.3 Tertiary Screening – Planning Risks

This screening process is the same as the Secondary Screening undertaken in the BSS report with the exception that it also includes the BSS Primary Screening item for proximity to sensitive receptors as noted in Section 3.2. The items are to be assessed on a scoring system similar to that used in the BSS report. Items which are considered as low risk will have a higher score than those considered a greater risk. The purpose of this exercise is to organise the portfolio of sites according to their likely difficulty to overcome planning and fundamental engineering issues that would not necessarily preclude them from being used. In the BSS report, the items listed below were assessed according to two broad measurements of distance at 100m or 250m depending on whether the facility would be a class 1 (landfill or windrow composting facility) or class 2 (others). As we are considering sites for various different processes from HWRCs to EFWs a scoring system is proposed to recognise the difference in these processes and how they may affect their surrounding

environment. Details of the proposed screening system are given in the attached spreadsheets.

Proximity to sensitive receptors (scored on basis of 1 – 5)

1 Primary residential
2 Town centre
3 Housing development
4 Residential Areas (PRES, HD, TC)
5 Hospital
6 Food processing plant
7 Primary school
8 Secondary school
9 Within EA Flood zone 3 - 1:100 chance of flooding
10 Within agricultural land classification 1, 2 or 3a

Other land and planning aspects (scored on basis of 1 -5)

1 Landscape Designation
2 Greenbelt
3 Nature Conservation
4 Archaeology and Historic Environment
5 Green Space
6 Green Corridors and Access Routes
7 Tidal Flood Planes
8 Fluvial Flood Planes
9 SPZ
10 Proximity to Controlled Waters
11 Roads – Transport
12 Proximity to Waste Arisings
13 Aerodrome Safety
14 Agricultural Land
15 Mineral Deposits
16 Air Quality Management Areas
17 Railway/Port/Canal

The above information is currently available for the proposed new sites only. With regard to existing licensed, exempt, PPC, reprocessing and planned facilities some information is available in the GIS model. But as noted previously some sites are represented as single points and therefore the proximity to sensitive receptors would be affected by the size of the site and an accurate distance of the receptor from the site boundary. Also, if an existing site was to continue with its current operations then the above screening criteria are not required. However, if a site such as a current landfill site were to be proposed for use as a site for a MBT or EFW plant, then the above screening criteria would need to be re-considered in light of the changed of use. For the existing licensed, exempt, PPC, reprocessing and planned facilities and also the old landfill sites and landfill sites currently undergoing restoration, the above information would need to be gathered. It is proposed that this information can be obtained by consulting the Environment Agency's database and also the multi-agency on-line database "Magic".

By undertaking the above process all sites which remain after the Secondary Screening process would be retained. But, the sites would be ranked using the scoring system to indicate their suitability for use. The advantage of this approach would be to provide a degree of flexibility in the process so that alternative sites could be determined and reviewed quickly should the need arise and no site would be discounted at this stage.

4.0 Information Gaps

It should be noted that there are gaps in the information currently available which will have an impact on the methodology to be undertaken. The information gaps are:

- Details of site areas for all existing licensed, exempt, PPC, Reprocessing and planned facilities. It is proposed to obtain this information by consultation with the Environment Agency who will have details of applications made for such sites on record.
- Tertiary screening criteria for all existing licensed, exempt, PPC, reprocessing and planned facilities and old landfill sites and landfill sites currently undergoing restoration. It is proposed that this information is gathered on the pre-screened list of sites by reviewing the relationship of each site relative to known data sources in the EA's web based information interfaces and also ordnance survey sources.

5.0 Deliverables

- Portfolio of sites for each MSW waste management process ranked according to their suitability under the Tertiary Screening process.
- Report detailing the development of the methodology for undertaking the process of screening sites and the conclusions drawn.
- Details of any outstanding information gaps.
- Report on Acceptability Testing/Feasibility/Risk Assessment process to be used on the sites which pass the screening process.

6.0 Approval of Proposed Methodology

The following section lists the required changes to the Broad Site Search (BSS) report methodology. Approval is sought for the following changes.

- Add area of site as Primary Screening.
- Proposed minimum site areas for each type of process.
- BSS Primary Screening process for proximity to sensitive receptors included with proposed Tertiary Screening.
- Revised Tertiary Screening proximity distance measurements for varying waste management processes as detailed in the attached spreadsheet.

3 Appendix 2 – Criteria Scoring

Existing spreadsheet on potential new sites collected by SLR of BSS Report

				EfW Large	EfW Small	MBT	MRF	IVC	HWRC
1	**Primary Screening**	Site Area	Hectares	**4.5**	**2.34**	**4.5**	**1.08**	**0.72**	**0.45**
	Critical Engineering Needs	Shape	1:1 - 1:2						
2	**Secondary Screening**	BSS Report Show Stoppers (Y/N) as BSS Report							
1	Showstoppers 1	SS_SSSI	Showstopper SSSI (Site of Special Sientific Interest)						
		SS_SPA	Showstopper SPA (Special Protection Area)						
		SS_SAC	Showstopper SAC (Special Area of Conservation)						
		SS_RAM	Showstopper RAM (Ramsar Site)						
		SS_NNR	Showstopper NNR (National Nature Reserve)						
		SS_NAT_DES	Showstopper 1 - all the National or international sites of nature conservation interest						
		SS_WHS	Showstopper World Heritage site						
		SS_SAM	Showstopper Scheduled Ancient Monuments						
		SS_LB	Showstopper Listed Buildings						
		SS_HERIT	Showstopper 2 _ Within building or site of international or national heritage importance						
3	**Tertiary Screening**	Other engineering/environmental considerations rated on a scale of 1 to 5							
1	Planning Risks	Based on BSS Report structure. But, scored 1-5 instead of Y/N							
		Differing scoring system for each type of process (see separate table)							
		1	Primarily Residential						
		2	Town Centre						
		3	Housing Development						
		4	Residential Areas (PRES, HD, TC)						
		5	Hospital						
		6	Food processing plants						
		7	primary school						
		8	Secondary school						
		9	Within EA Flood zone 3 - 1:100 chance of flooding						
		10	Within Agricultural Land Classification 1, 2 or 3a						
2	Land Aspects	The following scored as BSS report							
		1	C1_LD_DES	Criteria 1 Landscape Designation					
		2	C2_GB	Criteria 2 Greenbelt					
		3	C3_NATCON	Criteria 3 Nature Conservation					
		4	C4_ARCHHE	Criteria 4 Archaeology and Historic Environment					
		5	C5_GSPACE	Criteria 5 Green Space					
		6	C6_PROW	Criteria 6 Green Corridors and Access Routes					
		7	C7_FLOODT	Criteria 7 Tidal Floodplains					
		8	C7_FLOODF	Criteria 7 Fuvial Floodplains					
		9	C8_SPZ	Criteria 8 SPZ					
		10	C9_CWATER	Criteria 9 Proximity to Controlled Waters					
		11	C10_ROAD	Criteria 10 Roads - Transport					
		12	C11_WASTE	Criteria 11 Proximity to Waste Arisings					
		13	C13_AEROS	Criteria 13 Aerodrome Safety					
		14	C14_AGRIC	Criteria 14 Agricultural Land					
		15	C15_MINDES	Criteria 15 Mineral Deposits					
		16	C16_AQMA	Criteria 16 Air Quality Management Areas					
		17	C17_RPC	Criteria 17 Railway/Port/Canal					

Note Criteria 12 Proximity to sensitive receptors category 1 & 2 is covered under Planning Risk section above.

4 Appendix 3 – Proximity to Sensitive Receptors

Tertiary Scoring for Proximity to Sensitive Receptors

Minimum distance to receptor

	Efw Large					Efw Small					MBT					MRF					IVC					HWRC				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Primarily Residential	50	100	150	200	250	50	100	150	200	250	50	100	150	200	250	20	40	60	80	100	20	40	60	80	100	20	40	60	80	100
Town Centre	50	100	150	200	250	50	100	150	200	250	50	100	150	200	250	20	40	60	80	100	20	40	60	80	100	20	40	60	80	100
Housing Development	50	100	150	200	250	50	100	150	200	250	50	100	150	200	250	20	40	60	80	100	20	40	60	80	100	20	40	60	80	100
Residential Areas (PRES, HD, TC)	50	100	150	200	250	50	100	150	200	250	50	100	150	200	250	20	40	60	80	100	20	40	60	80	100	20	40	60	80	100
Hospital	50	100	150	200	250	50	100	150	200	250	50	100	150	200	250	20	40	60	80	100	20	40	60	80	100	20	40	60	80	100
Food processing plants	50	100	150	200	250	50	100	150	200	250	50	100	150	200	250	20	40	60	80	100	20	40	60	80	100	20	40	60	80	100
primary school	50	100	150	200	250	50	100	150	200	250	50	100	150	200	250	20	40	60	80	100	20	40	60	80	100	20	40	60	80	100
Secondary school	50	100	150	200	250	50	100	150	200	250	50	100	150	200	250	20	40	60	80	100	20	40	60	80	100	20	40	60	80	100

Estimated scale of engineering response	1	5
Within EA Flood zone 3 - 1:100 chance of flooding	Wholly in FP	not in FP
Within Agricultural Land Classification 1, 2 or 3a	Y	N