

MERSEYSIDE WASTE DISPOSAL AUTHORITY

ENVIRONMENTAL MANAGEMENT SYSTEM 5

CLOSED LANDFILL SITES MANAGEMENT PLAN

Authorised by: Chief Executive
Issued by: ASB
Issue Number 03

Date of Issue: 12th January 2017
Page 1 of 40

Document Control: EMS 5- Closed Landfill Sites Management Plan - FA-Man – 191 - ASB-03

Document Revision History

Issue: 4

Date of Issue: 6th November 2019

Issue	Author	Date	Amendments
04	ASB	6 th November 2019	
03	ASB	12 January 2017	Contact details amended
02	ASB	26 th September 2013	Minor wording amendments
01	ASB	20 ^h June 2013	Initial issue

Authorised by: Chief Executive
Issued by: ASB
Issue Number 03

Date of Issue: 12th January 2017
Page 2 of 40

Document Control: EMS 5- Closed Landfill Sites Management Plan - FA-Man – 191 - ASB-03

Contents

- 1.0 Introduction**
- 2.0 Legal**
- 3.0 Site Background Information**
 - 3.1 General
 - 3.2 Bidston Moss Community Woodland
 - 3.3 Billinge Hill
 - 3.4 Foul Lane
 - 3.5 Red Quarry
 - 3.6 Roughdales
 - 3.7 Sefton Meadows Ext II
 - 3.8 Sefton Meadows Ext III
- 4.0 Access**
- 5.0 Health & Safety – Emergency Information - Risk Assessments**
 - 5.1 Health & Safety
 - 5.2 Emergency information
 - 5.3 Risk assessments
- 6.0 Site Monitoring**
 - 6.1 Environmental Monitoring
 - 6.2 Site Inspections
 - 6.3 Process Monitoring
 - 1 Leachate Treatment & Discharge Systems and Gas Extraction Systems
 - 2 Leachate Treatment & Discharge System – Records, Recording and Reporting
 - 3 Leachate volumes
 - 4 Raw Material Usage
 - 5 Energy Consumption
 - 6 Water Consumption
 - 7 Waste Emissions
 - 8 Performance
 - 9 Annual Treatment
 - 6.4 Index of Monitoring Records and Reports
- 7.0 Gas Extraction Systems**
 - 7.1 Bidston Moss Community Woodland
 - 7.2 Billinge Hill
 - 7.3 Red Quarry
 - 7.4 Roughdales
- 8.0 Planned preventative Maintenance**
 - 8.1 Infrastructure
 - 8.2 Security (Fencing and gates etc)
 - 8.3 Access Chambers
 - 8.4 Leachate Treatment and Discharge Systems
 - 8.5 Incident Management
 - 8.6 Trespass / Travellers

9.0 Non Conformance Reporting

Appendix 1 Site Location Plans

Appendix 2 Emergency Contacts

1.0 INTRODUCTION

This document is the Site Management Plan for the seven closed landfill sites for which MWDA is responsible. Namely:

Bidston Moss Community Woodland
Billinge Hill Quarry
Foul Lane
Red Quarry
Roughdales
Sefton Meadows Extension No II
Sefton Meadows Extension No III

It provides a summary of the environmental management and maintenance of the sites.

2.0 LEGAL

A schedule of legal requirements and compliances associated with the individual sites, can be found in manual EMS 2 Legal and Other Requirements Register

3.0 ALL SITES - BACKGROUND INFORMATION

3.1 General

- 1 In order to monitor the environmental impact and condition of the former landfill sites, each contains a number of monitoring points, located on and, in some instances off, the site. From these points, Gas, Groundwater, Surface Water and Leachate is monitored, sampled and recorded.
- 2 Monitoring and Sampling is conducted on a regular basis in accordance with the MWDA Environmental Monitoring and Maintenance Schedule.

3.2 Bidston Moss Community Woodland

- 1 Since the completion of landfilling operations in 1995, Bidston Moss has undergone major changes. Hundreds of trees have been planted, and the site has been handed over to the Forestry Commission, under a lease arrangement. The Forestry Commission are now responsible for the top 2.5m of the site ("Piecrust" lease), with MWDA having full responsibility for the environmental monitoring and control of former landfill

2 Landfill gas extraction

Authorised by : Director of Waste
Issued by : ASB
Issue Number :3

Date of Issue: 6th November 2019

Page 5 of 40

Document Control: EMS 5 – Billinge Hill Quarry Closed Landfill Site Manual – PE-MAN-08-ASB-Issue4

The Landfill Gas produced on site is collected via a gas collection system (the gas field) and piped to an off-site gas engine which produces electricity which is fed into the national grid. Infinis operate the gas field through a joint venture with MWDA known as Bidston Methane Ltd.

Horizontal migration off site is prevented by way of a vent curtain installed around the perimeter of the site.

3 Leachate treatment

The site is a dilute and disperse site, with all leachate naturally dispersing to ground. There is no leachate collection and treatment system in place.

A system of surface water culverts is located beneath the landfill site. The culverts connect together a number of small surface water ditches that originally ran across, and drained, the surrounding moss land prior to the commencement of landfilling in the 1930's.

Over the years the culverts have failed, and leachate from the landfill site now infiltrates the culvert system and contaminates the surface water within. As a consequence MWDA has intercepted and diverted the culverts, originally discharging into the River Birket, into foul sewer. This is subject to treatment prior to discharging to public sewer.

3.3 Billinge Hill Quarry

- 1 Billinge Hill has been subject to extensive soft landscaping and restoration works, and forms a wildlife habitat rare amongst the adjacent farmed land.
- 2 The site is subject to a Waste Management Licence, which applies to the former landfill site; and a PPC Permit (Environmental Permit) which applies to the Leachate Treatment Compound.
- 3 The site is owned by Eddleston Trust, with limited public access. MWDA has responsibility for the environmental aftercare of the site, including for gas extraction and leachate treatment.

4 Landfill gas extraction

The landfill site is capped with a Bentonite layer to prevent the release of gases to atmosphere and maximise gas recovery.

The Landfill Gas produced on site is collected via a gas collection system and piped to a flare, located in a secure compound. Landfill gases are 'burnt off' via the flare, before being released into the atmosphere.

MWDA along with its joint venture partner Infinis operate the gas extraction systems as Bidston Methane Ltd.

5 Leachate treatment

A leachate collection and treatment system is located on site, midway along the eastern boundary.

The landfill site contains a number of radial drains located on the bottom of the quarry, beneath the waste mass. The drains connect into a central pump chamber, from where the leachate is treated in the Leachate Treatment Compound before discharging into the public sewer.

3.4 Foul Lane

- 1 After the completion of landfilling the site was partially restored, and has since been left to form a naturally occurring wildlife habitat.
- 2 Fine Jane's brook runs along the immediate northern boundary, and Boundary Brook along the eastern.
- 3 The site is closed to the public, and there are no users other than MWDA staff.
- 4 Access is made via the Southport Waste Transfer Station and HWRC. Before conducting any work on the site it is necessary to sign in at the weighbridge office of the Waste Transfer Station.

5 Landfill gas extraction

There is no gas extraction system in place. Landfill gas arisings are prevented from horizontal migration off site by way of a vent curtain installed around the perimeter of the site.

6 Leachate treatment

The site is a 'Dilute and Disperse' site, and as such MWDA has responsibility to protect surface water only. A perimeter 'cut off' drain is in place to prevent horizontal migration of leachate arising from the landfill site. The leachate collects into a pump chamber, from where the leachate

is treated in the Leachate Treatment Compound before discharging into the public sewer.

3.5 Red Quarry

- 1 The Forestry Commission has been granted a surface lease by MWDA, and the site is open to the public. MWDA has responsibility for the environmental aftercare of the site, including for gas extraction and leachate treatment.
- 2 A number of residential properties back immediately onto the southern boundary, and Pendlebury brook runs along the immediate northern boundary.

3 Landfill gas extraction

The extraction system is no longer active on site due to the low levels of gas detected. However, due to the close proximity of the adjacent properties, the extraction system remains in place and on stand-by if elevated gas levels were to occur.

4 Leachate treatment

The site is a 'Dilute and Disperse' site, and as such MWDA has responsibility to protect surface water only. A 'cut off' drain is in place on the northern boundary to prevent horizontal migration of leachate into Boundary Brook. The leachate collects into a pump chamber, from where the leachate is treated before discharging into the public sewer.

The liquor arising from a septic tank from a singular residential property on the south east corner of the site also discharges into the pump chamber via a rising main along the southern boundary

3.6 Roughdales

- 1 The site has been incorporated into the Ravenhead Greenway public open space, which is managed by St Helens MBC, and is open to the public. As part of the land transfer agreement, MWDA retains responsibility for the site environmental monitoring and control.

There are a number of residential properties on the immediate southern boundary of the site.

2 Landfill gas extraction

Authorised by : Director of Waste
Issued by : ASB
Issue Number :3

Date of Issue: 6th November 2019

Page 8 of 40

Document Control: EMS 5 – Billinge Hill Quarry Closed Landfill Site Manual – PE-MAN-08-ASB-Issue4

The Landfill Gas produced on site is collected via a gas collection system and piped to a flare, located in a secure compound. Landfill gases are 'burnt off' via the flare, before being released into the atmosphere. MWDA maintains responsibility for maintenance of the flare and ancillary apparatus and equipment.

3 Leachate treatment

The site is a dilute and disperse site, with all leachate naturally dispersing to ground. There is no leachate collection and treatment system in place.

- 4 An unnamed water course flows across the adjacent land east of the site.
- 5 A surface water drainage system is in place to collect surface water that accumulates in the low level area of the site.

3.7 Sefton Meadows Extension No II

- 1 The site is occupied by a tenant arable farmer. MWDA retains responsibility for the site environmental monitoring and control.
- 2 Sefton Meadows HWRC is located adjacent to the site, and as such, is encompassed within MWDA's environmental responsibility.
A high-visibility jacket and hard hat and protective footwear must be worn when undertaking monitoring on the HWRC.

3 Landfill gas extraction

While there is no active extraction system; there are a number of sensitive receptors, in the form of commercial businesses, immediately south of the site.

4 Leachate treatment

The site is a 'Dilute and Disperse' site, and as such MWDA has responsibility to protect surface water only. A network of land drains collects the leachate into the treatment system before discharging into the public sewer.

3.8 Sefton Meadows Extension No III

- 1 The site has been subject to extensive restoration, and is an established woodland. While MWDA retains responsibility for the site environmental monitoring and control, there is no aftercare to the Woodland

2 Landfill gas extraction

None. There are no sensitive receptors present.

3 Leachate treatment

The site is a 'Dilute and Disperse' site, and as such MWDA has responsibility to protect surface water only. The site is encompassed with a collection of water courses and irrigation ditches, and a perimeter 'cut off' drain encloses the site. Leachate collects from the cut of drain into a pump chamber, before being discharged into the treatment system located on Sefton Meadows II.

4.0 ACCESS

4.1 Location plans for all sites can be found in Appendix I.

4.2 All members of Waste Facilities Department have been issue with level entry keys that will permit access onto all sites, with the exception of Sefton Meadows II & III. Access to these sites is via the HWRC, and HWRC site staff hold the key to the access gate.

4.3 Signing In

Bidston Moss, Foul Lane, and Sefton Meadows II & III are accessed via operational waste facilities, and it is necessary to sign in and out at each of the following locations:

Bidston Moss - Visitors centre
Foul Lane - Weighbridge office
Sefton Meadows III - HWRC office

4.4 Upon immediate entry onto site, the Operative shall secure the security gates. It is understood that due to the installation of lock boxes, many of the gates cannot be locked from inside the site. However, upon entry, the gates can be closed and secured if not locked. At no time shall gates remain open without immediate supervision.

4.5 If the Operative is expecting a delivery of materials or equipment, provision shall be made for the deliverer to contact the Operative when they reach the gates.

4.6 Vehicular speed limits are in place on the access road, and shall be adhered to at all times.

- 4.7 Dedicated access routes shall be adhered to at all times. Alternative routes shall be followed if and when instructed by staff at the operational facilities
- 4.8 Due to the potentially hazardous nature of the site, access shall only be made during daylight hours. Except in the event of an emergency, all sites shall be vacated before the end of daylight hours. The leachate treatment installations at Billinge Hill, Foul Lane and Sefton Meadows II all have permanent task lighting installed to assist in the event of emergency works.
- 4.9 Smoking is **not** permitted on any site.
- 4.10 Lone Working for the purpose of Environmental Monitoring and associated activities is **not** permitted on any of the closed landfill sites.
- 4.11 All Officers shall complete the Outside Working Register prior to leaving the office and upon return. If for any reason, the duration of the site visit will extend beyond the anticipated return time, the operatives' immediate Line Manager shall be informed. If the line manager is not available, another member of MWDA staff at Head Office shall be informed. In all such instances, contact shall be made with Head Office before 16:30Hrs, in advance of the nightline telephone system.

5.0 HEALTH AND SAFETY - EMERGENCY INFORMATION - RISK ASSESSMENTS

5.1 Health and Safety

1 General advice

When coming to the assistance of an injured party, it is essential that all personnel check the suitability and safety of the working environment e.g. check for live electrical cables.

Your Personal Safety **always** comes first.

As a priority, if the casualty is unconscious, always check breathing.

If in any doubt, contact emergency services (999) and seek medical advice.

2 Risk Assessments and Procedures

Risk Assessments and Procedures etc. for undertaking site activities can be found in the Authority's Health and Safety Management System.

All personnel working on the sites shall be subject to a site Induction prior to commencing any activities.

5.2 Emergency Information

1 Bidston Moss Community Woodland

Site Location

When relaying information to the emergency services the site address is

Bidston Waste Management Facility
Wallasey Bridge Road (A5088)
Wallasey
Wirral
CH41 1EB.

NOTE Access to Bidston Moss is through the Waste Management Facility via the weighbridges, not via the public access to the HWRC.

Hospital locations

Accident and Emergency:

Arrowe Park Hospital (2.9 miles) Tel: 0151 678 5111
Arrowe Park Road
Upton
Wirral
Merseyside
CH49 5PE

Drop In Centre – (Minor Injuries):

Victoria Central Hospital (0.8miles) Tel: 0151 604 7296
Mill Lane
Wallasey
Merseyside
CH44 5UF

2 Billinge Hill

Site Location

**MWDA Environmental Management System
Manual 5 Closed Landfill Site Management**

When relaying information to the emergency services the site address is

Billinge Hill Quarry Closed Landfill Site
Beacon Road
Billinge
St Helens
WN5 7PF

Hospital locations

Accident and Emergency:

Royal Albert Edward Infirmary (5.6 miles)
Wigan Lane,
Wigan,
Lancashire,
WN1 2NN

Tel: 01942 244000

Drop In Centre – (Minor Injuries):

St Helens Walk in Centre (2.3 miles)
Millennium Building
Bickerstaff Street
St. Helens
Merseyside
WA10 1DH

Tel: 01744 627400

3 **Foul Lane**

Site Location

When relaying information to the emergency services the site address is;

Foul Lane Closed Landfill Site
Foul Lane
Southport
Sefton
PR9 7RG

NOTE Access to Foul Lane is through the Waste Transfer Station.

Hospital locations

Accident and Emergency:

Southport and Formby District General Hospital (0.5 miles) Tel: 01704 547471
Town Lane,
Southport,
Merseyside,
PR8 6PN

Drop In Centre – (Minor Injuries):

Skelmersdale Walk/In Centre (9.9 miles) Tel: 01695 554260
116- 118 The Concourse,
Skelmersdale,
Lancashire,
WN8 6LJ

4 Red Quarry

Site Location

When relaying information to the emergency services the site address is;

Red Quarry Closed Landfill Site
Chester Lane
Clock Face
St Helens
WA9 4DE

Hospital locations

Accident and Emergency:

Whiston Hospital (2.5 Miles)
Warrington Road
Prescot
Merseyside
L35 5DR

Tel: 0151 426 1600

Drop In Centre – (Minor Injuries):

St Helens Walk/In Centre (2.3 Miles)
Millennium Building
Bickerstaffe Street
St Helens
Merseyside
WA10 1DH

Tel: 01744 627400

5 **Roughdales**

Site Location

When relaying information to the emergency services the site address is

Roughdales Closed Landfill Site
Sutton Heath Road
St Helens
WA9 5HP

Hospital locations

Accident and Emergency:

Whiston Hospital (2.5 miles)
Warrington Road
Prescot
Merseyside
L35 5DR

Tel: 0151 426 1600

Drop In Centre – (Minor Injuries):

St Helens Walk in Centre (2.3 miles)
Millenium Building
Bickerstaffe Street
St. Helens
Merseyside
WA10 1DH

Tel: 01744 627400

6 **Sefton Meadows II & III**

Site Location

When relaying information to the emergency services the site address is

Sefton Meadows Closed Landfill Site
Sefton Lane
Maghull
Sefton
L31 8BX

NOTE: Access to Sefton Meadows III is through the HWRC, while access to Sefton Meadows II is through the farm, north east of the site, off of Green Lane.

Hospital locations

Accident and Emergency:

University Hospital Aintree (2.9 miles)
Lower Lane
Liverpool,
Merseyside,
L9 7AL

Tel: 0151 525 5980

Drop In Centre – (Minor Injuries):

Litherland Town Hall Walk In Centre (2.9 miles)
Litherland Town Hall Health Centre,
Off Hatton Hill Road/Field Lane,
Liverpool,
Merseyside,
L21 9JN

Tel: 0151 475 4667

5.3 Risk Assessments

- 1 Site specific Risk Assessment has been carried out for all aspects of the management of the closed Landfill Site, and can be found in the Authority's Health and Safety Management System Manual No 2.
- 2 The Risk Assessments have been undertaken in relation to all site users and potential users. Typically for officers of MWDA, third party stakeholders, and members of the public.
- 3 The Risk Assessments has been used to develop mitigation measures to remove any such hazard identified. Such mitigation measures are generally in the form of engineering works, and/ or safe practice procedures.
- 4 The Risk Assessments are dynamic document that are reviewed and recorded:-
 - Biennially
 - After a significant alteration to the site infrastructure
 - After any 'health and safety' occurrence.

6.0 MONITORING

6.1 Environmental Monitoring

- 1 Environmental monitoring and sampling procedures, along with frequency and targets can be found in EMS 5 - Environmental Monitoring Procedures
- 2 Any breach of limit shall be actioned in accordance with EMS 5 Accident Management Plan as appropriate, and recorded and reported in compliance with EMS 11 NCR, Corrective & Preventative action
- 3 Copies of all monitoring reports, sample records and laboratory reports etc shall be archived on MWDA computer network Y:\Environmental Monitoring\year\.....(subdivided between report and results).

6.2 Site Inspections

- 1 During the course of the monitoring exercises, a visual inspection of the site and its immediate environs shall be made for evidence of;
 - Leachate spillages
 - Discoloured water
 - Oil film
 - Odours
 - Noise nuisance
 - Indication of flora & fauna distress
 - Slope Instability
 - Illegal Site Access and instances of vandalism
- 2 Records of each inspection shall be made in the Environmental Officers' field books; all of which are kept indefinitely by the individual officers, at the head offices of MWDA, and included in the Environmental Monitoring Reports.
- 3 If any occurrences of the above are detected, the procedures in EMS 11: NCR, Corrective & Preventative Action shall be followed as necessary.

6.3 Process Monitoring

- 1 **Leachate Treatment & Discharge Systems and Gas Extraction Systems**
 - 1 The monitoring and maintenance of the Leachate Treatment & Discharge Systems, and Gas extraction Systems, is undertaken strictly in accordance with the EMS 5 Landfill Site Maintenance Manuals & Schedules
 - 2 The Maintenance Manuals detail the maintenance inspections, and the emergency procedures in the event of a system failure, and incorporate an *Easy Guide* to the operation of the systems.
- 2 **Leachate Treatment & Discharge System – Records, Recording and Reporting**
 - 1 In order to determine the efficiency and effectiveness of the Leachate Treatment Systems, various data is required to be collected and analysed.

- 2 Under the terms of the Billinge Hill Environmental Permit, this information shall be reported to the EA periodically. For all other sites, it shall be recorded and made available to the EA if requested.
- 3 Meter readings shall be recorded on the schedules found in EMS 5 - Meter Readings. All other reporting forms can be found in EMS 5 – Reports and Inspection forms

3 Leachate volumes

- 1 Composition and volumes of leachate discharged shall be recorded quarterly in Form Sewer 1
- 2 Under the terms of the Billinge Hill Environment Permit, this information shall be submitted to the Environment Agency quarterly. For all other sites it shall be compiled, and made available to the EA if requested.

4 Raw Material Usage

- 1 The plant system does not consume any raw materials during the treatment process, however during the course of maintenance and cleaning, chemicals and other products may be used.
- 2 All operatives and contractors are required to provide and record the information in Table 1

Table 1 - Raw material usage					
Product name / description	Unit and quantity	Chemical composition / characteristic	Application	Date / period of usage	Other
-	-	-	-	-	-

- 3 All raw materials used shall be recorded on Form RM1 and made available to the EA if requested. A summary report on Form RM2 shall be compiled annually (31st January), and made available to the EA if requested.

5 Energy Consumption

- 1 Meter readings shall be made by Environmental Monitoring staff during the course of their duties, and recorded on the schedule EMS 5 - Meter Readings
- 2 A summary report in the format Form energy1 shall be compiled annually (31st January), and made available to the EA if requested.

6 Water Consumption

- 1 The systems do not consume any water during the treatment process, however during the course of maintenance and cleaning quantities may be used.
- 2 In these instances, water consumption will be recorded as Raw Material Usage in clause 7.3.4 above.

7 Waste Emissions

- 1 The plant system does not produce any significant quantities of waste material as a by-product of the treatment process. However, during cleaning and maintenance deposits may arise.
- 2 All operatives and contractors are required to provide and record the information in Table 2

Table 2 – Waste emissions					
Description of arising	Unit and quantity	Source of arisings	Date	End source / Destination	Unit and quantity recovered
-	-	-	-	-	-

- 3 All arisings shall be recorded on Form WE1 and made available to the EA if requested.
- 4 A summary report on Form waste1 shall be compiled annually (31st January), and made available to the EA if requested.
- 5 All commercial wastes generated by MWDA and its contractors shall be managed and disposed of in an

**MWDA Environmental Management System
Manual 5 Closed Landfill Site Management**

environmentally safe and correct manner in accordance with current statutory requirements.

Manual EMS 8 Waste Management details the systems to be followed in order to correctly manage the commercial waste arisings.

Authorised by : Director of Waste
Issued by : ASB
Issue Number :3

Date of Issue: 6th November 2019
Page 22 of 40

Document Control: EMS 5 – Billinge Hill Quarry Closed Landfill Site Manual – PE-MAN-08-ASB-Issue4

8 Performance

- 1 Records of the energy used against the quantities of Leachate treated are recorded on Form Performance 1 annually (31st January) and made available to the EA if requested.

9 Annual Treatment

- 1 Records of the quantities of Leachate treated shall be recorded on Form AT 1 annually (31st January) and made available to the EA if requested.

6.4 Index of Monitoring Records and Reports

	Element	Frequency	Archive / Reporting Format
1	Leachate volumes	Quarterly	Form sewer 1
2	Raw material usage	Periodic recording of occurrence	Form RM1
		Annual summary	Form RM2
3	Energy consumption	Periodically. During each Env Monitoring visit.	EMS5 Meter readings
		Annual summary	Form energy 1
4	Water consumption	N/A	
5	Waste emissions	Periodic recording of occurrence	Form WE1
		Annual summary	Form waste 1
6	Performance	Continual records	EMS5 Meter readings
		Annual summary	Form performance 1
7	Annual treatment	Continual records	EMS5 Meter readings
		Annual summary	Form AT1

7.0 GAS EXTRACTION SYSTEMS

7.1 Bidston Moss Community Woodland

- 1 As a former landfill site, Bidston Moss closed landfill site and Community Woodland incorporates a commercial gas extraction system which extracts landfill gas, and produces electricity which is fed into the National Grid.
- 2 The Gas Rights are owned by Bidston Methane Ltd, a joint venture company established by Merseyside Waste Disposal Authority partnered by Infins. Bidston Methane Ltd is responsible for the day to day operation and maintenance of the extraction system.
- 3 Post Commercial Gas Utilisation management will be the responsibility of Merseyside Waste Disposal Authority as part of any site "Succession Strategy and to meet Community Woodland Planning Conditions for landfill gas management. "

7.2 Billinge Hill

- 1 Commercial gas extraction has ceased at Billinge Hill as it was considered to be no longer financially viable due to the depletion of landfill gases.
- 2 Continued flaring of the residual landfill gases remains, and the flare is maintained by the joint venture partnership Bidston Methane Ltd.
3. Post Commercial Gas Utilisation Management will be the responsibility of Merseyside Waste Disposal Authority as part of any site "Succession Strategy".

7.3 Red Quarry

- 1 The gas extraction system is no longer active on site due to the low levels of gas detected. However, due to the close proximity of the adjacent properties, the extraction system remains in place and on stand-by such that if elevated gas levels were to occur, the extraction system can be readily activated.
- 2 Maintenance of the extraction system is undertaken by MWDA in accordance with EMS5 Landfill Site Maintenance Manuals and Schedules

7.4 Roughdales

- 1 Due to the close proximity of residential properties, the landfill gases produced on site is collected via a gas collection system and piped to a flare, located in a secure compound. Landfill gases are 'burnt off' via the flare, before being released into the atmosphere.
- 2 Maintenance of the flare is undertaken by MWDA in accordance with EMS5 Landfill Site Maintenance Manuals and Schedules

8.0 PLANNED PREVENTATIVE MAINTENANCE

8.1 Infrastructure

- 1 Regular maintenance inspections are undertaken by the Environmental Monitoring officers during the course of their duties. These inspections should identify any acts of vandalism/damage, and any obvious signs of infrastructure failure.
- 2 Billinge Hill Quarry – Overland pipeline
 - 1 Specific to Billinge Hill is an off-site pipeline which transports treated leachate from the landfill site into the public sewer in Downham Walk.
 - 2 As the pipeline is off-site, beneath farm land north east of the landfill site, it is not subject to the regular inspections afforded by the Environmental Monitoring activities.
 - 3 Consequently, at least once a year, the pipeline is subject to this environmental inspection. See manual EMS 5- Billinge Off site pipeline annual environmental inspection for details.

8.2 Security (Fencing and gates etc)

- 1 Conditional appraisals of the fences and gates etc shall be made, and drop bolts and padlocks checked.

8.3 Access Chambers

- 1 The visible external condition of all access chambers shall be inspected. Typically, this shall be a safety inspection, ensuring that no chamber covers are missing, dislodged or damaged.

- 2 Evidence of more serious damage shall be reported the Facilities section for further investigation.
- 3 The Chambers are deemed to be Confined Spaces. Access into the chambers shall be made by suitably qualified personnel only and in compliance with a Permit to Work.

8.4 Leachate Treatment and Discharge Systems

- 1 The Leachate Treatment and Discharge Systems are in place to ensure that the Leachate discharged to foul sewer is compliant with United Utilities Trade Effluent Discharge Consents. When operating correctly, the treatment systems will carry this out.
- 2 During the course of maintenance inspections, only an observational inspection of the treatment systems shall be made. E.g. Evidence of leaking pipes, vibration or excessive/unusual noises, or anything of a suspicious nature.
- 3 Detailed system monitoring and planned preventative maintenance of the treatment system is undertaken strictly in accordance with EMS5 Landfill Site Maintenance Manuals and Schedules

8.5 Incident Management

- 1 EMS 5- Emergency Preparedness and Response manual encompasses all anticipated scenarios which could befall the closed landfill sites. In the event of any incident being observed or suspected, this shall be reported verbally to the Facilities Section, where the manual shall be consulted and acted upon accordingly.
- 2 Where an incident occurs outside of those included in the manual, appropriate action, and notification to relevant authority/emergency service, shall be made accordingly.
- 3 All incidents shall be recorded in accordance with EMS 11: NCR, Corrective and Preventative Action where applicable.
- 4 Any remediation works arising from incidents shall be undertaken by contractors approved by MWDA and in compliance the MWDA's Procurement Procedures for ordering goods and services.
- 5 Due to the nature of the installation, it is not practicable to test emergency procedures. It is not possible to initiate a test breakdown of a system, regular maintenance and monitoring ensures the system is operational.

- 6 MWDA Emergency call out numbers can be found in Section Appendix 2 of this document.

8.6 Trespass / Travellers

- 1 If any indications of trespass or the presence of travellers are evident or suspected, head office shall be informed as soon as possible. Such events may be reported to the local police force.
- 2 Officers shall continue with their site duties only if they feel it is safe to do so.
- 3 On **NO** account shall any unknown persons on site be confronted.
- 4 Head office shall seek advice from the local police, and the RSPCA if animals are involved, and act accordingly.

9.0 NON-CONFORMANCE REPORTING

- 9.1 Any breach of any conditions as stipulated in Environmental Permits, Environmental Guidelines, or Trade Effluent Agreement shall be deemed a Non-Conformance.
- 9.2 Non-Conformances shall also be identified as one of the three following events as most appropriate;
- a) A malfunction, breakdown or failure of equipment or process which has caused, is causing or may cause significant pollution.
 - b) A breach of any emissions limit
 - c) The detection of any significant adverse environmental effect
- 9.3 Notification of a Non-Conformance can be made by third party bodies such as the Environment Agency or United Utilities.

All Non-Conformances shall be recorded in accordance with EMS 11: NCR, Corrective and Preventative Action by the observer, or to whom the Non Conformance was reported.

9.4 Non Conformance reporting to the Environment Agency (Billinge Hill only)

- i) *EA Permit No. 3535 relates to the Leachate Treatment Plant at Billinge*
- ii) *EA Permit No. 53646 relates to Billinge landfill site*

[Permit No. 53646 replaces the former Waste Management Licence (WML) No. 427/04/M03/TO1. The Permit has not yet been provided to MWDA by the EA. The EA has however instructed that in the meantime, the WML conditions shall be complied with].

1 Procedure for complying with EA Environmental Permit

- 1 Within 24 hours of any Non-Conformance being determined, the Environment Agency must be informed, with the submission of the EA's Schedule 6 Notification – Part A.
- 2 This shall be followed by the submission of the EA's Schedule 6 Notification – Part B, which shall be submitted 'As soon as practicable' as stipulated by the EA.

2 Note: For all Schedule 6 Notifications:

- All units of measurement used in Schedule 6 notifications Parts A and B shall be best appropriate to the individual circumstances.
- Where relevant, comparisons shall be made and included, between authorised emissions and actual emissions.
- Any commercially confidential information shall be separated from non-confidential
- information, and submitted with an application for commercial confidence under the provisions of the PPC Regulations.

3 Copies of the Schedule 6 Notification Parts A and B can be found in EMS5 Closed Landfill Site Management Reports and Inspection Forms.

4 An appropriate member of the Facilities Section shall submit the notification forms to the EA accordingly

9.5 Trade Effluent Discharge Consent

1 Procedure for complying with UU requirements

- 1 In the event of UU notification of a breach, a “Trade Compliance Action Plan” form is generated by United Utilities and issued to MWDA.
- 2 The Action Plan shall be completed by an appropriate member of the Facilities Section and returned to United Utilities for approval.
- 3 The Action Plan shall be updated as necessary until the proposed improvements have been put in place, and United Utilities gives notification that the Action Plan is closed.

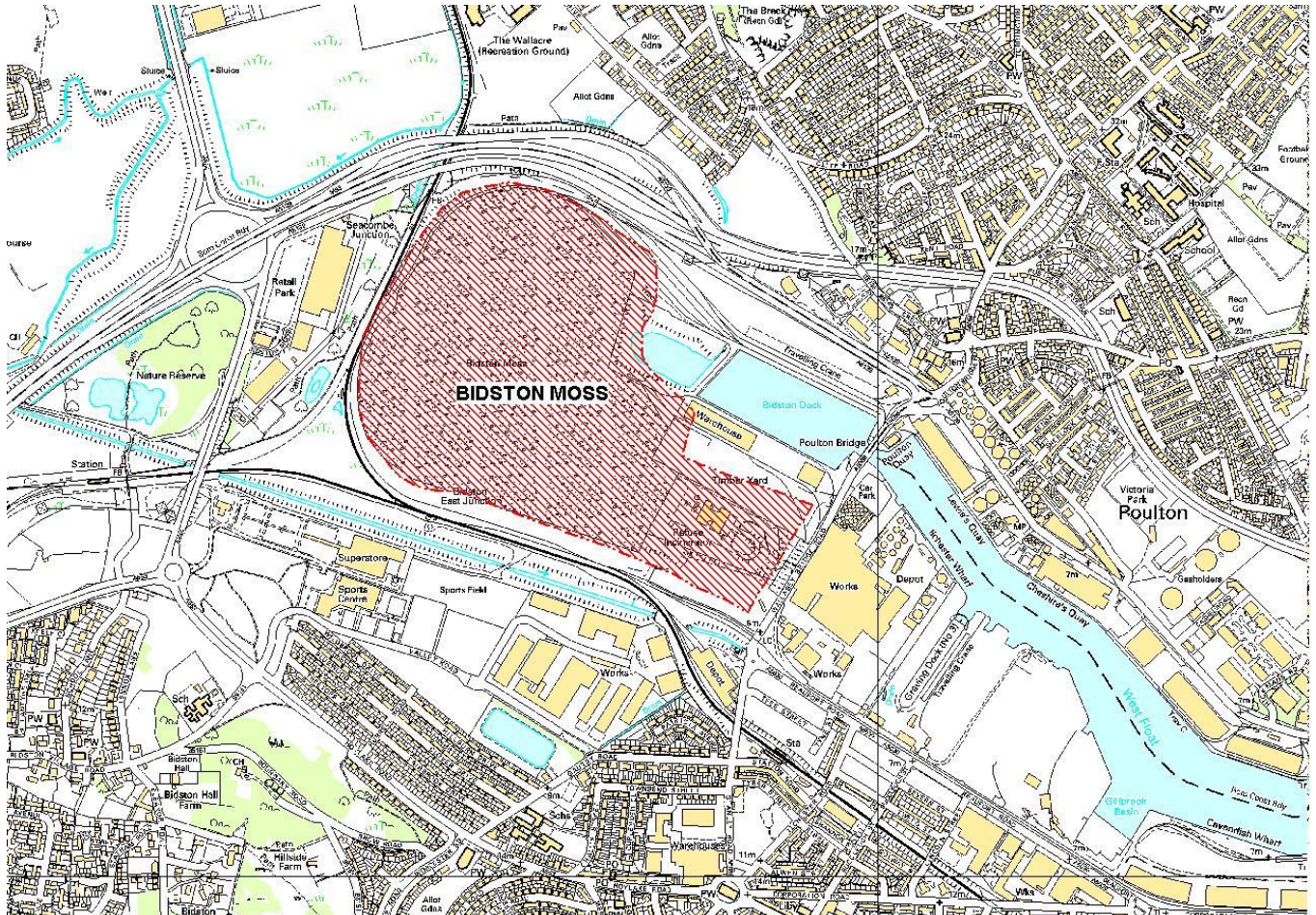
APPENDIX 1

LOCATION PLANS

Uncontrolled

Bidston Moss Community Woodland

Bidston Moss Community Woodland, Wallasey Bridge Road, Wallasey, Wirral, CH41 1EB



Authorised by : Director of Waste
Issued by : ASB
Issue Number :3

Date of Issue: 6th November 2019

Page 31 of 40

Document Control: EMS 5 – Billinge Hill Quarry Closed Landfill Site Manual – PE-MAN-08-ASB-Issue4

Foul Lane Closed Landfill Site

Foul Lane Closed Landfill Site, Foul Lane, Southport, Sefton, PR8 5LA



Authorised by : Director of Waste
Issued by : ASB
Issue Number :3

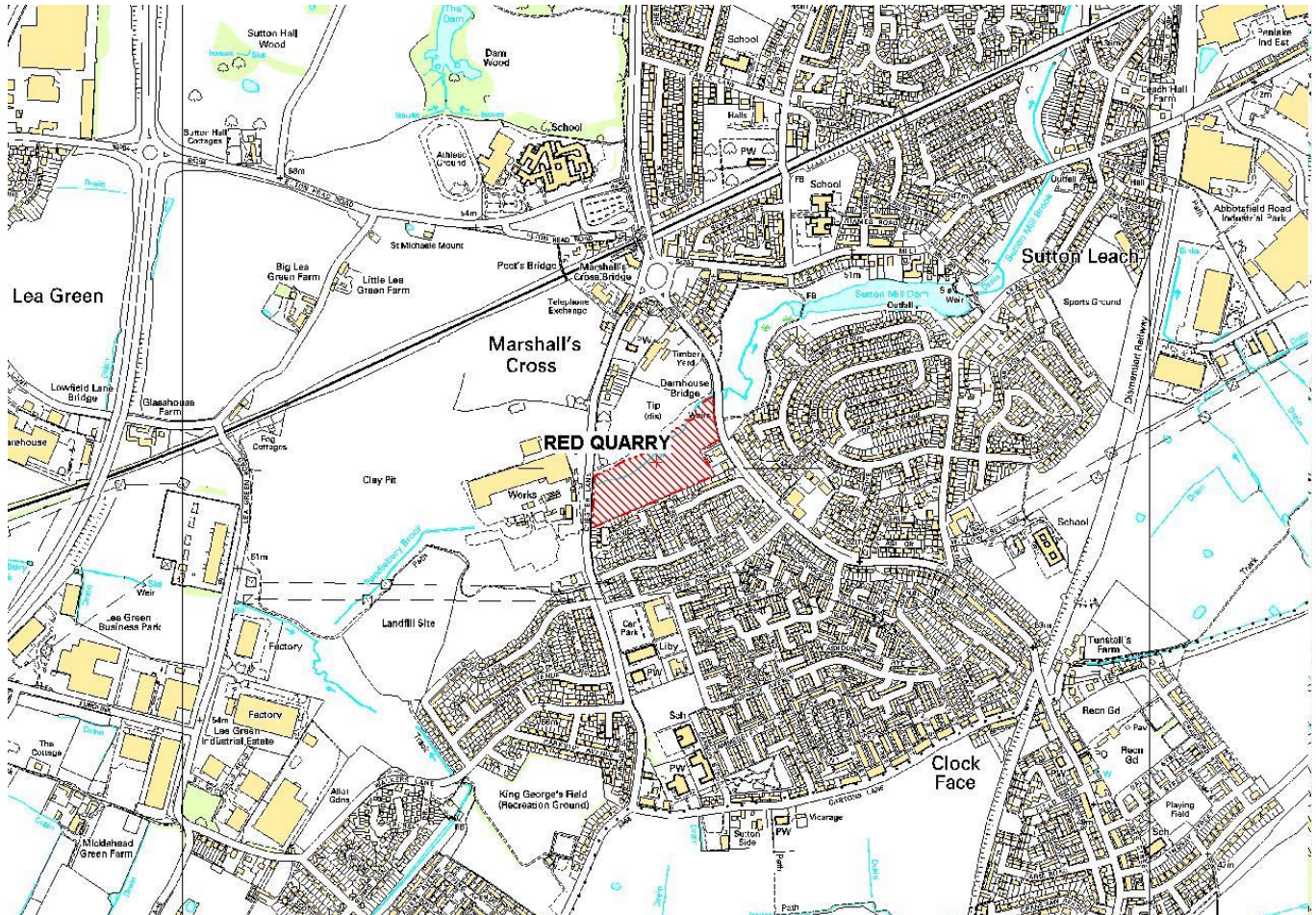
Date of Issue: 6th November 2019

Page 33 of 40

Document Control: EMS 5 – Billinge Hill Quarry Closed Landfill Site Manual – PE-MAN-08-ASB-Issue4

Red Quarry Closed Landfill Site

Red Quarry Closed Landfill Site, Chester Lane, St Helens, WA9 4DE



Authorised by : Director of Waste
Issued by : ASB
Issue Number :3

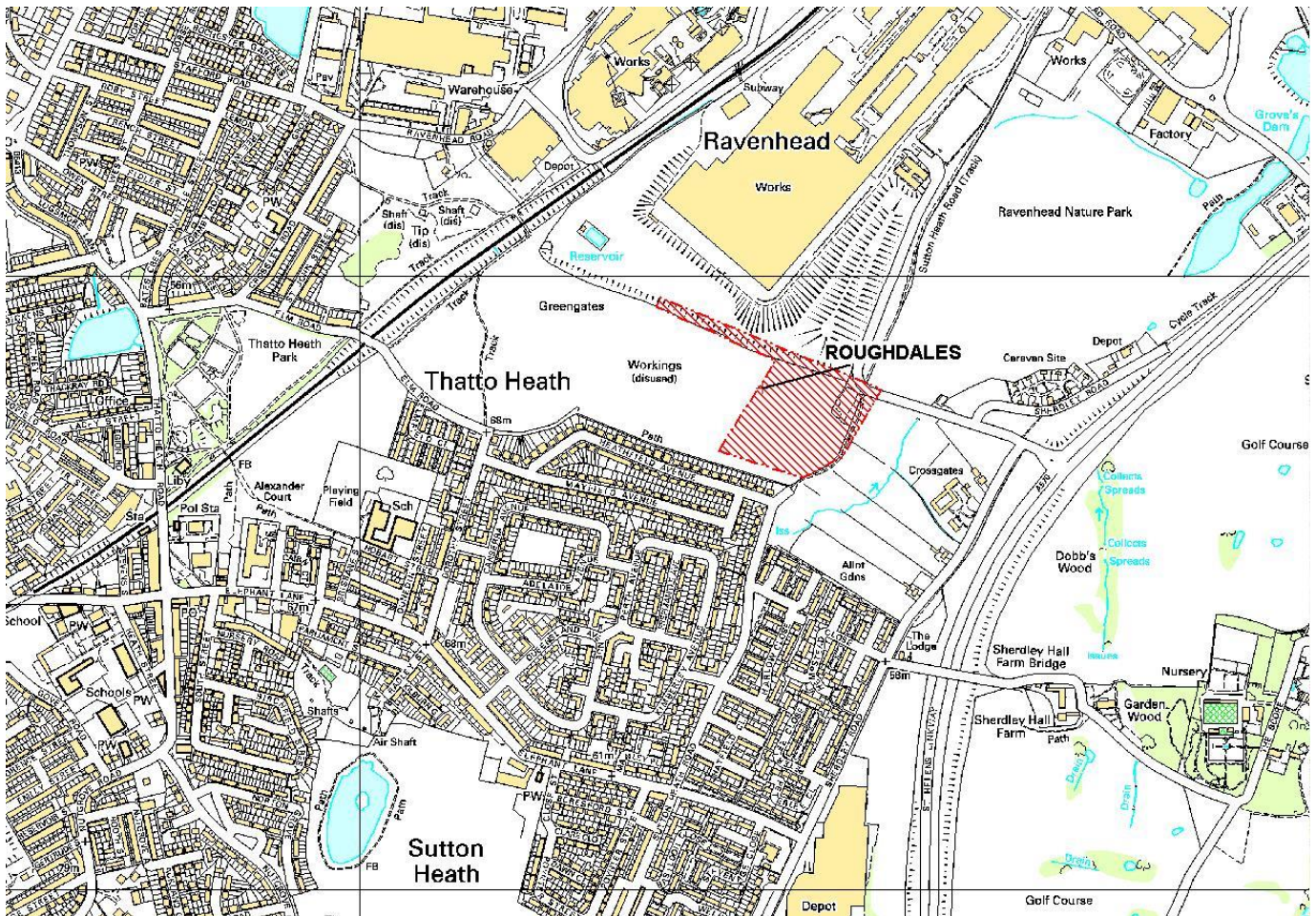
Date of Issue: 6th November 2019

Page 34 of 40

Document Control: EMS 5 – Billinge Hill Quarry Closed Landfill Site Manual – PE-MAN-08-ASB-Issue4

Roughdales Closed Landfill Site

Roughdales Closed Landfill Site, Sutton Heath Road, St Helens, WA9 5HP



Authorised by : Director of Waste
Issued by : ASB
Issue Number :3

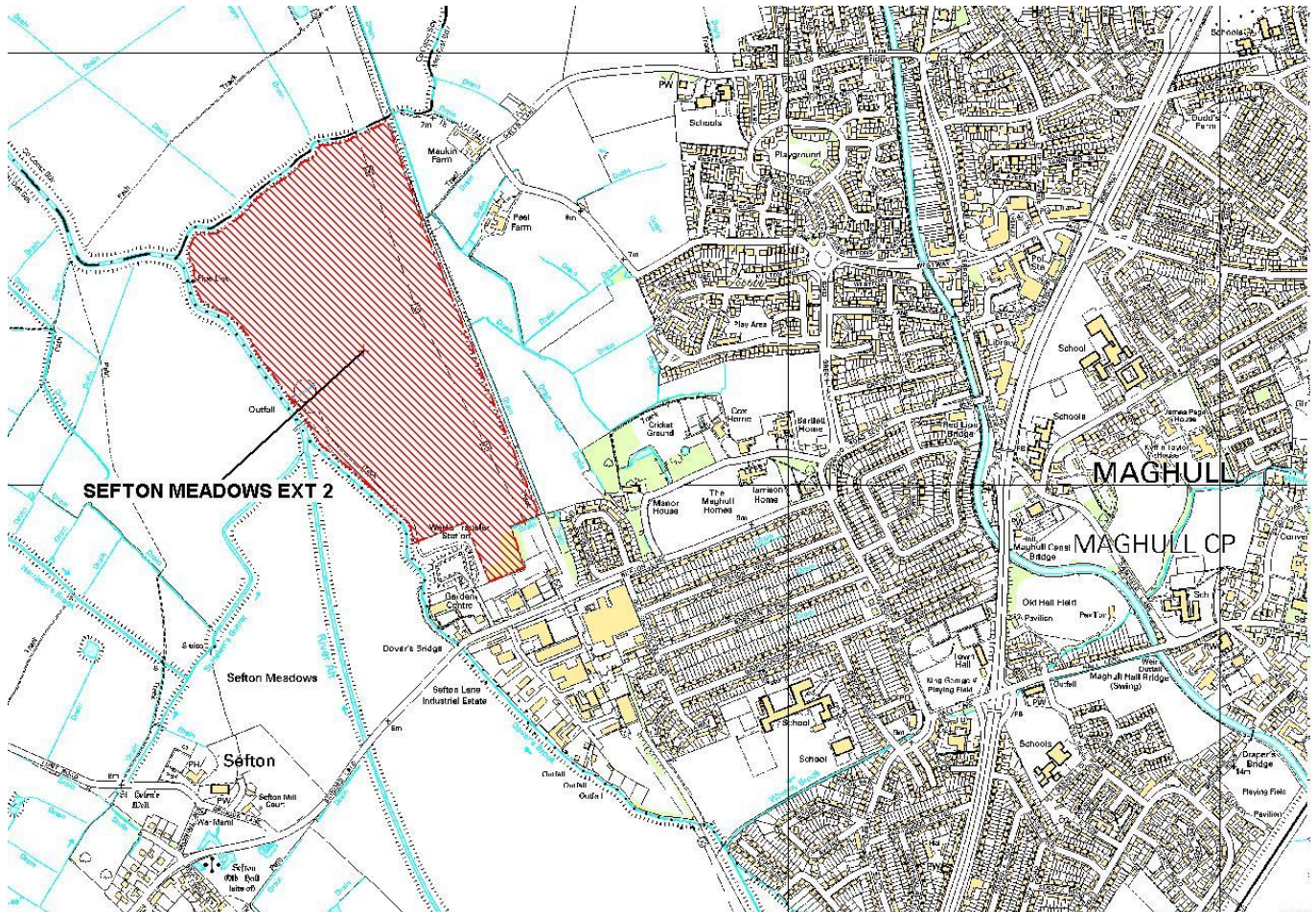
Date of Issue: 6th November 2019

Page 35 of 40

Document Control: EMS 5 – Billinge Hill Quarry Closed Landfill Site Manual – PE-MAN-08-ASB-Issue4

Sefton Meadows Ext 2 Closed Landfill Site

Sefton Meadows Extension II Closed Landfill Site, Sefton Lane, Maghull, Sefton, L31 8BX
(access is via Sefton Meadows HWRC)



Authorised by : Director of Waste
Issued by : ASB
Issue Number :3

Date of Issue: 6th November 2019

Page 36 of 40

Document Control: EMS 5 – Billinge Hill Quarry Closed Landfill Site Manual – PE-MAN-08-ASB-Issue4

APPENDIX 2

EMERGENCY CONTACT DETAILS

Uncontrolled

**MWDA Environmental Management System
Manual 5 Closed Landfill Site Management**

Merseyside Recycling and Waste Authority Staff	
Name	Contact Details
Carl Beer Chief Executive	Tel: 0151 255 1444 Mobile: 07703222177 carlbeer@merseysidewda.gov.uk
Tony Byers Estates Manager	Tel: 0151 255 2579 tony.byers@merseysidewda.gov.uk
Graeme Bell Planning and Environmental Officer	Tel: 0151 255 2543 graeme.bell@merseysidewda.gov.uk
Issy Silo Environmental Officer	Tel: 0151 255 2541 kate.knowles@merseysidewda.gov.uk
Laura Baugh Environmental Officer	Tel: 0151 255 2535 jacob.buckingham@merseysidewda.gov.uk

Authorised by : Director of Waste
Issued by : ASB
Issue Number :3

Date of Issue: 6th November 2019
Page 39 of 40

Document Control: EMS 5 – Billinge Hill Quarry Closed Landfill Site Manual – PE-MAN-08-ASB-Issue4

**MWDA Environmental Management System
Manual 5 Closed Landfill Site Management**

Local Authorities, Regulators and Utility Companies	
Organisation	Contact
Environment Agency	03708 506 506
Merseyside Fire and Rescue Service	0151 249 4000
Merseyside Police	0151 709 6010
Mersey Travel	0151 227 5181
Network Rail	0161 237 1019
British Telecom	0845 755 5999
National Grid (North West Area)	0151 339 2721
Scottish Power Energy Networks	0151 609 4736
Transco	0800 111 999
United Utilities	01925 714 812
North West Ambulance Service	01204 498306
Mersey Docks and Harbour Company	0151 949 6000
Liverpool City Council	0151 233 3000
Sefton Council	0151 934 4035
Wirral MBC	0151 647 2320
St.Helens MBC	01744 456 353
Knowsley MBC	0151 443 4717

Authorised by : Director of Waste
Issued by : ASB
Issue Number :3

Date of Issue: 6th November 2019

Page 40 of 40

Document Control: EMS 5 – Billinge Hill Quarry Closed Landfill Site Manual – PE-MAN-08-ASB-Issue4