



VALENCIA WASTE MANAGEMENT LTD

APPLICATION TO VARY PERMIT NUMBER EPR/BW0991IX

ACCIDENT AND AMENITY RISK ASSESSMENT

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1 INTRODUCTION

- 1.1.1 Wardell Armstrong LLP has been commissioned by Valencia Waste Management Ltd to prepare a Permit Application to vary the existing Environmental Permit, EPR/BW0991IX, at the Erin Landfill, Markham Lane.
- 1.1.2 The site is permitted to accept non-hazardous commercial, industrial and household waste as well as having a separate cell for asbestos and a transfer station for asbestos.
- 1.1.3 Valencia is seeking to move waste up the waste hierarchy by treating mixed non-hazardous waste arriving at the landfill to recover metals for recycling. The waste will be further treated to remove non-combustible material before it is sent off site for energy recovery. The non-combustible fraction may be used in engineering works on the landfill, the residual waste will be placed in the landfill.
- 1.1.4 Overall the scheme is seen as being beneficial to the environment by diverting waste away from landfill and saving natural resources by increasing recycling of metals, wood, plastic and inert waste and improving energy recovery.
- 1.1.5 Nevertheless, it is important that this is achieved whilst preventing any significant impacts on local residents and businesses or wildlife. This report provides a risk assessment to support the variation application.
- 1.1.6 No asbestos will be treated. The measures in place for the safe disposal of asbestos into a dedicated cell within the landfill will continue.
- 1.1.7 Section 2 outlines the site setting and the possible receptors in the vicinity.
- 1.1.8 Section 3 provides a table identifying the potential risks posed by the site and setting out the control measures in place to break to source, pathway, receptor linkage and protect the environment.

2 RECEPTORS

- 2.1.1 The site is located at Erin Landfill, Markham Lane, Duckmanton, Chesterfield, Derbyshire, S44 5HS. The site is accessed from Markham Lane. The national grid reference is SK 44778 73113.
- 2.1.2 The main landfill lies to the east of the new transfer station building. The site is located between two villages, with Poolsbrook to the northwest of the site and Duckmanton to the southwest. The nearest residential properties in the villages respectively lie

approximately 450m northwest and 550m southwest of the proposed MRF. There are also two industrial areas, 300m to the south and 450m to the north of the site. To the west is mainly fields and agricultural land.

2.1.3 There are no European Sites (including SACs, SPAs and Ramsars) within 10km of the MRF and no Sites of Special Scientific Interest within 2km.

2.1.4 There are a number of receptors in the area as detailed below:

Table 2.1 – Receptors within 2km of the MRF			
Type of Receptor	Receptor Name	Location (NGR)	Distance and Direction from Site
Local Wildlife Site (LWS)	Doe Lea River flash	SK 44424 73882	930m NNW
LWS	Woodside Field Slope & Stream	SK 45968 73228	1090m E
LWS	Markham Colliery Reedbed	SK 45294 73009	410m E
LWS	Netherthorpe Flashes	SK 44368 74626	1640m NNW
LWS	Bolsover Colliery March	SK 45406 71100	1040m S
LWS	Poolsbrook Flash	SK 43444 72874	1450m W
Protected Species Area	European Water Vole	SK 44494 73443	600m NW (to centre)
Protected Habitat Area	Reedbeds	SK 45288 73024	460m E (to edge)
School	Poolsbrook Primary Academy	SK 44234 73426	740m WNW
School	Duckmanton Primary	SK 44023 72446	1050m SW
Care Home	Ravenworth Care Home	SK 44549 72395	740m SSW

3 RISK ASSESSMENT AND MANAGEMENT

- 3.1.1 For the receptors outlined above to be at risk there must be a source of pollution and a pathway by which that pollution can reach the receptor. Management of the risks will have two elements, reducing the source of pollution by good management of the site, for example limiting the quantity of waste, and the period for which it is stored and placing control measures in place to break the pathway and prevent pollution reaching the receptors, eg providing a sealed drainage system.
- 3.1.2 Table 3.1 identifies the risks and describes the control measures in place to ensure that impacts on the receptors are minimised.
- 3.1.3 The site will operate in accordance with a written Environmental Management System (EMS) and this will be audited and reviewed on an annual basis to ensure compliance and drive continuous improvement.
- 3.1.4 All staff will receive initial training to ensure they are aware of the EMS and familiar with those sections relevant to their role. Refresher training will be given as needed.
- 3.1.5 Records will be maintained of all complaints, incidents and near misses. These will be reviewed annually to identify trends and inform improvements to the EMS.
- 3.1.6 Daily inspections will be made around the outside of the MRF to ensure that dust, noise, odour and litter are being effectively controlled. Should these inspections indicate that emissions are occurring the site manager will be informed, the cause will be investigated and suitable mitigation will be instigated.
- 3.1.7 Should it be that the mitigation will require significant investment of resources and may take some time, this will be communicated to local businesses and residents explaining the measures to be implemented and the likely timescales.

Table 3.1: Risks to the Environment and Mitigation Measures

Hazard	Receptor	Pathway	Risk management techniques	Probability of exposure with risk management in place	Consequence
Litter	Local wildlife and local residents	Windblown	All vehicles carrying waste to the MRF to be enclosed or sheeted. Waste unloaded inside building with doors closed. Waste stored and treated inside building. Any litter to be collected daily and placed in the appropriate bay inside the building.	Low	Detriment to the amenity of the local area. Potential harm to wildlife. Nuisance
Dust	Local residents and local businesses	Windblown	Sorting and screening carried out inside a building. Site roads properly maintained and swept as necessary. Wheelwash available and to be used as needed. Dust damped down if required in dry weather Plant properly maintained and serviced to minimise emissions. Dust Management Plan in place.	Low	Nuisance. Potential harm to health
Noise	Local residents and local businesses	Airborne	Sorting and screening carried out inside building. Machinery properly maintained and serviced and turned off when not in use. Good traffic management around the site to minimise reversing and idling.	Low	Disturbance
Odour	Local residents and local businesses	Airborne	Waste stored and treated inside buildings. Waste treated on first in first out basis with RDF, fines and residual waste removed within 72 hours of receipt. No putrescible waste to be treated.	Low	Nuisance

Table 3.1: Risks to the Environment and Mitigation Measures

Hazard	Receptor	Pathway	Risk management techniques	Probability of exposure with risk management in place	Consequence
Emissions to groundwater	Groundwater beneath the site	Infiltration through the ground	Waste storage and treatment areas fitted with impermeable surfacing and sealed drainage to prevent fugitive emissions. Waste is stored and treated inside the MRF building minimising rainwater infiltration. Measures in place to contain firewater. Liquids (eg oil for plant maintenance) stored in appropriate containers with secondary containment.	Low	Pollution of groundwater
Emissions to surface water	Local water courses potential to reach River Gipping.	Infiltration through the ground or run-off direct to surface water / drains from leakages	Waste storage and treatment areas indoors and provided with impermeable surfacing and sealed drainage. Speed hump at entrance to prevent any liquid leaving the building. Liquids (eg oil for plant maintenance) stored in appropriate containers with secondary containment.	Low	Pollution of surface water potential impact on protected species.
Emission of nitrogen oxides to air	Local residents and workers	Airborne	Plant serviced and maintained in accordance with manufacturer's recommendations. Compliance with NRMM regulations. Where plant is replaced, lower emissions models chosen where practicable.	Low	Harm to human health
Fire	Local residents or workers	Through the air	Waste to be stored in bays with fire resistant bay walls and 1m headroom to minimise risk of fire spreading.	Low	Smoke poses a potential health risk

Table 3.1: Risks to the Environment and Mitigation Measures

Hazard	Receptor	Pathway	Risk management techniques	Probability of exposure with risk management in place	Consequence
			<p>Quantity of flammable waste in line with EA Fire Prevention Plan guidance, waste treated in 72 hours to avoid self-heating. RDF and fines to be removed from site within 72 hours.</p> <p>Good housekeeping with fire watch at end of day and in case of hot works.</p> <p>Fire detection and suppression systems fitted in building.</p> <p>Fire prevention Plan in place.</p>		
Fire water	Groundwater beneath the site and local water courses.	Infiltration through soil or surface water run-off	The site is provided with impermeable surfacing and sealed drainage. Ability to store water in sealed sump and on the building floor.	Low	Pollution of groundwater or surface water
Plant breakdown	Local residents or workers or groundwater and surface water.	Air and /or water pollution depending on nature of breakdown	<p>Preventative maintenance programme in place to ensure all plant and infrastructure is inspected, serviced and maintained.</p> <p>Damaged plant or infrastructure taken out of service until repaired by a competent person.</p> <p>Waste treatment inside building with impermeable pavement to provide containment.</p> <p>Staff training. Only competent staff to operate machinery.</p>	Low	Noise or pollution as result of breakdown.

4 CONCLUSION

- 4.1.1 The MRF has been located on the landfill so as to be away from the boundary closest to the residential areas of Poolsbrook and Duckmanton. Sensitive human receptors are over 400m away so dust and noise are likely to dissipate before reaching them.
- 4.1.2 Measures are in place to minimise the risk of emissions from the site with all operations contained inside a building. The site will operate in accordance with a written Environmental Management System including a Dust Management Plan, Fire Prevention Plan and Odour Management Plan.
- 4.1.3 There are County Wildlife Sites close to the site but measures put in place to contain leachate, dust and litter will minimise the potential impacts.
- 4.1.4 The MRF will operate in line with guidance on the best available techniques for waste treatment.
- 4.1.5 The operation of the MRF is not expected to increase the risk over and above that already present due to the operation of the permitted landfill.

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