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PILSWORTH SOUTH VARIATION APPLICATION (EPR/BS7951IB)

ENVIRONMENTAL RISK ASSESSMENT

JUNE 2023

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1 INTRODUCTION

1.1.1 Wardell Armstrong has been appointed to prepare an application to vary the permit for Pilsworth South Landfill Site in Bury, Lancashire. The site is operated by Valencia Waste Management Ltd (Valencia) under permit number EPR/BS7951IB.

1.1.2 The site is permitted to accept non-hazardous commercial, industrial and household waste for disposal, as well as for the disposal of hazardous asbestos in a separate specially designed cell.

1.1.3 Valencia is seeking to prevent recyclable and recoverable wastes from going to disposal, in accordance with the principles of the waste hierarchy. The variation will allow mixed non-hazardous waste arriving at the landfill to be first treated to recover metals, wood and plastic for recycling, then further treated to remove non-combustible material to prepare the combustible wastes for energy recovery off-site. The residual non-combustible waste will be utilised in landfill engineering or will be placed in the landfill.

1.1.4 This Environmental Risk Assessment assesses the risks associated with the activities, identifies the proximal sensitive receptors and describes the control methods in place to minimise the identified risks so as not to cause harm to people or the environment.

2 SITE SETTING AND RECEPTORS

2.1.1 Pilsworth South Landfill Site is located approximately 2.5km southeast of Bury in Lancashire. The site is accessed via Pilsworth road at nearest post code BL98QZ. The new MRF will be located at national grid reference (NGR) SD 82260 09020. Defra's MAGIC Maps application[1] has been used to identify receptors that might be affected by operation of the proposed MRF.

2.1.2 The land surrounding the landfill is a mix of residential, agricultural and commercial/ industrial use. The landfill site is bound in the west by the Pilsworth commercial and industrial estate, approximately 200m from the Proposed MRF on the opposite side of the M66. To the northeast, the landfill is bound by Heywood Distribution Park, approximately 1.1km east of the proposed MRF. Pilsworth North, a restored landfill site, is located north of the landfill on the opposite side of Pilsworth Road, while to the south, land use is predominantly agricultural.

2.1.3 The nearest residential receptor to the proposed MRF is located approximately 250m northeast of the proposed boundary at Jackson Fold Barn. The next nearest residents are located around 650m south at Pilsworth Cottages on Castle Road. Further residential receptors are located on the southwest side of Pilsworth industrial/ commercial estate, around 850m from the MRF, with additional houses around the same distance south-southwest at Haweswater Crescent. Around 1km west, land use becomes mainly residential and commercial properties of the town of Bury. Similarly, properties in the town of Heywood are located approximately 1.5km northeast.

2.1.4 Hollins Vale Local Nature Reserve is the only designated habitat within 2km of the site, located approximately 550m southwest of the proposed MRF location.

2.1.5 There are no SSSIs within 2km of the site, or SPAs or Ramsars within 10km of the site. There is one Special Area of Conservation at Rochdale Canal, located approximately 5.9km east of the MRF, which is at a great enough distance that emissions from the MRF operations are unlikely to have any impact.

2.1.6 No local wildlife sites or ancient woodlands have been shown within 2km of the site.

2.1.7 Table 2.1 below lists the relevant receptors within 1km of the proposed location of the MRF.

[1] MAGIC (defra.gov.uk)

Table 2.1: Receptors within 1km of Pilsworth Landfill MRF		
Receptor Name	**Receptor Type**	**Approx. Distance and Direction**
Pilsworth South Landfill	Industrial	0m Southeast
M66	Motorway	50m West
Pilsworth Industrial/ Commercial Estate	Industrial/ Commercial	150m West
Jackson Fold Barn	Residential	250m Northeast
Hollins Vale	Habitat	550m Southwest
Pilsworth Cottages	Residential	650m South
Warehouse ("Garic") on Aviation Rd	Commercial/ Industrial	650m South
River Roch	River	850m West
Properties on Pilsworth Road, Hollins	Residential	850m Southwest
Properties on Haweswater Crescent, Hollins	Residential	850m South
Properties in Gigg, Bury	Residential	900m Northwest
Water Farm House	Residential	900m Northwest
Castle House	Residential	950m South
Pilsworth North Leachate treatment/ Gas Engine Compound	Industrial	1000m Northeast

2.1.8 GOV.UK's Flood map for planning[2] shows the MRF is located in flood zone 1, therefore is at very low risk of flooding from rivers or sea.

[2] Flood map for planning - GOV.UK (flood-map-for-planning.service.gov.uk)

3 ENVIRONMENTAL RISK ASSESSMENT

3.1.1 The main risk from the MRF activity to the identified receptors will be emissions of dust, odour, litter and noise. The activities will be undertaken with environmental protection as a priority, ensuring that effective control measures are in place to prevent harm to human health and the local environment.

3.1.2 Table 3.1 below identifies the potential environmental risks that may arise from operations at the MRF and considers which receptors may be impacted by the risk, and pathways. The risk assessment shows how these risks are minimised by preventing the hazard at source or by providing measures to break the pathway and prevent pollution migrating towards receptors.

3.1.3 The activities will be undertaken with environmental protection as a priority, following Best Available Techniques and utilising Appropriate Measures, ensuring that effective control measures are in place to prevent harm to human health and the local environment. A dedicated building will house the activities, ensuring effective prevention of pollution emissions of dust, litter, noise and odour.

3.1.4 Waste will be dealt with on a first in first out basis and, other than inert waste, will be turned round within 72 hours to minimise the risks of odour and vermin. The site will be kept tidy and will be inspected on a daily basis to make sure that no pollution is detected. Any significant emissions of dust, odour, litter or noise will be investigated and remedied.

3.1.5 Staff will be trained to understand the potential environmental risks associated with the site and their role in managing those risks. An induction will also be provided for contractors, so that they are aware of any environmental requirements.

Table 3.1: Risk Assessment							
Hazard	**Receptor**	**Pathway**	**Consequence**	**Exposure Probability**	**Overall risk**	**Mitigation Measures**	**Residual Risk**
Litter	Local wildlife, local residents, local businesses	Windblown	Detriment to the amenity of the local area. Potential harm to wildlife. Nuisance	Medium	Low	All vehicles carrying waste to the MRF to be enclosed or sheeted. Waste for treatment will be unloaded inside MRF building with doors closed. Waste will be stored and treated inside the building, with doors remaining closed other than to allow vehicle access and egress. Any litter to be collected daily and placed in the appropriate bay inside the building.	Very Low
Dust	Local wildlife, local residents, local businesses	Windblown	Nuisance. Potential harm to health. Potential harm to wildlife.	Medium	Medium	Sorting and screening carried out inside MRF building, with doors remaining closed other than to allow vehicle access and egress. Site roads properly maintained and swept as necessary. A wheel wash is available onsite and will be used as needed. Dusty stockpiles and site roads will be damped down if required in dry weather. Site roads will be kept clear of mud that may dry and cause dust. Plant properly maintained and serviced to minimise emissions. A site-specific Dust Management Plan has been developed for the site and will be kept under regular review, in accordance with the EMS.	Very low

Table 3.1: Risk Assessment

Hazard	Receptor	Pathway	Consequence	Exposure Probability	Overall risk	Mitigation Measures	Residual Risk
Noise	Local residents and local businesses	Airborne	Nuisance	Medium	Low	Sorting and screening carried out inside MRF building, with doors remaining closed other than to allow vehicle access and egress. Plant and machinery will be properly maintained and serviced in accordance with the manufacturer's recommendations, and turned off when not in use. A site traffic plan will be implemented on the site to minimise reversing and idling.	Very low
Odour	Local residents and local businesses	Airborne	Nuisance	Medium	Low	Waste stored and treated inside buildings. Waste treated on first in first out basis with all degradable waste removed within 72 hours of receipt. Odour management plan in place.	Very low
Emissions to groundwater	Groundwater beneath the site	Infiltration through the ground	Pollution of groundwater	Medium	Low	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 (e.g. oil for plant maintenance) stored in appropriate containers with secondary containment.	Very Low
Emissions to surface water	Local water courses	Infiltration through the ground or run-off	Pollution of surface water potential impact	Medium	Low	Waste storage and treatment areas indoors and provided with impermeable surfacing and sealed drainage. Sleeping policeman at entrance to prevent any liquid leaving the building.	Very Low

Table 3.1: Risk Assessment

Hazard	Receptor	Pathway	Consequence	Exposure Probability	Overall risk	Mitigation Measures	Residual Risk
		direct to surface water / drains from leakages	on protected species.			Liquids (e.g. oil for plant maintenance) stored in appropriate containers with secondary containment.	
Emission of nitrogen oxides to air	Local residents and workers	Airborne	Harm to human health	Medium	Low	Most plant is electrically powered. 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
Fire	Local residents or workers	Through the air	Smoke poses a potential health risk	Medium	Medium	Waste to be stored in bays with fire resistant bay walls and 1m headroom to minimise risk of fire spreading. Quantity of flammable waste in line with EA Fire Prevention Plan guidance, waste turned round in 72 hours to avoid self-heating. Good housekeeping with fire watch at end of day and in case of hot works. Fire detection and suppression systems fitted in building. Fire prevention Plan in place.	Very Low
Fire water	Groundwater beneath the	Infiltration through soil or surface	Pollution of groundwater or surface water	Medium	Medium	The site is provided with impermeable surfacing and sealed drainage. Ability to store water in sealed sump and on the building floor.	Very Low

Table 3.1: Risk Assessment							
Hazard	**Receptor**	**Pathway**	**Consequence**	**Exposure Probability**	**Overall risk**	**Mitigation Measures**	**Residual Risk**
	site and local water courses.	water run-off					
Plant breakdown	Local residents or workers or groundwater and surface water.	Air and /or water pollution depending on nature of breakdown	Noise or pollution as result of breakdown.	Medium	Low	Preventative maintenance programme in place to ensure all plant and infrastructure is inspected, serviced and maintained. Damaged plant or infrastructure taken out of service until repaired by a competent person. Waste treatment inside building with impermeable pavement to provide containment. Staff training. Only competent staff to operate machinery.	Very Low

4 HABITATS RISK ASSESSMENT

4.1.1 The section provides a habitats risk assessment, demonstrating that the control measures in place at the MRF are appropriate to prevent pollution to proximal sensitive habitats.

4.2 Ecological Receptors

Designated Habitats

4.2.1 The only sensitive habitat within 2km is Hollins Vale Local Nature Reserve, located approximately 550m southwest of the proposed MRF location.

4.2.2 One European Site has been identified within 10km of the proposed MRF, that is Rochdale Canal SAC, located approximately 5.9km east of the MRF.

4.2.3 There are no SSSI or ancient woodland within 2km of the site.

Priority Habitats

4.2.4 There are a number of areas of priority habitat located in proximity to the site. The nearest are Deciduous Woodland, located 50m northeast of the MRF, within the Pilsworth South landfill site permit boundary. There are also some proximal areas of Deciduous Woodland to the north on the opposing side of Pilsworth Road, around Jackson Fold Barn.

4.2.5 Approximately 250m to the northwest, there is an area of Deciduous Woodland and Lowland Acid Grassland on the north boundary of the Pilsworth commercial and industrial estate.

4.2.6 600m to the south of the MRF, strips of Deciduous Woodland are located on either side of the M66.

4.2.7 550m south of the MRF, around Pilsworth Cottages, there is an area of good quality semi-improved grassland.

4.2.8 Hollins Vale Local Nature Reserve (LNR) contains a patchwork of Deciduous Woodland, Lowland Dry Acid Grassland, Purple Moor Grass and Rush Pasture and Lowland Fens, especially in its northern extent, 550m southwest of the MRF location. There are some additional areas of Lowland Fens and Deciduous Woodland adjacent to the west boundary of the LNR.

4.2.9 Further Deciduous Woodlands are located 800m west of the site on the river Roch, 800m east on Brightly Brook and 950m northeast next to Pilsworth North gas engine compound.

Species

4.2.10 The MRF is located within a 2km^2 area which had been identified as an area for Priority Species for Countryside (CS) Targeting for Lapwing. 200m to the west, Snipe have additionally been identified as a priority species, while 900m to the north, Lapwing and Curlew have been identified as identified as Priority Species.

4.2.11 MAGIC Maps data from between 2005-2009 indicates bird species Grey Partridge, Lapwing, Tree Sparrow and Yellow Wagtail have been identified within 1km of the proposed MRF.

4.2.12 Date from the Great Crested Newt (GCN) Class Survey Licence Returns identifies the species was present in the lagoons 400m south of the MRF, during a survey undertaken in May 2016. GCNs have also been identified 2km south of the site in surveys undertaken August 2016 and May 2017, near Unsworth Academy, along with a Granted European Protected Species Licence for the species (granted December 2017) allowing damage of a resting place.

4.2.13 A further record of a Granted European Protected Species Application for bats (granted in January 2011 for Common Pipistrelle) is located 1,600m northeast of the MRF site.

4.3 Potential Impacts and Mitigation Measures

Noise and Vibration

4.3.1 Excessive noise and vibration can cause disturbance to sensitive species, such as birds, bats, amphibians and mammals. The MRF building is proposed to be located on the southern extent of the existing operational landfill site next to the site offices. As the building is in an industrial setting and the majority of habitats at least 300m away, it is considered unlikely that the cumulative noise from the operation will adversely impact local habitats and species.

4.3.2 The MRF treatment operations will take place inside a building with doors closed other than to allow vehicles access and egress. The building will attenuate noisy emissions from the MRF plant and equipment.

4.3.3 Plant and machinery will be properly maintained and serviced in accordance with the manufacturer's recommendations, and turned off when not in use.

4.3.4 The site's traffic management plan will be extended to the MRF operations to ensure reversing and idling continues to be minimised as far as possible.

4.3.5 It is therefore deemed unlikely that there will be any noise disturbance to the identified habitats as a result of the new operations.

Dust

4.3.6 Dusty emissions have the potential to damage habitats and affect sensitive species through smothering and respiratory distress. The risk of dust emissions will primarily result from the handling and treatment of wastes, as well as from the operation of mobile plant and other vehicles used to transport waste. There will be no excessively dusty loads accepted at the MRF, with waste types excluding those made up of predominantly powders and loose fibres.

4.3.7 A Dust Management Plan has been developed for the site for the site to ensure that dust is controlled throughout the operation. Measures used to control dust will include:

- sorting and screening will be carried out inside MRF building, with doors remaining closed other than to allow vehicle access and egress;
- a wheel wash is available onsite and will be used as needed;
- dusty stockpiles and site roads will be damped down if required in dry weather;
- site roads properly maintained and swept as necessary to prevent the build-up of dried mud and dust; and
- plant will be properly maintained and serviced to minimise emissions.

4.3.8 The dust management plan has been developed with considerations for the proximity of local sensitive receptors with the aim of preventing any particulate emissions beyond the permit boundary as far as practicable. The control measures outlined in the plan will be employed to appropriately mitigate the risk of dust emissions causing cumulative impacts on nearby receptors.

Litter

4.3.9 If uncontrolled, litter can be wind-blown and deposited on sensitive habitats and cause disturbance and distress to local wildlife.

4.3.10 Measures will be in place to prevent litter. Waste will be unloaded inside the waste MRF building. The building will be fitted with fast acting roller shutter doors which will, as far as possible, be kept closed except for allowing vehicle access and egress.

4.3.11 Waste will be stored in dedicated storage bays or containers appropriate for the waste type. Daily inspections will made and any loose waste noted lying around will be collected and transferred to the appropriate bay or container.

4.3.12 Incoming and outgoing vehicles will be enclosed or have appropriate sheeting to contain any waste.

Emissions to Water

4.3.13 There are no planned emissions to water from the operation. Water for fire control purposes will be stored within a bunded firewater storage tank. Firewater from extinguishment of any on site fire will be contained on the site and tankered to an appropriately permitted facility for treatment.

4.3.14 The building has an impermeable concrete floor which is designed for liquid from wastes to drain towards a sealed sump. Sump capacity will be maintained, with collected liquids periodically sent for treatment to the site's leachate treatment plant (or offsite to an appropriately permitted facility). The sump will have a capacity of 240m^3. In the event of a fire, sump and the building floor footprint can contain up to 484m^3 of firewater.

4.3.15 Any fuels and any other liquids stored on site will be stored within bunded containers. Spill-kits will be available nearby which site operatives will be trained to use in case of spillages.

4.3.16 These measures are in line with Environment Agency guidance to provide high levels of protection, preventing harmful emissions to surface water or groundwater. The risk of contaminants reaching the SSSI or other protected habitats via the water environment is very low.

Point Source Emissions to Air

4.3.17 There are no point source emissions to air proposed from the permitted operation, therefore presenting no risk to habitats.

5 MANAGEMENT

5.1 Monitoring

5.1.1 Site inspections, including monitoring of emissions of dust, noise, litter and odour will be undertaken periodically. Throughout the day staff will be aware of the need to report any excessive emissions so that the cause can be identified and resolved.

5.1.2 Formal monitoring will take place at least once a day with an inspection being made around the outside of the building along the site road and at the site entrance. The finding of this inspection will be recorded in the site log.

5.1.3 Where polluting emissions are noted leaving the site or escaping from the MRF building (paying particular attention to entrances and exits where fugitive emissions are most likely), this will be recorded and immediately reported to the site manager. Steps will be taken to confirm the source of the dust and take remedial action.

5.2 Environmental Management System

5.2.1 The site will be operated in accordance with a formal Environmental Management System which has been developed in line with Environment Agency guidance. Standard Operating Procedures will be in place to ensure that waste materials are handled appropriately and safely.

5.2.2 The site plant and infrastructure will be subject to regular inspection, servicing and maintenance to ensure that it remains fit for purpose and all emissions are prevented or controlled.

6 CONCLUSION

6.1.1 Risk to nearby sensitive receptors will be effectively controlled though the implementation of the environmental control measures outlined in this plan.

6.1.2 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.

6.1.3 The MRF will operate in line with guidance on the best available techniques for waste treatment.

6.1.4 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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