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VALENCIA WASTE MANAGEMENT LTD

SHELFORD LANDFILL VARIATION APPLICATION (EPR/XP3434HX)

ENVIRONMENTAL RISK ASSESSMENT

NOVEMBER 2023

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1 INTRODUCTION

1.1.1 Wardell Armstrong has been appointed to prepare an application to vary the permit for Shelford Landfill Site at Shelford Farm Estate near Kent. The site is operated by Valencia Waste Management Ltd (Valencia) under permit number EPR/XP3434HX.

1.1.2 The site is permitted to accept non-hazardous commercial, industrial and household waste for disposal, as well as for the treatment of leachate arising from the landfill.

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 plastics 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 Shelford Landfill is located on Shelford Farm Estate off Shalloak Road, 2.5 miles northeast of Canterbury, Kent. The nearest postcode is CT2 0PU, and the new MRF will be located at national grid reference (NGR) TR 16335 60113, south of the existing landfill site.

2.1.2 The land surrounding the site is mixed in use. The landfill area extends north from the proposed location of the MRF building, with the land beyond being predominantly agriculture and interspersed woodland northwest, north and northeast.

2.1.3 The nearest residential properties are 2 houses located approximately 200m east of the MRF on Shalloak road. 550m to the northeast, there are several properties at Broad Oak Lodge Farm and a mobile home park approximately 750m northeast within Den Grove Wood.

2.1.4 Land use to the south is mixed residential, commercial and industrial, with large areas of parkland and woodland. Approximately 100m east of the proposed MRF, a car dealership is the nearest commercial receptor to the site, bound by the landfill's permit boundary on all but its south side, sharing the site entrance road.

2.1.5 There are a number of residential properties are located approximately 630m south of the proposed MRF on Vauxhall Avenue, within the wider area of the Canterbury Retail Park, which houses an array of retail and industrial units. There are further residential properties to the south Sturry Road, with and adjacent Community Park and play space 750m southeast of the proposed facility.

2.1.6 Further residential areas in proximity to the proposed MRF include Hales Place (850m west), Broadoak (1.1km northeast), Sturry (1.1km east), Cottages (1.4km north), and Fordwich (1.5km east).

2.1.7 In regards to habitat receptors, there are five European sites within 10km of the proposed MRF location, the nearest of which is Stodmarsh located approximately 1.9km east, designated as a SAC, SPA and Ramsar, as well as a SSSI (extending sightly west to within 1.7km of the MRF). At its eastern extent, over 5km away, Stodmarsh is also designated as an NNR. The remaining four European Sites are located over 4km away from the site at Blean Complex (SAC), The Swale (Ramsar and SPA), Tankerton Slopes and Swalecliffe (SAC), and Thanet Coast & Sandwich Bay (Ramsar and SPA). All of the sites are at a great enough distance that they are not considered to be especially vulnerable to the MRF activity, with any potential impacts mitigated by the distance.

2.1.8 There are four SSSIs within 2km of the site, including Stodmarsh. The nearest is West Blean and Thornden Woods SSSI which lies adjacent to the landfill north and north-eastern permit boundary, with its closest point located at around 400m from the proposed MRF; the site is also designated as an ancient woodland throughout its extent. Chequer's Wood and Old Park SSSI is located 1.2km southeast of site, containing areas of Ancient Woodland at Chequers Wood and Scotland Hills. Sturry Pits SSSI is located 1.3km east of the site, however is considered of geological interest, therefore not vulnerable to the activity.

2.1.9 Additional areas of ancient woodland are located at Dengrove Wood (750m northeast), Hoards Wood (2km northeast) and Kemberland wood (1.9km northeast), Middle Shaw (1.7km north), Brickhouse Wood (780m northwest) and an unnamed wood on Canterbury Hill road (2km west).

2.1.10 The Great Stour, Ashford to Fordwich Local Wildlife Site (LWS) is located 170m south of the proposed facility and is the nearest designated site to the proposed MRF. One further LWS is located within 2km of the site at Little Hall and Kemberland Woods and Pasture (800m northwest at its closest point). An additional LWS was identified by an EA pre-application habitat screening report at Tyler Hill Pastures, however this site is over 2km from the proposed MRF building.

2.1.11 Table 2.1, below, sets out the receptors within 1km of the site in greater detail.

Table 2.1: Receptors with 1km of the proposed MRF

Receptor Name	Receptor Type	Distance/ Direction
Human Receptors		
Motorline Car Dealership	Commercial	100m east
CVS Canterbury and Canterbury Audi car dealerships	Commercial	150m South
6 Shalloak Road	Residential	200m East
Caravan Site	Residential	250m South
Retail Park (Vauxhall Road)	Commercial	350m South
Canterbury Wastewater Treatment Works	Industrial	450m southeast
Canterbury North 400kV Substation	Industrial	550m Southwest
Broad Oak Lodge Farm	Residential	550m Northeast
Vauxhall Avenue and Vauxhall Crescent	Residential	600m South
Businesses on Broad Oak Road	Commercial	600m Southwest
Retail Park (Marshwood Close)	Commercial	700m Southwest

Table 2.1: Receptors with 1km of the proposed MRF		
Receptor Name	**Receptor Type**	**Distance/ Direction**
Sturry Road Allotments	Leisure	700m South
Sturry Road (A28)	Residential	700m South
Caravan Park	Residential	750m Northeast
Maytree Canterbury Garden Centre	Commercial	800m Southeast
Bicknor Close	Residential	800m Southwest
Kilndown Gardens	Residential	800m Southwest
Field Avenue	Residential	850m South
Reed Avenue	Residential	850m South
Sturry Road Community Park	Leisure	850m Southeast
22-38 Shalloak Road	Residential	850m Northeast
Headcorn Drive	Residential	850m Southwest
Kemsing Gardens	Residential	850m Southwest
Halstead Close	Residential	900m Southwest
Westerham Close	Residential	900m Southwest
Hunton Gardens	Residential	900m West
East Street	Residential	900m South
Sandhurst Close	Residential	950m Southwest
Goudhurst Close	Residential	950m West
Junior King's School Sports Facility	Leisure/ School	1km East
Habitats Receptors		
Woods in Southern extend of permit boundary	Priority Habitat Inventory - Deciduous Woodland	Adjacent
Great Stour, Ashford to Fordwich Local Wildlife Site	Local Wildlife Site,	170m South
Great Stour	River	250m South
West Blean and Thornden Woods	SSSI, Ancient Woodland, Priority Habitat Inventory - Deciduous Woodland	400m East
Woods adjacent to Canterbury City Park and Ride	Priority Habitat Inventory - Deciduous Woodland	700m Southeast
Dengrove Wood	Ancient Woodland, Priority Habitat Inventory - Deciduous Woodland	750m Northeast
Brickhouse Wood	Ancient Woodland, Priority Habitat Inventory - Deciduous Woodland	780m Northwest
Little Hall and Kemberland Woods and Pasture	Local Wildlife Site, Priority Habitat Inventory - Deciduous Woodland	800m Northwest

3 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, in accordance with 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 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 waste removed within 72 hours of receipt.	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 potential to reach River Gipping.	Infiltration through the ground or run-off direct to	Pollution of surface water potential impact on protected species.	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**
		surface water / drains from leakages				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	Plant serviced and maintained in accordance with manufacturer's recommendations. Compliance with NRMM regulations. Where plant is replaced, lower emissions models chosen where practicable.	Very 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 site and local water courses.	Infiltration through soil or surface water run-off	Pollution of groundwater or surface water	Medium	Medium	The site is provided with impermeable surfacing and sealed drainage. Ability to store water in footprint of sealed building floor.	Very Low

Table 3.1: Risk Assessment							
Hazard	**Receptor**	**Pathway**	**Consequence**	**Exposure Probability**	**Overall risk**	**Mitigation Measures**	**Residual Risk**
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 CONCLUSION

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

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

4.1.4 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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