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VALENCIA WASTE (SOMERSET) LIMITED

APPLICATION TO VARY PERMIT NUMBER EPR/BK6785IE

ACCIDENT AND AMENITY RISK ASSESSMENT

FEBRUARY 2024

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1 INTRODUCTION

1.1.1 Wardell Armstrong have been appointed to prepare an application to vary the permit for Walpole Landfill Site at Pawlett, near Bridgwater, Somerset. The site is operated by Valencia Waste (Somerset) Limited under permit number EPR/BK6785IE.

1.1.2 The landfill site is permitted to accept non-hazardous commercial, industrial and household waste as well as having a separate cell for asbestos.

1.1.3 The site also contains an AD site, open windrow compost facility, Waste Transfer Station and waste storage area, which is shared with Biffa.

1.1.4 Valencia is seeking to move waste up the waste hierarchy by treating mixed non-hazardous waste arriving at the landfill to recover materials for recycling. The waste will be further treated to recover recyclate and remove non-combustible material from the combustible waste before it is sent off site for energy recovery. The residual waste will be used in landfill engineering or will be placed in the landfill.

1.1.5 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.

1.1.6 Nevertheless, it is important that this is achieved whilst preventing any significant impacts on local residents and businesses or wildlife. This report provides an environmental risk assessment to support the variation application.

1.1.7 No asbestos will be treated. The measures in place for the safe disposal of asbestos into a dedicated cell within the landfill will continue.

1.1.8 Section 2 outlines the site setting and the possible receptors in the vicinity.

1.1.9 Section 3 provides a table identifying the potential risks posed by the site and setting out the control measures in place to break the source, pathway, receptor linkage and protect the environment.

2 RECEPTORS

2.1.1 Walpole Landfill Site lies approximately 3.5km north of the town of Bridgwater and the MRF building will be approximately 1.2km to the north-east of the village of Pawlett and 1.5km to the north of the village of Puriton. The surrounding area is a mainly agricultural setting.

2.1.2 The MRF lies c.490m from the M5 Motorway, and c.180m from a significant train line (Bristol to Exeter West Coast).

2.1.1 The closest residential and business sites are Rye Farm, c.820m to the south-east of the MRF, on the other side of the M5 Motorway and railway line, and the Emerald Pool Fishery c.800m to the north.

2.1.1 The closest major residential receptors are the village of Pawlett c.1.2km to the south-west of the MRF site, with the village of Puriton c.1.5km to the south.

2.1.1 A number of solar farm developments also exist to the -east of the site within c.1km, as well as a number of smaller farms, commercial developments and fish farms within 2km.

2.1.2 The boundary of the Severn Estuary Ramsar/SPA/SAR site is c.2km away from the MRF, with the Somerset Wetlands National Nature Reserve (NNR) boundary being just over c.1 km north of the MRF (Huntspill River).

2.1.3 The Bridgwater Bay SSSI overlaps with the Somerset Wetlands/Severn Estuary Ramsar and is c.2km away from the site.

2.1.4 Magic.gov.uk, accessed on 13/2/24 shows that there are also several priority habitats within c.2km of the MRF, including mudflats, coastal saltmarsh, as well as various areas of semi-improved grassland, lowland calcareous grassland, and deciduous woodland. Floodplain grazing marsh is indicated on parts of the landfill, including the area where the MRF will be built. However, aerial photography available from Magic and Google Maps shows that this is unlikely to be high quality habitat and it has certainly been within the permitted boundary of the landfill for the last twenty years.

2.1.5 The Huntspill River lies c.1km the north of the site boundary, while the Black Ditch and Walpole Rhyne, are 420m and 750m from the site of the MRF respectively. There are also a number of drainage ditches in the area.

2.1.6 The human receptors are considered sufficiently far away to limit the risk from emissions from the MRF operation, due to appropriate containment measures outlined in this Accident and Amenity Risk Assessment and elsewhere in the permit application.

2.1.7 The closest protected habitats and receptors are unlikely to be at risk from emissions from the additional shredding and sorting activity on site due to the control measures listed in this Accident and Amenity Assessment.

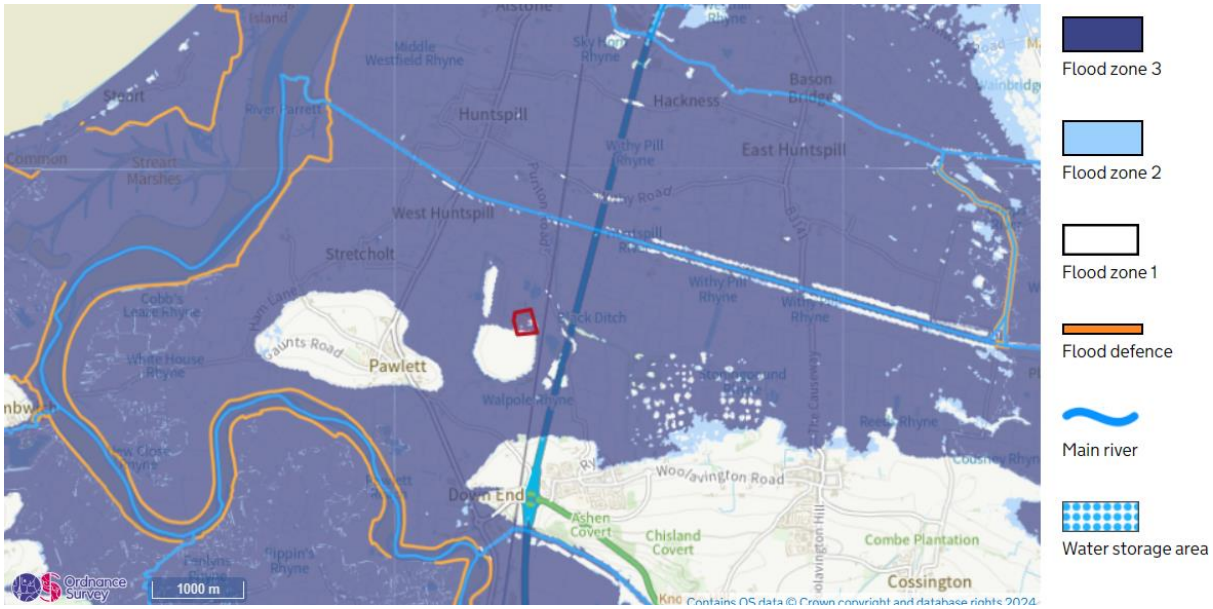
2.1.8 Table 2-1 below sets out the receptors in greater detail.

Table 2-1 Local Receptors within 2km (and SAC/SPA/RAMSAR sites within 10km)		
Receptor Type	**Receptor**	**Approximate Distance and Direction**
Residential/commercial	Rye Farm	820m South-east
Residential	Farms nr Down End	1.8km South
Residential	Farms on Pawlett Road	1.3m South
Residential	Houses in Pawlett	1.3km South West
Residential	Houses in Down End	1.8km South
Commercial	Warehousing / Logistics Units nr Dunball	1.95km South
Residential/Commercial	GJ Boyer Dairy Farm	1.45km North East
Residential/Commercial	Withy Water Campsite	1.88km North East
Residential/Commercial	Withy Road Houses / Farms	1.7km North
Residential	Stretcholt Hamlet	1.65km North West
Amenity	Puriton Primary School	1.9km South East
Commercial	Emerald Pool Fishery	800m North
Commercial	Gravity Business Park	2.4km South East
Commercial	Pawlett Service Station	1.4km West
Commercial	Sedgemoor Crematorium	1.3km North West
Commercial / Leisure	Puriton Sports Centre	1.5km South-East
Commercial	BCA Bridgwater and Car Showrooms	1.9km South-West
Major Amenity	Bristol – Exeter Rail Line	180m East
Major Amenity	M5 Motorway (J23 of M5)	490m East(1.8km South)
Protected Habitat	Severn Estuary RAMSAR	2km South West
Protected Habitat	Severn Estuary SAC	2km South West
Protected Habitat	Somerset Wetlands NNR (River Huntspill)	1km North
Protected Habitat	Bridgwater Bay SSSI	2km South West
Protected Habitat	Somerset Levels and Moors SPA	6km East
Protected Habitat	Somerset Levels and Moors RAMSAR	6km East
Protected Habitat	Catcott Edington and Chilton Moors SSSI	6km East
Protected Habitat	Somerset Wetlands National Nature Reserve	2.27km South
River / Ditch	Walpole Rhyne	130m East
River / Ditch	Black Ditch	400m North East

The site is located in a Flood Zone 3, land with a 1 in 100 (1%) or greater chance of flooding each year from Rivers. This value disregards the flood defences which are present around the

River Parrett. These defences are located around the southern and western extent of the river in proximity to the site as shown on Figure 1.

Figure 1 – Flood Risk Map[1]



2.1.9 The River Huntspill to the north of the site is a channelised river constructed in the 1940s with an artificially managed water level controlled via a series of sluice gates, pumping stations and drains.

2.1.10 The Black Ditch runs parallel to the Huntspill River and bounds the landfill site to the north creating a further level of protection from flooding on site.

2.1.11 With regards to flood risk from rivers it is likely that the flood defences along the River Parrett will reduce the likelihood of flooding at the site.

2.1.12 If flooding does occur the waste is contained within a building. The building is designed to capture any leachate, with the floor sealed to the building walls. This will keep flood water out to a certain level, with water needing to be more than 90mm above the concrete pad to enter the building.

2.1.13 The currently operational part of the landfill site on which the MRF is located is also in Flood Zone 3. As the waste entering the MRF would otherwise end up in the landfill it is considered that the addition of the MRF will not add any further risk to the site from

[1]https://flood-map-for-planning.service.gov.uk/flood-zone-results?polygon=[[331347,143402],[331525,143437],[331591,143178],[331374,143159],[331328,143316],[331347,143402]]&center=[331459,143298]&location=TA6%25204TF

flooding. The risk of pollution would be the same from the landfill regardless of if the MRF was located on top of it or not.

2.1.14 The site is located on a landfill site which has been designed and engineered to shed water from the surface to maintain integrity of the engineered cap. Therefore, it is likely that water will run off from the site in accordance with the falls of the land in regard to pluvial/surface water flooding and be captured by the surface water management system/ site drainage.

3 RISK ASSESSMENT AND MANAGEMENT

3.1.1 For the receptors outlined above to be at risk there must be a source of pollution (including noise) 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 by putting control measures in place to break the pathway and prevent pollution reaching the receptors, e.g. 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 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.

3.1.4 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.

3.1.5 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.

3.1.6 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. [The public are offered the opportunity of a local liaison group and meetings will be held at a frequency led by the local community].

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. Sleeping policeman at entrance to prevent any liquid leaving the building. Liquids (eg oil for plant maintenance) stored in appropriate containers with secondary containment. Flood risk assessment completed for planning application.	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**
			Quantity of flammable waste in line with EA Fire Prevention Plan guidance, waste treated in 72 hours to avoid self-heating. Combustible waste to be removed from site within 72 hours. 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.		
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 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	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.	Low	Noise or pollution as result of breakdown.

4 CONCLUSION

4.1.1 The MRF has been suitably located away from other sensitive receptors and is unlikely to create further disruption to local amenities due to this factor, and other containment measures listed in this Risk Assessment.

4.1.2 Sensitive human receptors are over 800m away with major residential receptors being more than 1km away. with site hazards including noise, fire and dust being able to be contained on the MRF.

4.1.1 Sensitive habitats are also considered and those with statutory protection are located c.1km or more away from the MRF. Some BAP priority habitats are closer to the site with grazing marsh being shown present on site. However, the areas within the site are not considered to represent good quality habitat as they have been part of the permitted landfill for the last 20 years. Images on google maps indicate the area where the MRF will be built has already been subject to some development.

4.1.2 Containment measures for the MRF as set out in this application, are in place to minimise the risk of emissions reaching sensitive receptors.

4.1.3 Measures are in place to minimise 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.

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

4.1.5 Therefore, the operation of the MRF is not expected to increase the risk of the site beyond that of the existing permitted landfill and other waste activities.

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