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VALENCIA WASTE (SOMERSET) LIMITED

APPLICATION TO VARY PERMIT NUMBER EPR/BK6785IE

HABITATS RISK ASSESSMENT

JUNE 2023

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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 existing landfill is permitted to accept non-hazardous commercial, industrial and household waste as well as having a separate cell 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, plastic and wood for recycling. The waste will be further treated to remove non-combustible material 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.
- 1.1.4 No asbestos will be treated. The measures in place for the safe disposal of asbestos into a dedicated cell within the landfill will continue as currently permitted.
- 1.1.5 This document provides a summary of the protected habitats nearby and the manner in which these will be protected. Section 2 describes the site operations. Section 3 describes the protected habitats that are present in the area. Section 4 describes the measures that will be in place on the site to prevent emissions to air, water and land and so protect the local human population and wildlife.

2 SITE OPERATIONS

- 2.1.1 The site is currently permitted as a non-hazardous landfill with a specialist cell for the acceptance of asbestos waste. Valencia is seeking to improve rates of recycling and recovery and so are seeking variation of the permit to include a Materials Recycling Facility (MRF).
- 2.1.2 The purpose of the MRF will be to sort mixed waste to recover ferrous and non-ferrous metal, wood and plastic for recycling elsewhere. Waste will undergo an initial shred where necessary to present a material that is less than 300mm across to the recycling plant.
- 2.1.3 The waste will pass through a trommel to separate it into three separate waste streams. The fine material will be stored in a dedicated bay for use as landfill cover or to be disposed of in the landfill. The other waste streams will pass through various pieces of sorting equipment to generate non-ferrous metal, ferrous metal, wood and plastic for recycling and a light fraction comprising the most combustible waste for use as refuse derived fuel (RDF). The sorting process will also generate a heavy fraction comprising glass, stone and similar materials.
- 2.1.4 The heavy fraction will be used for access roads on the landfill or for landfill cover. The RDF will be sent to an R1 compliant energy recovery facility (ERF).
- 2.1.5 All of the sorting machinery and waste storage will be housed in a suitable building to contain any emissions.

3 PROTECTED HABITATS

- 3.1.1 There are a number of protected habitats within 2km of the site, including a Site of Special Scientific Interest (SSSI), a National Nature Reserve (NNR) and the Severn Estuary Special Protection Area (SPA) / Ramsar site.
- 3.1.2 Within 10km there is also the Somerset Levels and Marshes SPA / Ramsar area.
- 3.1.3 The Living England Habitat map shows the MRF and landfill site are immediately surrounded by calcareous grassland to the south, east and west, beyond the site perimeter, with salt marsh, improved grassland and small lagoon habitats nearby. A small area of broadleaved woodland is 200m east of the MRF.
- 3.1.4 Two marshland ditches, the Walpole Rhyne and Black Ditch (c.50m and c.400m north from the MRF respectively) are close to the site, with the River Huntspill c.1km north of the MRF site boundary.
- 3.1.5 Natural England citations have been used where appropriate throughout the habitat assessment, to ascertain the status of protected habitats.

3.2 Special Protection Areas (SPA) / RAMSAR

- 3.2.1 There are two Special Protection Areas / RAMSAR within 10km of the site. Due to the containment facilities available on site to control emissions and the distances involved, it is not expected the MRF will have any impact on these ecosystems.
- 3.2.2 The Severn Estuary SAC / SPA / RAMSAR¹ comprises of one of the largest estuaries in Britain, with the second largest tidal range in the world. This tidal estuary includes globally significant salt marshes, supporting breeding wildfowl and wader bird species with the presence of overwintering bewick swans being one reason for designation as an SPA. Habitats include dunes, coastal grassland, sand and shingle beaches, salt marsh and lagoons, as well as a diverse marine environment. Bird species include, among others, ringed plover, European white fronted geese, dunlins, redshanks, pintails, pochards and tufted ducks. The habitats of the estuary also support a range of invertebrate species.
- 3.2.3 The Somerset Levels and Moors SPA² consists of a series of SSSIs within the largest area of lowland wet grassland, and associated wetland habitat remaining in Britain. It

¹ Natural England, 2014. Citation available at:

<https://publications.naturalengland.org.uk/publication/5601088380076032>

² Natural England, 2014. Citation available:

<https://publications.naturalengland.org.uk/publication/4598158654963712>

covers about 35,000 ha in the flood plains of the Rivers Axe, Brue, Parrett, Huntspill, Tone and their tributaries. The majority of the SPA is only a few metres above mean sea level and drains through a large network of ditches, rhynes, drains and rivers. Parts of the site in the Brue Valley include areas of former raised peat bog which have now been substantially modified by agricultural improvement and peat extraction which has created areas of open water, fen and reedbed. The site attracts internationally important numbers of wildfowl in winter and is one of the most important sites in southern Britain for breeding waders. The network of ditches support a range of aquatic invertebrates and aquatic plant species.

3.3 National Nature Reserve (NNR)

3.3.1 The Somerset Wetlands NNR³ is over c.1km from site, as it follows the Huntspill River, overlapping significantly with the adjacent Bridgwater Bay SSSI, Somerset Levels RAMSAR / SPA and Severn Estuary SPA/RAMSAR/SAC. It is an ecologically significant nature reserve, with important flora and fauna including a range of wading birds.

3.4 Sites of Special Scientific Interest (SSSI)

3.4.1 There is one SSSI within 2km of site, the Bridgwater Bay SSSI.

3.4.2 The Bridgwater Bay SSSI⁴ (boundary c.2km away from the site boundary to the south-west) provides an intertidal mudflat and saltmarsh environment for waterfowl and wading birds. The site supports a significant migrating bird population, some important invertebrate species including beetles and damselflies and a range of important flora.

3.5 Local Nature Reserve (LNR)

3.5.1 There are no LNRs within 2km of the site boundary.

3.5.2 A summary of the surrounding protected habitat receptors is presented in Table 3.1.

³ Natural England, 2022. Report/Citation available at:

<https://www.gov.uk/government/publications/somersets-national-nature-reserves/somersets-national-nature-reserves#somerset-wetlands>

⁴ Natural England, 1989. Citation available at:

<https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1001145.pdf>

Table 3.1 Protected Habitat Sites within 2km (including RAMSAR/SAC sites within 10km)

Receptor	Reason for Designation	Approximate Distance and Direction
Severn Estuary SPA	Significant waterfowl / wader bird species, saltmarsh/coastal habitat	2km South-West
Severn Estuary SAC	Significant waterfowl / wader bird species, saltmarsh/coastal habitat	2km South-West
Severn Estuary RAMSAR	Significant waterfowl / wader bird species, saltmarsh/coastal habitat	2km South-West
Somerset Levels and Moors SPA	Wetland / Marsh Habitats and Wader Bird / Invertebrate Species	6km East
Somerset Levels and Moors RAMSAR	Wetland / Marsh Habitats and Wader Bird / Invertebrate Species	6km East
Somerset Wetlands NNR	Wetland / Marsh Habitats and Wader / Invertebrate Species	1km North
Bridgwater Bay SSSI (River Parrett)	Saltmarsh Habitats and Wader / Waterfowl / Invertebrate Species	2km South-West
River Huntspill	Uncommon plants and riverine environment, salt marsh and part of NNR area.	1km North

3.5.1 The MRF lies within the current landfill footprint and does not impose directly on any protected habitat.

4 CONTROL MEASURES

4.1 Contaminated Water

- 4.1.1 The protected habitats may be vulnerable to toxic contamination or eutrophication via chemicals leaching from the waste and dispersing via surface water or groundwater. To prevent this from happening all waste will be unloaded, stored, treated and loaded into vehicles inside the building. The quarantine area may be external to the building but will have impermeable surfacing and fully sealed drainage to prevent any emissions to water.
- 4.1.2 As waste is generally stored inside the building, the building roof and walls will prevent rainwater from entering the waste and will minimise any free liquid that may run-off.
- 4.1.3 Should any leachate arise, the building is provided with an impermeable concrete floor which will form an effective barrier and prevent leachate escaping the site. A 240 cubic metre sump will be provided and any run-off from the waste will be directed to this sump, from where it can be safely collected and disposed of.
- 4.1.4 In case of a fire additional storage will be provided by a sleeping policeman at the site entrance. Any firewater coming into contact with waste will run to the sump. Should the sump become full the sleeping policeman across the doorway will ensure that any firewater is held on the building floor. Following the fire this water can be removed by tanker.
- 4.1.5 Any diesel or oils kept on site for the operation of site plant will be stored in appropriate tanks or drums and will be provided with bunding to allow secondary containment. Such bunding will be designed to hold 110% of the contents of the largest vessel within the bund so as to ensure that nothing will escape in the event of a leak or spill.
- 4.1.6 Measures are therefore in place to prevent contaminated water leaving the site and entering any watercourses, protecting the Walpole Rhyne and Black Ditch which are within close proximity of the site and direct receptors.

4.2 Litter

- 4.2.1 Litter can pose a danger to wildlife, and it is important that it is contained.
- 4.2.2 To prevent litter leaving the site waste will be delivered and removed in enclosed vehicles, open vehicles must be sheeted.

- 4.2.3 Vehicles will unload inside the building. All waste storage and treatment will also take place inside the building. The operation will therefore be protected from the wind and any litter should be contained.
- 4.2.4 The building door will be kept closed as far as possible to prevent fugitive emissions of litter.
- 4.2.5 The site will be inspected on a daily basis and any litter will be collected and returned to the appropriate waste storage bay inside the building with an appropriate litter pick.
- 4.3 **Dust**
- 4.3.1 There may be a risk of dust arising from the treatment of waste. Dust can cause smothering of vegetation if uncontrolled. To minimise dust emissions the main control is for waste to be unloaded and treated inside the building. As far as possible the doors will be kept closed, to provide a high level of containment for any dust.
- 4.3.2 All site plant will be maintained and serviced in line with the manufacturer's recommendations to prevent excessive emissions.
- 4.3.3 The 3-way separator (large screener) is fitted with local air extraction which will direct air via a dust filter. This discharges air back inside the building. Where light materials leave the 3-way separator a spray bar is provided to damp down dust.
- 4.3.4 Vehicles entering and leaving the site must be enclosed or sheeted to prevent windblown litter or dust. Vehicles will be checked before leaving the site and must use the wheel wash where appropriate to prevent dust and mud being tracked out of the site.
- 4.3.5 The site roads will be properly maintained and swept as necessary. In addition, a 10 mile and hour speed limit will be imposed so as to minimise the potential for raising dust settled on the road.
- 4.3.6 A water supply is available on site and will be utilised where necessary to damp down dusty areas of the site.
- 4.3.7 Further containment is listed within the proposed Dust Management Plan.

4.4 **Fire and Smoke**

- 4.4.1 The Materials Recycling Facility has a Fire Prevention Plan prepared in line with the Environment Agency's guidance. The site is provided with suitable firewalls and the size of waste stockpiles will be limited.
- 4.4.2 Waste will be turned round on a first in first out basis and will not be stored on site for more than 24 hours before treatment, limiting the chances for self-heating. Waste will be removed from site on a regular basis with all potentially flammable waste taken off site within 72 hours.
- 4.4.3 The site will be fitted with a fire detection system and a deluge fire suppression system using a water cannon. The fire suppression system can be triggered manually or automatically, so that it will operate out of hours if the detection system picks up indications of a fire.
- 4.4.4 Good housekeeping will be employed to ensure that dust and debris do not build up on hot surfaces or anywhere where they may pose a fire hazard. Mobile plant will be parked at least 6m away from the waste inside the building.
- 4.4.5 A firewatch will be undertaken at the end of each working day and during and after any hot works (eg welding) to ensure that no embers are present.
- 4.4.6 The measures in place will help prevent fires and prevent the spread of fire, should one occur limiting the potential for fire or smoke damage to receptors nearby.

4.5 **Noise**

- 4.5.1 Some new equipment will be installed at the site. This has the potential to generate noise. However, the building will provide a degree of attenuation. Given the proximity of the existing landfill and nearby railway, motorway, Waste Transfer Station and AD plant, the noise emissions anticipated are not expected to generate any disturbance above that already present.

5 SUMMARY

- 5.1.1 Valencia is varying their permit to allow the installation of new equipment to sort waste. Overall, this will have a positive environmental benefit, allowing more waste to be sorted for recycling or energy recovery and reducing waste to landfill.
- 5.1.2 There are a number of protected habitats that have been identified around the site, however, the majority have been identified as being over 2km away.
- 5.1.3 The Severn Estuary SPA/RAMSAR/SAC, Somerset Levels SPA/RAMSAR (6km away), Bridgwater Bay SSSI and Somerset Wetlands NNR have been identified as the main sensitive habitats surrounding the MRF, as well as the Walpole Rhyne, Black Ditch and River Huntspill being potential riverine receptors by which water-borne emissions could enter nearby habitats. The control measures in place to prevent emissions including noise, dust, airborne and water-borne emissions contaminants, fire risk and smoke, should be sufficient to protect these habitats.
- 5.1.4 The site has an Accident and Amenity Risk Assessment, Dust Management Plan and Fire Prevention Plan in place. It is also provided with appropriate impermeable surfacing and sealed drainage to prevent pollution spreading via soils or groundwater. Good housekeeping procedures will be in place to minimise the risks of dust and litter, preventing emissions from reaching these receptors.

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