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SYRACUSE WASTE LIMITED

PRIORSWOOD TRANSFER STATION, COMPOSTING AND HWRC

ENVIRONMENTAL RISK ASSESSMENT

JULY 2023

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Wardell Armstrong
Sir Henry Doulton House, Forge Lane, Etruria, Stoke-on-Trent, ST1 5BD, United Kingdom
Telephone: +44 (0)1782 276 700 www.wardell-armstrong.com

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PREPARED BY:

Dominiqua Drakeford-Allen — Principal Waste & Resources Consultant

APPROVED BY:

Alison Cook — Technical Director

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1 INTRODUCTION

1.1.1 Wardell Armstrong have been commissioned by Syracuse Waste Limited (Biffa) to vary the environmental permit for their waste management facility in Priorswood, Taunton. The permit, reference EPR/KB3605KR, permits multiple waste activities, which are; a Household Commercial and Industrial (HCI) waste transfer station (with treatment and asbestos storage), a non-hazardous and hazardous household waste amenity site (also known as the Household Waste Recycling Facility (HWRC)), and open windrow composting (also known as the Open Windrow Composting Facility (OWCF)).

1.1.2 The permit is held by Syracuse Waste Limited (Biffa) which is a wholly owned subsidiary of Biffa , following the acquisition of the site in August 2021. Since the acquisition, Biffa have sought to optimise the site environmental monitoring regime, formally add waste codes previously accepted under a registered exemption, add some other waste codes and review the storage location of wastes, which are currently restricted in the extant permit based on standard rules conditions which are not applicable for the bespoke permit. In summary, the variation seeks to:

- Include additional waste streams accepted to the HCI Transfer Station and HWRC;
- Change the waste storage layout on site;
- Relocate the monitoring points for both dust and odour monitoring.

1.1.3 The additional wastes to be added are largely already accepted onto site under a registered exemption[1]. Other wastes to be added to the permit for storage and transfer include those that are similar to wastes already accepted, for example:

- The storage and transfer of liquid hazardous wastes (such as antifreeze fluids);
- Gases in pressure containers containing hazardous substances;
- Healthcare wastes (such as sharps).

1.1.4 There will be no increase in volumes of waste throughput into site, change to the waste treatment activities carried out on site, nor extension to the permitted site boundary[2].

[1] S2 waste exemption: storing waste in a secure place - GOV.UK (www.gov.uk)
[2] A Partial surrender application will be submitted at the same time as this variation application, to remove two parts of land which are not operated on under permit EPR/KB3605KR.

1.1.5 This Environmental Risk Assessment has been prepared to demonstrate that the impacts of the proposed changes will be acceptable, and how the risks to the environment and nearby sensitive receptors have been prevented or controlled.

1.1.6 The site will continue to operate in accordance with a formal integrated environmental management system, and site specific management plans including a Fire Prevention Plan, Odour Management Plan and Dust Management Plan.

2 ENVIRONMENTAL RISK ASSESSMENT

2.1 Receptors

2.1.1 Priorswood waste management facility is located on the Crown Industrial Estate, Taunton off the A3259. The site lies on flat land adjacent to the River Tone to the south and Bridgewater and Taunton Canal to the north. To the immediate south is the main west country railway line.

2.1.2 An assessment of receptors within 1km of the site has been carried out using DEFRA's Magic Map website[3]. This assessment identified potentially sensitive receptors, in particular there are several residential developments in relatively close proximity to the site, the closest is Maidenbrook housing estate situated 100m to the north. To the west there are several commercial and industrial activities.

2.1.3 Data available on DEFRA's Magic Map indicates the presence of Local Nature Reserves (LNRs) within 2km of the Site; Children's Wood and Riverside LNR located approximately 50m to the south of the Site, and also to the south lies South Taunton Streams located approximately 1.2km away from the Site boundary. A Habitats Risk Assessment Report has been prepared in order to assess the potential impact from the Site to the LNRs.

2.2 Risk and mitigation measures

2.2.1 Table 2.1 below identifies the risks to the environment or people that might be posed by the changes on site (as described in Section 1) and confirms how these risks are to be controlled in order to protect the environment.

[3] Magic Map Application (defra.gov.uk)

Table 2.1 Environmental Risk Assessment								
Issue	**Source**	**Pathway**	**Receptor**	**Harm**	**Probability**	**Risk Management**	**Probability with management in place**	**Residual Risk**
Odour	Incoming waste	Via the air	Nearby residents	Nuisance	Low	Strict adherence to the waste pre-acceptance and waste acceptance procedures are followed to ensure only compliant wastes are accepted. Any highly odorous wastes will be rejected. Waste treatment will be carried out within the recycling building. The Site operates in accordance with an Odour Management Plan.	Low	Low
Odour	Compost feedstock storage pile and open windrows at Composting facility	Via the air	Nearby residents	Nuisance	Medium	Odour Management Plan in place for the Composting facility, monitoring locations to be relocated to improve monitoring to ensure optimal monitoring locations.	Medium	Medium

Table 2.1 Environmental Risk Assessment								
Issue	**Source**	**Pathway**	**Receptor**	**Harm**	**Probability**	**Risk Management**	**Probability with management in place**	**Residual Risk**
Dust	Incoming waste, tipping, loading and storage of waste	Via the air	Nearby residents	Human health, respiratory illness and irritation	Low	Additional waste types are not likely to generate fugitive emissions of dust, and are similar in nature to existing permitted waste codes. Sorting of waste carried out inside the recycling building. Waste stored in containers and storage bays are monitored frequently to ensure the container capacity is adequate to avoid overspilling.	Low	Low
Dust	Compost feedstock storage pile and open windrows at Composting facility	Via the air	Nearby residents	Human health, respiratory illness and irritation	Medium	Dust Management Plan in place, monitoring locations to be relocated to improve monitoring.	Medium	Medium
Noise	Tipping and processing of waste	Via the air	Nearby residents, loss of amenity	Nuisance	Low	No changes to waste processing or treatment procedures. New waste streams to be accepted to	Low	Low

Table 2.1 Environmental Risk Assessment								
Issue	**Source**	**Pathway**	**Receptor**	**Harm**	**Probability**	**Risk Management**	**Probability with management in place**	**Residual Risk**
						site are similar to those already accepted.		
Litter	Incoming waste	Windblown	Nearby residents or wildlife	Nuisance, injury to wildlife	Low	HCI Transfer station: Small vans tip waste into storage containers outside of the recycling building, waste then moved inside the transfer station building to be sorted. These containers are emptied by the end of the operational day. Daily site inspections are carried out. Any litter noted is collected and placed in a the correct container. The site operates with housekeeping procedures in place. Waste stored in containers or storage bays and monitored frequently to ensure the	Low	Low

Table 2.1 Environmental Risk Assessment								
Issue	**Source**	**Pathway**	**Receptor**	**Harm**	**Probability**	**Risk Management**	**Probability with management in place**	**Residual Risk**
						container or bay capacity is adequate to avoid overspilling.		
Pests	Incoming waste and waste stored on site	Attraction of pests to odour in waste	Nearby residents	Nuisance, spread of disease	Low	Majority of wastes to be added to the permit are unlikely to attract pests and vermin (e.g. food wastes). Wastes which may attract pests/vermin such as animal tissue and anatomical wastes are covered up to prevent attraction to flies. Storage times of wastes are kept to a minimum and operate on a first in, first out principle. Daily site inspections carried out and site operates with good housekeeping procedures.	Low	Low
Risk of Fire	Fire in stored wastes	Smoke or flame via air or contamination of water via	Groundwater, surface water and local residents	Respiratory issues due to smoke. Contamination of water supply,	Possible likelihood with no controls	The site already accepts a range of combustible wastes, and operates in accordance with a Fire Prevention Plan. Waste storage times are kept as short as	Low	Low

Table 2.1 Environmental Risk Assessment								
Issue	**Source**	**Pathway**	**Receptor**	**Harm**	**Probability**	**Risk Management**	**Probability with management in place**	**Residual Risk**
		fire fighting water		damage to wildlife		possible, reducing the risk of combustion. The site operates on a first-in, first-out policy to ensure wastes are stored for as little time as possible.		
Pollution of groundwater or surface water	Spillage of liquid waste (e.g. anti-freeze, oil)	Direct run-off from site across ground surface, infiltration through the ground	Surface waters close to the site (Taunton Canal and River Tone), Groundwater	Contamination of surface water, harm to wildlife, pollution to groundwater	Possible likelihood with no controls	All liquids shall be provided with secondary containment. Waste is stored on an impermeable surface with sealed drainage. Spill kits in place on site and staff trained to deal with spills. Drainage from the baler area drains to the foul sewer network and then discharges to foul sewer. . Drainage from the HWRC area drains to the foul sewer network and then discharges to foul sewer.	Low	Low

Table 2.1 Environmental Risk Assessment								
Issue	**Source**	**Pathway**	**Receptor**	**Harm**	**Probability**	**Risk Management**	**Probability with management in place**	**Residual Risk**
Pollution of groundwater or surface water	Failure to contain firewater	Direct run-off from site across ground surface, infiltration through the ground	Surface waters close to the site (Taunton Canal and River Tone), Groundwater	Contamination of surface water, harm to wildlife, pollution to groundwater	Possible likelihood with no controls	Site operates in accordance with a Fire Prevention Plan. Firewater containment measures in place as detailed in the Fire Prevention Plan.	Low	Low
Ozone depleting substances: Chlorofluoro carbons, HCFC, HFC,	Releases of vapours and polluting gases from wastes	Via the air, inhalation	Local human population	Harm to human health, respiratory irritation and illness	Low	No treatment, storage only pending removal from site. Wastes inspected for damage, and appropriately stored in a container	Low	Low
Damaged components of waste, e.g. batteries, small WEEE	Releases of hazardous substances, contaminated leachate or water run off	Across ground, through the ground	Ground contamination, groundwater and surface water contamination	Contamination of surface water, harm to wildlife, pollution to groundwater	Low	All hazardous wastes will be stored securely in containers on an impermeable surface.	Low	Low
Extreme weather	Increase in likelihood of	Climate	Local human population, local	Respiratory irritation, illness	Increasingly likely	The site already accepts a range of combustible wastes, and	Low	Low

Table 2.1 Environmental Risk Assessment								
Issue	**Source**	**Pathway**	**Receptor**	**Harm**	**Probability**	**Risk Management**	**Probability with management in place**	**Residual Risk**
conditions – prolonged hot weather	self-combustion of combustible waste being stored		environment, surface and ground waters	and nuisance to local population. Injury to staff or firefighters. Pollution of water or land.		operates in accordance with a Fire Prevention Plan. The site is managed to the shortest storage times as possible, with first-in, first-out principals in place.		
Contamination/spread of disease	Healthcare waste	Accidental contamination, improper handling or storage of waste types	Site visitors (members of the public)	Spread of infectious diseases	Medium	Wastes securely stored in appropriate packaging. Wastes managed appropriately in accordance with the relevant appropriate measures and Environment Agency guidance.	Low	Low
Release of volatile organic compounds (VOCs)	Wastes which could produce VOCs being exposed (e.g. evaporating paints or solvents)	Through the air	Local human population	Human health, irritation to eyes, nose, throat, skin, Respiratory irritation	Low	Wastes will be stored in secure, sealed containers and won't be exposed on site. Waste storage is managed on a first-in, first-out principal to ensure wastes are stored for the minimal amount of time.	Low	Low

3 CONCLUSION

3.1.1 Comprehensive control measures are in place to protect the environment and the site operator manages the site in accordance with an EMS to ensure that risks are managed and plant and equipment are properly maintained to prevent pollution.

3.1.2 Although the variation seeks to add additional waste streams, the safe handling and storage of these wastes provides adequate environmental protection. The review of the waste storage locations on site has prompted an update to the Fire Prevention Plan, to ensure the risk of fire is prevented.

3.1.3 Additionally, the intention of relocating the monitoring points for both dust and odour monitoring ensures that they are in the optimal locations to monitor at points with more potential to impact sensitive receptors, enhancing the site's monitoring regime.

3.1.4 It is considered that sufficient site infrastructure is in place and the environmental risks posed are mitigated against for the permit variation to be issued.

wardell-armstrong.com

STOKE-ON-TRENT
Sir Henry Doulton House
Forge Lane
Etruria
Stoke-on-Trent
ST1 5BD
Tel: +44 (0)1782 276 700

BIRMINGHAM
Two Devon Way
Longbridge Technology Park
Longbridge
Birmingham
B31 2TS
Tel: +44 (0)121 580 0909

BOLTON
41-50 Futura Park
Aspinall Way
Middlebrook
Bolton
BL6 6SU
Tel: +44 (0)1204 227 227

BRISTOL
Temple Studios
Temple Gate
Redcliffe
Bristol
BS1 6QA
Tel: +44 (0)117 203 4477

BURY ST EDMUNDS
Armstrong House
Lamdin Road
Bury St Edmunds
Suffolk
IP32 6NU
Tel: +44 (0)1284 765 210

CARDIFF
Tudor House
16 Cathedral Road
Cardiff
CF11 9LJ
Tel: +44 (0)292 072 9191

CARLISLE
Marconi Road
Burgh Road Industrial Estate
Carlisle
Cumbria
CA2 7NA
Tel: +44 (0)1228 550 575

EDINBURGH
Great Michael House
14 Links Place
Edinburgh
EH6 7EZ
Tel: +44 (0)131 555 3311

GLASGOW
24 St Vincent Place
Glasgow
G1 2EU
Tel: +44 (0)141 428 4499

LEEDS
36 Park Row
Leeds
LS1 5JL
Tel: +44 (0)113 831 5533

LONDON
Third Floor
46 Chancery Lane
London
WC2A 1JE
Tel: +44 (0)207 242 3243

NEWCASTLE UPON TYNE
City Quadrant
11 Waterloo Square
Newcastle upon Tyne
NE1 4DP
Tel: +44 (0)191 232 0943

TRURO
Baldhu House
Wheal Jane Earth Science Park
Baldhu
Truro
TR3 6EH
Tel: +44 (0)187 256 0738

International office:

ALMATY
29/6 Satpaev Avenue
Hyatt Regency Hotel
Office Tower
Almaty
Kazakhstan
050040
Tel: +7(727) 334 1310

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