

Clear-A-Way Recycling Transfer Station	<h1>Environmental Risk Assessment</h1>	
Document Reference: CAW-ERA-V1	Issue Number: 2	Issue Date: 13.3.2022

INTRODUCTION

- 1.1 A risk assessment has been undertaken¹, to assess the risk to local amenity, surface water, air and groundwater. The assessment assesses the additional risk associated with the proposed variation. It relates to the following waste facility:

Clear-a-way Recycling Transfer Station
Archers Field
Burnt Mills Industrial Estate
Basildon
Essex
SS13 1DH

- 1.2 The Environmental Permit was originally issued on 15 September 2010. A Standard Rules permit was issued, SR2008 No1. This was replaced in 2017 by SR2015 No6, Household, Commercial and industrial waste transfer station with treatment.
- 1.3 This Risk Assessment considers the risk associated with increasing the annual throughput to 150,000 tonnes per annum, increasing the site boundary and receiving EWC 191212 (other wastes (including mixtures of materials) from mechanical treatment of waste other than those mentioned in 191211).
- 1.4 The 191212 code will only apply to mixed residual waste (mixed plastics, paper, cardboard, wood etc) that has been produced at other waste sites. It will not include trommel fines.
- 1.5 To establish whether there could be harm to the environment or human health, the sources, pathways and receptors need to be identified.

Source

- 1.6 The operations at the site will involve using bespoke processing equipment to manage waste more efficiently. The incoming waste will be unloaded into a storage bay and transferred into an automatic baling and wrapping machine. The bales will be completely sealed and stored in a bay. The operator has a fleet of articulated HGVs and transport will be arranged daily to remove storage bales. This will be a continual process to manage the increased throughput. The storage capacities at the site will not change.
- 1.7 The site has more land to ensure efficient operations. The loading will take place on the adjoining land. A forklift will be permanently based at the site and used to load bales into the articulated lorry. Using the adjoining land for loading reduces any interference with the operational processes, to ensure continuous processing.

¹ <https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit>

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Pathway

- 1.8 The main routes for contaminants will be ground cover, the atmosphere, surface water runoff and groundwater. Vectors such as birds and pests may also act as a pathway.

Receptors

- 1.9 The receptors are listed in Table 1 and shown in Figure 1.
- 1.10 The nearest residential properties are approximately 120m South East of the site. The change to the site boundary does reduce this distance.
- 1.11 The permitted site is surrounded by industrial uses, including other waste operators. It is separated from all residential receptors by other industrial occupants.
- 1.12 In addition, the underlying groundwater also needs to be considered as a receptor.
- 1.13 The Bedrock Geology comprises of the London Clay Formation. The Superficial Deposits comprise of Head, clay, silt and gravel.
- 1.14 The underlying superficial deposits are a Secondary Undifferentiated. The bedrock geology is unproductive. The groundwater vulnerability is Medium-Low. There are no Groundwater Source Protection Zones in the vicinity of the site. The groundwater is therefore a low risk receptor.
- 1.15 The River Thames is approximately 18.7km south of the site. There are no other nearby surface waters. The River Crouch is approximately 3km north of the site.
- 1.16 The nearest ecological designations are:
- Pitsea Marsh SSSI (2.9km south of the site)
- 1.17 There is an Ancient Woodland south of the site. The change to the permit boundary does not reduce the distance between the site and this receptor.
- 1.18 There are no Listed Buildings or Scheduled Monuments in the local area.
- 1.19 The site is located not located in an Air Quality Management Area.
- 1.20 People who are authorised to be on the site are covered specifically by the Health & Safety at Work Act 1974.

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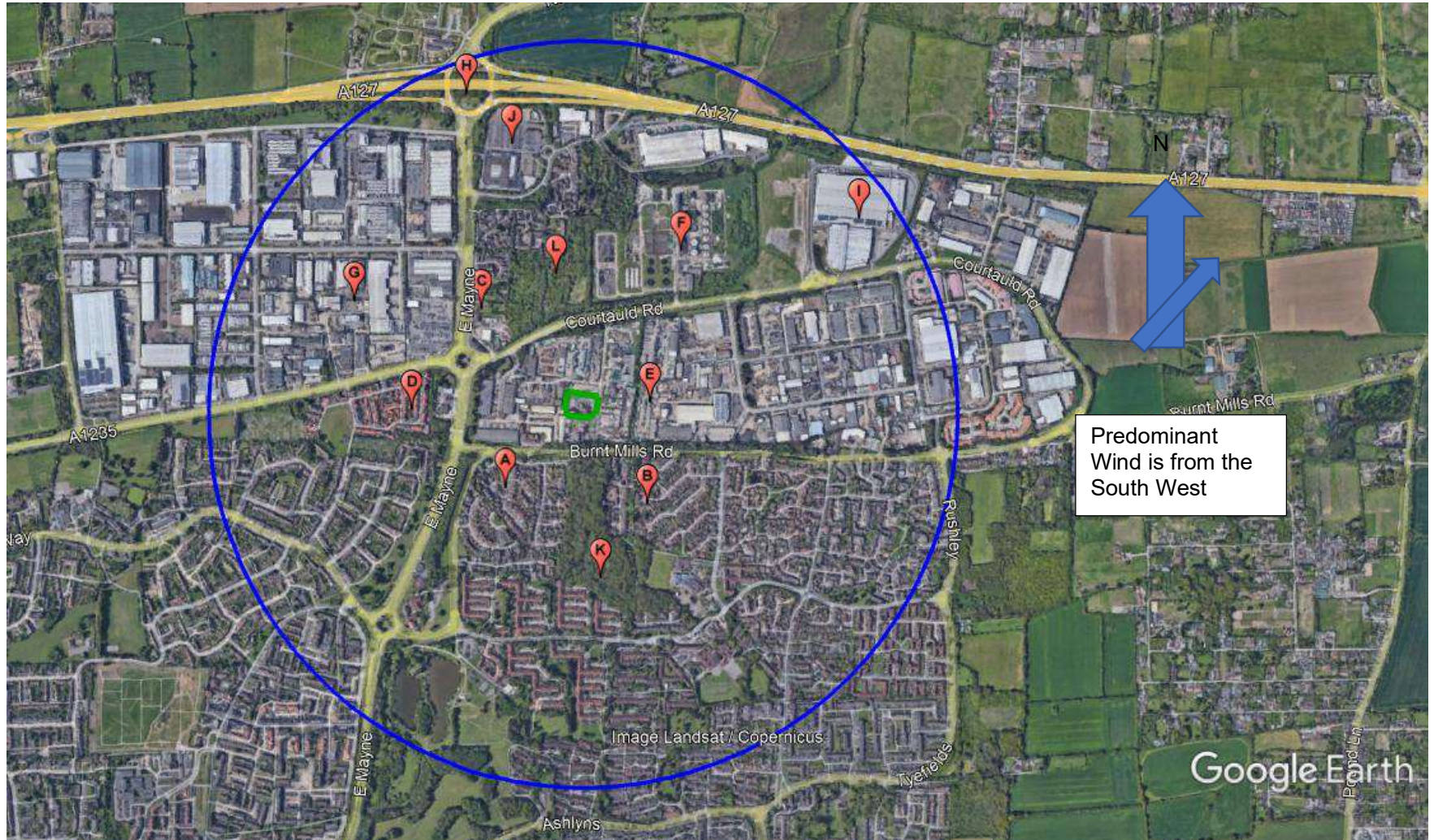
Table 1 Nearest Receptors and Sensitivity

Receptor	Type	Sensitivity	Distance and Direction from Permitted site
A	Residential	High	130m South
B	Residential	High	120m South East
C	Residential	High	290m North West
D	Residential	High	365m West
E	Industrial	Low	Adjoining all directions
F (Sewage Works)	Industrial	Low	290m North East
G	Industrial	Low	335m North West
H	Road	Low	790m North
I (MBT Plant)	Industrial	Low	720m North East
J	Retail	Medium	580m North West
K	Ancient Woodland	High	140m South
L	Priority Habitat	Medium	205m North

Summary

- 1.21 The risk assessment identifies the likelihood of harm occurring, the consequences and magnitude if harm is caused. The magnitude has been justified based on site specific knowledge.
- 1.22 In summary, the assessment demonstrates that the acceptance of the additional tonnage and changes to the permit boundary will not increase the risk associated with the waste facility.

Figure 1 – Receptors (blue represents 1km from site centre)



Source	Pathway	Receptor	Harm	Probability of exposure	Consequence	Magnitude of Risk	Justification	Risk Management	Residual Risk
Fugitive release of particulate matter from delivery, treatment and loading	Atmosphere	Local human population	Harm to human health, respiratory irritation and illness	Low	Medium	Low-Medium	<p>Permitted waste types do not include dusts, powders or loose fibres.</p> <p>The change to the permit boundary will not increase the risk associated with dust.</p> <p>Distance to sensitive receptors.</p> <p>Waste reception and treatment will continue in same building.</p> <p>EWC191212 will be similar in composition and nature to mixed municipal waste already received at the site.</p>	<p>All waste received and treated inside a building.</p> <p>Bespoke processing equipment to bale and wrap RDF. This provides completely sealed bales. Forklift to load bales from storage bay directly into HGV.</p> <p>Speed restrictions on site.</p> <p>Visual inspection of dust daily.</p> <p>Regular cleaning of site.</p> <p>Entire site is concreted.</p>	Low

Source	Pathway	Receptor	Harm	Probability of exposure	Consequence	Magnitude of Risk	Justification	Risk Management	Residual Risk
Fugitive release of particulate matter from delivery, treatment and loading	Atmosphere	Local Air Quality	Harm to human health, respiratory irritation and illness	Low	Medium	Low-Medium	Site is not within an Air Quality Management Area.	As above.	Low
Fugitive release of particulate matter from delivery, treatment and loading	Atmosphere	Local human population	Dust annoyance on cars, clothing and windows of residential properties and/or adjoining businesses	Low	Medium	Low-Medium	Residents and businesses may be sensitive to dust. However, residents are located over 120m from the site. Similar operators on the estate. Operations do not handle dusty wastes.	As above.	Low
Fugitive emissions to water	Water runoff to surface water	River Thames	Harm to surface water quality	Low	Medium	Low-Medium	No direct discharges to adjoining water courses.	Entire site is concreted with drainage. Daily checks to ensure concrete remains intact	Low

Source	Pathway	Receptor	Harm	Probability of exposure	Consequence	Magnitude of Risk	Justification	Risk Management	Residual Risk
							The permitted wastes do not include liquids.	Daily checks of drainage system. Spillage procedure. Any fuels will be stored in accordance with Oil Storage Regulations.	
Fugitive emissions to water	Water runoff to ground	Groundwater	Harm to groundwater quality	Low	Low	Low	The permitted wastes do not include liquids. Groundwater is not sensitive.	As above	Low
Noise from plant and machinery	Atmosphere	Local human population	Nuisance to neighbours	Low	Medium	Low - Medium	Operation is in an industrial estate which has established industrial uses including waste operators. The noise in this area is dominated by industrial activity	All plant and machinery to be maintained in accordance with manufacturers specifications. Complaints procedure is in place. Distance and intervening topography will minimise any direct noise impact. No history of noise complaints. Waste to be received and treated inside a building.	Low

Source	Pathway	Receptor	Harm	Probability of exposure	Consequence	Magnitude of Risk	Justification	Risk Management	Residual Risk
Odour	Atmosphere	Local human population	Nuisance to neighbours	Low	Medium	Low-Medium	The processing will not increase the likelihood of odour. Waste reception and treatment will continue in same building. EWC191212 will be similar in composition and nature to mixed municipal waste already received at the site. No greater risk.	Regular cleaning of site. Daily Site checks. Waste will be received and baled continuously throughout the working day. Bales will be removed daily. Operator manages fleet of HGVs to arrange transportation.	Low
Pests, Vermin, Birds	Atmosphere	Local human population	Nuisance to neighbours	Low	Medium	Low-Medium	EWC191212 will be similar in composition and nature to mixed municipal waste already received at the site. No greater risk.	Same as above. Commission Pest Control Contractor if necessary.	Low
Litter	Atmosphere	Local human population	Nuisance to neighbours	Low	Medium	Low-Medium	The incoming loads could contain lightweight wastes. No additional risk when compared to	Vehicles carrying waste will be sealed or sheeted when arriving and leaving the site. Waste to be deposited inside the building and loaded directly into the baling and wrapping machine. This will	Low

Source	Pathway	Receptor	Harm	Probability of exposure	Consequence	Magnitude of Risk	Justification	Risk Management	Residual Risk
							existing operation.	produce completely sealed bales. Bales transferred direct from storage bay to lorry. Daily Site Inspections Implement litter picking duties as necessary.	
Mud on Road	Tracked on vehicle wheels	Local human population	Nuisance to neighbours	Medium	Medium	Medium	Local businesses may be sensitive to mud on road. No change as a result of this variation.	All vehicles to be checked before leaving the site. Daily Site Inspections Deploy road sweeper if necessary.	Low
Any	Surface water runoff or atmosphere	Ancient Woodland and Priority Habitat	Harm to protected site through toxic contamination, nutrient enrichment, smothering, disturbance, predation	Low	High	Medium	Waste operations may cause harm to or deterioration of the Ancient Woodland. No direct pathway.	All of the controls above.	Low