



Appendix 3

Environmental Risk Assessment



Environmental Risk Assessment

Seletia (HW) Limited
Hespin Wood Landfill,
Todhills,
Carlisle,
Cumbria,
CA6 4BJ



PROVIDING SOLUTIONS, ENSURING COMPLIANCE

T 01952 879705 E info@westburyenv.co.uk

A Agriculture House, Southwater Way
Telford, Shropshire, TF3 4NR

W www.westburyenv.co.uk



Document Control Table

Project Reference	24/012w
Project Title	Permit Variation Application
Document Title	Environmental Risk Assessment
Document Issue Date	09 October 2025
Client	Seletia (HW) Limited
Status	Draft

Change log

Version.	Changes	Produced by	Checked by	Date
1	Original Environmental Risk Assessment.	Sian Wilcox	Tracey Westbury	26 June 2025
2	Updated Client Name. Added Sections: 1., 2., 3, 4. 5, 6, 8. ,Added Table 2, Updated Table 3	Sian Wilcox	Tracey Westbury	09 October 2025



Contents

1. Introduction 1

2. Site Location and Sensitive Receptors 2

3. Protected Habitats and Species 3

4. Identification Environmental Risk..... 4

5. Risk Factors and Mitigation Measures 5

6. Environmental Risk Matrix 9

7. Environmental Risk Assessment 10

8. Conclusion 26

Tables

Table 1: Sensitive Receptors 2

Table 2: Impact on Emission Sources and Mitigation Measures 5

Table 3: Estimating the Magnitude of Risk 9

Table 4: Environmental Risk Assessment 10

Drawings

24/012u 001 Sensitive Receptor Plan V2



1. Introduction

- 1.1. Westbury Environmental Limited have produced this Environmental Risk Assessment (ERA) to support an Environmental Permit variation application on behalf of Seletia (HW) Limited (Operator) Hespian Wood Landfill, Todhills, Carlisle, Cumbria, CA6 4BJ (Site).
- 1.2. The Operator was formerly known as Cumbria Land Management Limited until 30th June, when the company name changed to Seletia (HW) Limited.
- 1.3. For the purposes of this ERA, the Site is defined as the area and activities covered by Environmental Permit reference EPR/BM6026IB (Permit).
- 1.4. This ERA considers any potential increase in environmental risk associated with the following proposed changes:
 - Increase of the annual limit for non-hazardous waste to 750,000 tonnes per annum.
 - Increase of the annual limit for inert waste to 100,000 tonnes per annum.
 - Addition of waste code 18 02 03 (Wastes whose collection and disposal is not subject to special requirements in order to prevent infection) to Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste, in the Permit.
 - This waste stream will consist of animal faeces.
 - This waste will be bagged before arrival on Site.
 - This waste will be stored on Site for less than one day prior to deposit in the landfill.
 - Addition of waste code 19 05 03 (off specification compost) to Table S2.3 Permitted waste types for restoration, in the Permit.
 - This waste will be produced in accordance with the requirements of the Animal By-Products Regulations.
 - This waste will have been tested and evidenced to meet the specifications for pathogenic microorganisms.
- 1.5. This assessment has been undertaken in accordance with the requirements set out by the Environment Agency guidance document "Risk assessments for your environmental permit" (last updated 3 January 2025).

Content of the Environmental Risk Assessment

- 1.6. This report provides a detailed description of the Site and its environmental setting, it identifies nearby sensitive receptors and evaluates the magnitude of risk to receptors as a result of the proposed changes.
- 1.7. The Environmental Risk Assessment is structured as follows:
 - Section 2 provides information relating to the Site setting, including the location of the Site and nearby sensitive receptors (Table 1).
 - Section 3 provides information on environmental risk to protected habitats and species
 - Section 4 provides information on how environmental risk has been identified.
 - Section 5 identifies risk factors, sources of risk, mitigation measures and the impact of proposed changes (Table 2).
 - Section 6 provides a risk matrix for estimating the magnitude of environmental risk (Table 3).
 - Section 7 provides an assessment of environmental risk, risk management, and residual risk following risk mitigation measures (Table 4).
 - Section 8 provides a conclusion of the Environmental Risk Assessment and the impact of the proposed changes.



2. Site Location and Sensitive Receptors

Location

- 2.1. Hespin Wood Landfill is located at Todhills, Carlisle, Cumbria, CA6 4BJ.
- 2.2. The land surrounding the Site is largely agricultural, with the nearest residential area being Todhills which is located approximately 630m southeast from the Site boundary at its closest point.
- 2.3. The Site is not located within a Groundwater Source Protection Zone.
- 2.4. The nearest surface water features are the Channel of River Esk located approximately 1.15km northwest and the River Eden approximately 1.2km southwest of the Site boundary.
- 2.5. The Site is located within flood Zone 1 and therefore has a low risk of flooding.
- 2.6. The Site is located on a Principal bedrock aquifer. The bedrock geology is comprised of Helsby Sandstone Formation. The superficial geology is a combination of Peat and Gretna Till Formation across the Site.
- 2.7. The Site is located on an Unproductive (Superficial Drift) Aquifer.
- 2.8. The Site is in flood zone 1 and therefore has a low risk of flooding.
- 2.9. The predominant wind direction at Site blows towards the northeast, based on wind direction data obtained from Brampton weather station, located approximately 15km southeast of the Site.

Receptors

- 2.10. Sensitive receptors near the Site are identified on the Drawing No. 24/012u 001 Sensitive Receptor Plan V2.
- 2.11. Table 1 shows the approximate distance and orientation (from the Site boundary to the boundary of the nearest receptor) of nearby sensitive receptors.

Table 1: Sensitive Receptors

Receptor	Type of receptor	Bearing from Site	Approx. distance from Site boundary to receptor boundary (m)
M6 Motorway	Road	East	12
Blackrigg Bungalow	Residential	Southwest	225
Todhills	Residential	East	250
Wilson T Farm	Agricultural	Southwest	365
Todhills Services	Leisure	Southeast	580
Floriston Rigg Commercial Units	Commercial	North	450
Rockcliffe	Residential	Southwest	1km
Solway Firth	SAC, SPA	Northwest, West, Southwest	1.15km – 2.5km
Solway Flats & Marshes	SSSI, Ramsar Site	Northwest, West, Southwest	1.15km – 2.5km
Channel of River Esk	River	North, Northwest	1.15km
River Eden	River	Southwest	1.2km



3. Protected Habitats and Species

Habitats and Species

- 3.1. The Site is located adjacent an area containing protected habitats and species, located 1.15km northwest of the Site boundary at the closest point. An assessment of how the proposed changes may impact the risk to these habitats and species has been carried out as part of the assessment of environmental risk.
- 3.2. The protected species and habitats include the following habitat designations:
- Ramsar Sites (England and Scotland) – Upper Solway Flats and Marshes.
 - Sites of Special Scientific Interest (SSSI) (England) – Upper Solway Flats and Marshes.
 - Special Areas of Conservation (SAC) (England and Scotland) – Solway Firth.
 - Special Protection Areas (SPA) (Scotland) – Solway Firth.
- 3.3. These areas house a number of protected habitats and species, including habitats for natterjack toads and overwintering bird species.
- 3.4. The potential impact of the increased annual waste input limits on these species and habitats has been assessed with consideration to dust, noise, odour, pests, scavenging animals and surface water pollution, see Table 4 Environmental Risk Assessment.

Potential Risks

- 3.5. Dust and noise emissions may cause disturbance to sensitive birds. Bird species are usually sensitive to noise and human activity and could be disturbed from feeding or roosting grounds if impacts are severe or prolonged.
- 3.6. Odour emissions may have the potential to degrade local air quality, potentially impacting adjacent habitats and species. Odour could also attract scavenging birds and animals, which may have an impact on local wildlife by way of predation, disturbance of nesting birds, disrupting feeding patterns and introducing disease or pollutants to the protected population of wildlife.
- 3.7. Surface water emissions and runoff from the landfill may impair water quality if polluted water reaches the estuarine habitats of the Ramsar and SAC areas. This could impact aquatic species and the wetland vegetation by introducing contaminants.



4. Identification Environmental Risk

- 4.1. This section identifies the environmental risk factors associated with current site operations and evaluates how these may be affected by the proposed changes.
- 4.2. The Environmental Risk Factors identified in this assessment are:
 - Dust
 - Noise
 - Odour
 - Landfill Gas
 - Leachate
 - Mud (on local roads)
 - Litter
- 4.3. Whether the proposed changes present any new risk factors has been considered. No new risk factors have been identified as a result of the proposed changes.
- 4.4. Table 2 presents the sources of environmental risk for each factor listed above.
- 4.5. Whether the proposed changes introduce any new sources of risk has been considered. No new sources of risk have been identified as a result of the proposed changes.
- 4.6. It has been identified that the magnitude of risk by each source may be impacted in some instances. The impact that the proposed changes have on each source of risk have been described in Table 2.
- 4.7. Table 2 also describes the mitigation measures currently in place on the Site. It assesses whether new mitigation measures will be required and how existing measures may be impacted by the proposed changes.
- 4.8. Current mitigation measures will continue to be implemented, with some requiring more frequent application to manage risk where an impact on risk has been identified.
- 4.9. Should an event occur on Site that prevents the Operator from accepting waste deliveries, contingency measures will be implemented. Diverted vehicles may be directed to Flusco Landfill, located 34.5km north of the Site, or other alternative sites.
- 4.10. The Operator is committed to bring the Site up to date on all infrastructure requirements. The rate at which these will need to be completed may mean that there is a significant increase in vehicle movement and works associated with catching up with the infrastructure requirements.
- 4.11. This has been considered when assessing the impact of the changes on risk factors and mitigation measures.



5. Risk Factors and Mitigation Measures

Table 2: Impact on Emission Sources and Mitigation Measures

Risk Factor	Current Sources of Risk	Impact of proposed changes on Sources of Risk	Current Mitigation Measures	Impact of proposed changes on Mitigation Measures
Dust	<p>HGV Movements</p> <p>Handling and movement of waste</p> <p>Deposit of waste in the landfill.</p> <p>Waste storage (wind whipping of stockpiles)</p>	<p>There will be more HGV movements on Site each day. It is considered that this will result in an increased level of dust emissions as a result of vehicle movements.</p> <p>Movement of waste on the Site will take place more frequently each day, with waste being moved to and from storage areas and the landfill at a higher frequency. It is considered that this will increase the level of dust emissions from waste being handled.</p> <p>Waste will be deposited in the landfill at a faster rate. The tipping of waste loads can generate dust emissions. Dust emissions may increase as waste is tipped more frequently.</p> <p>It is not considered that the proposed changes will have a significant impact on waste storage. More waste will be delivered to Site daily however waste will be deposited in the landfill at a faster rate. It is not anticipated that there will be a significant impact to stockpile size or storage times as a result of the changes.</p> <p>The proposed addition of waste codes is not considered to have a significant impact on the risk of dust emissions. The addition of waste codes to the list of permitted waste types does not impact current sources of risk, such as vehicle movements and waste handling. The proposed waste codes are not considered to pose a significant risk of dust do not present an additional source of dust.</p>	<p>Dampening of stockpiles in dry warm weather to minimise dust generation.</p> <p>Dampening of internal road surfaces in dry, warm weather to minimise dust generated by vehicle movements.</p> <p>Temporary Cell Cover at the end of each day to prevent wind whipping of waste outside of operational hours.</p> <p>5mph Speed Limit to minimise dust generated by vehicle movements.</p> <p>Minimising drop heights to minimise dust generated by the handling of waste.</p> <p>Minimising double handling of waste to minimise dust generated by the handling of waste.</p> <p>Sheeting of vehicles to minimise dust escaping from waste during transport.</p>	<p>Due to the increased frequency of waste being delivered to Site and deposited in the landfill, stockpiles of waste may require more frequent dampening during warm, dry weather. This is due to the fact that waste will be removed from stockpiles and deposited in the landfill at a faster rate. Newly delivered waste that has not been dampened will be added to the stockpiles at a faster rate.</p> <p>The dampening of road surfaces is carried out in periods of warm, dry weather. This mitigation measure is implemented based on weather conditions and the observation of dust being generated. Implementation of this mitigation measure not dependant on the volume of traffic on Site.</p> <p>It is considered that there will be no significant impact to the implementation of the temporary cell cover at the end of each day. The temporary cell cover is put in place at the end of each operational day. Implementation of this mitigation measure is not dependant on the volume of waste deposited in the landfill each day.</p> <p>Mitigations measures such as the Site speed limit, minimising drop heights, minimising double handling and the sheeting of vehicles are constantly enforced on Site. Implementation of these mitigation measures is not dependant on the number of vehicles on Site or the volume of waste being handled each day.</p> <p>The proposed additional waste codes are not considered to pose a significant risk of dusty. As such, no additional dust mitigation measures will required to manage any dust emissions from these wastes.</p>
Noise	<p>HGV Movements</p> <p>Handling and movement of waste</p>	<p>There will be more HGV movements on Site each day. It is considered that this may result in an increased level of noise emissions as a result of vehicle movements.</p>	<p>5mph speed limit to minimise noise generated by vehicle movements.</p> <p>No idling policy / no revving of engines to minimise noise generated by vehicles.</p>	<p>An increase in the frequency of vehicle movements may mean that vehicles and equipment require more frequent maintenance as a result of them being used more.</p> <p>More vehicle movements may mean that the internal road surfaces will degrade faster. More frequent</p>



Risk Factor	Current Sources of Risk	Impact of proposed changes on Sources of Risk	Current Mitigation Measures	Impact of proposed changes on Mitigation Measures
	Deposit of waste in the landfill.	<p>Movement of waste on the Site will take place more frequently each day, with waste being moved to and from storage areas and the landfill at a higher rate. It is considered that this may increase the level of noise generated by the handling of waste.</p> <p>Waste will be deposited in the landfill at a faster rate. The tipping of waste loads can generate noise. Noise emissions may increase as waste is tipped more frequently.</p> <p>The proposed addition of waste codes is not considered to have a significant impact on the risk of noise emissions. The addition of waste codes to the list of permitted waste types does not impact current sources of risk, such as vehicle movements and waste handling.</p>	<p>Switching off plant when not in use to minimise noise generated by idle plant.</p> <p>Vehicle/equipment maintenance to minimise noise associated with mechanical faults.</p> <p>Minimising double handling of waste to reduce the number of vehicle movements.</p> <p>Minimising drop heights to minimise the noise generated by the handling of waste.</p> <p>Maintenance of internal surface (free from potholes and ruts) to prevent the generation of noise as a result of vehicles driving on an uneven surface.</p> <p>Only completing waste activities during operational hours to avoid noise being a nuisance during non-working hours.</p> <p>Fans for landfill gas extraction fitted with attenuators to minimise noise associated with landfill gas infrastructure.</p>	<p>maintenance may be required on internal surfaces to ensure that they are free from pot holes and ruts.</p> <p>Mitigations measures such as the Site speed limit, minimising drop heights, minimising double handling, no idling policy, and only completing waste activities during operational hours are constantly enforced on Site. Implementation of these mitigation measures is not dependant on the volume of waste being handled each day.</p> <p>Landfill gas extraction equipment is fitted with noise attenuators as part of the landfill gas infrastructure. The implementation of this mitigation measure is not dependant on the volume of waste being handled each day.</p> <p>The proposed additional waste codes are not considered to present any additional sources of noise. As such, no additional noise mitigation measures are required.</p>
Odour	Reception, handling, storage and deposit of biodegradable wastes	<p>More waste will be accepted per day and the total volume of waste will be deposited over a shorter period of time. As a result of this, more biodegradable wastes may be present on site at any one time, therefore increasing the risk of odour emissions.</p> <p>The proposed addition of waste codes is not considered to have a significant impact on the risk of odour emissions. The waste codes proposed are not considered to be more odorous than waste types that are currently accepted under the Environmental Permit. As an example, the proposed addition of waste</p>	<p>Olfactory monitoring to detect putrescible odours.</p> <p>Odorous waste loads are deposited as soon as practically possible to minimise the storage times of odorous wastes.</p> <p>Temporary cell cover at the end of each day to minimise the risk of odour emissions escaping from the landfill cell.</p>	<p>Olfactory monitoring may need to be carried out more frequently as a result of there potentially being more odorous waste present at Site at any one time.</p> <p>The measure of always depositing odours wastes as soon as practically possible is applied to all odorous waste regardless of the volume of waste. This mitigation measure will therefore not be impacted by the change.</p> <p>It is considered that there will be no significant impact to the implementation of the temporary cell cover at the end of each day. The temporary cell cover is put in place at the end of each operational day. Implementation of this</p>



Risk Factor	Current Sources of Risk	Impact of proposed changes on Sources of Risk	Current Mitigation Measures	Impact of proposed changes on Mitigation Measures
		code 18 02 03 for animal faeces would not be considered to be a greater source of odour than other odorous waste codes such as 02 01 06 (animal faeces, urine and manure) that are currently accepted under the environmental permit.		mitigation measure is not determined by the volume of odorous waste deposited in the landfill each day. The proposed addition of waste codes is not considered to have a significant impact on the risk of odour emissions. The waste codes proposed are not considered to be more odorous than waste types that are currently accepted under the Environmental Permit. A self-imposed sulphur content limit of 10,000mg per kg will be implemented for incoming waste loads.
Landfill Gas	Decomposition of organic waste	The increased rate of waste deposition may result in a higher volume of biodegradable waste being landfilled over shorter timeframes. This could lead to a more rapid onset of gas generation in newly filled cells, although the overall gas production profile is expected to remain consistent with existing operations.	Flaring of landfill gas extracted from completed landfill cells.	Additional gas extraction infrastructure may be installed in newly filled cells at an earlier stage to manage accelerated gas generation.
Leachate	Rainfall percolating through deposited waste. Flooding of the site. Decomposition of organic waste. Compromised cell liner allowing groundwater infiltration.	It is considered that there will be no significant impact to the sources of leachate as a result of the proposed changes. Cell liners are constructed in line with CQA's dependant on waste type and not the rate in which waste is deposited. Cells being completed quicker will likely reduce the amount of time that cell liners are exposed to the elements meaning that they could be less likely to become compromised while the cell is being filled. Cells being filled and capped quicker will likely reduce the time that waste is exposed to rain water. It is therefore considered that the proposed changes may reduce the quantity of leachate produced as a result of rain water percolating through the waste.	Temporary cell cover to shield waste from rainwater. A flood management plan to manage the potential escape of leachate as a result of a flood. Approved CQA's for cell liners. This ensures that cell liners are appropriately constructed based on waste type and are unlikely to become compromised. Leachate Treatment Facility to treat and discharge leachate from completed landfill cells.	It is considered that there will be no significant impact to the implementation of the temporary cell cover at the end of each day. The temporary cell cover is put in place at the end of each operational day. Implementation of this mitigation measure is not determined by the volume of odorous waste deposited in the landfill each day. CQA's for cell liners are always a requirement before works begin to fill a cell and this is not determined by the rate in which waste is deposited in the landfill. The leachate treatment facility has the capacity to treat leachate from both landfill and leachate imported from offsite. If the leachate treatment facility nears capacity treating leachate from the landfill, the Operator will temporarily cease acceptance of leachate imported for treatment from off-site.
Mud on Roads	HGV Movements	There will be more HGV movements on Site each day. An increase in Site traffic is considered likely to increase the risk of mud being tracked on to local roads.	Wheel wash to remove mud from vehicle wheels before they exit the Site. Road Sweeper to clear mud tracked on to local roads.	The wheel wash may need to be used more frequently due to the higher number of vehicles entering and exiting Site. The road sweeper may need to be deployed more frequently to clear local roads of any mud that has been tracked from Site on vehicle wheels.
Litter	Waste deliveries		Sheeting of vehicles	



Risk Factor	Current Sources of Risk	Impact of proposed changes on Sources of Risk	Current Mitigation Measures	Impact of proposed changes on Mitigation Measures
	<p>Waste storage (wind whipping of stockpiles)</p> <p>Waste handling</p> <p>Deposit of waste in the landfill</p>	<p>There will be more waste deliveries per day. This is considered likely to result in a higher risk of litter escaping from waste loads as they are delivered to the Site.</p> <p>There is not considered to be a significant impact on the amount of litter windblown from storage areas. This is due to the fact that waste will be deposited at a faster rate. As such, the size of the stockpiles is not expected to be significantly impacted.</p> <p>Waste will be handled more frequently each day due to the accelerated pace of landfilling activities. This increased frequency in waste handling may result in a higher likelihood of litter escaping from waste loads.</p> <p>Waste will be deposited into the landfill at an accelerated rate. This may result in a higher likelihood of litter from the waste within landfill cells.</p> <p>The proposed additional waste codes are not considered to be more likely to contain litter than other wastes current accepted under the environmental permit.</p>	<p>Litter picking.</p> <p>Temporary cell cover</p>	<p>Vehicles delivering waste loads are required to be sheeted to minimise the potential for litter to escape during transit. This implementation of this measure is not determined by the number of waste deliveries each day.</p> <p>Litter picking is completed daily. Due to the increased risk of litter on the Site, litter picking may need to take place multiple times a day. The frequency will be determined by the amount of litter observed on Site and weather conditions (e.g., windy weather).</p> <p>It is considered that there will be no significant impact to the implementation of the temporary cell cover at the end of each day. This action is not determined by the volume of waste deposited each day.</p> <p>Litter fencing will be installed along the eastern boundary of the Site. This will act as an additional barrier between the Site operations and the nearby M6 motorway. It is considered that additional litter fencing will effectively manage any increase in litter on the Site, preventing it reaching the M6.</p> <p>The proposed additional waste codes are not considered to be more likely to contain litter than other wastes current accepted under the environmental permit. As such, no additional litter mitigation measures are required to manage any litter present in these wastes.</p>

6. Environmental Risk Matrix

Risk Estimation

- 6.1. Table 3 below shows the matrix for estimating the magnitude of risk of a potential hazard from considering both the probability and consequence of a hazard occurring. The magnitude of risk determines what level of management is required to reduce the environmental impact and the probability of the risk occurring.

Table 3: Estimating the Magnitude of Risk

	Magnitude of Risk	Consequence			
		High	Medium	Low	Negligible
Probability	High	Very high	High	Medium/Low	Very low
	Medium	High	Medium	Low	Very low
	Low	High/Medium	Medium/Low	Low	Very low
	Negligible	High/Medium/Low	Medium/Low	Low	Negligible

- 6.2. Although Table 3 is a gross simplification that cannot represent the true complexity of risk assessment, it has been used as a guide in preparing this risk assessment report.
- 6.3. A risk assessment of the potential hazards associated with the proposed changes to the operation's that may cause harm to the environment has been completed using the method shown in Table 3, see Table 4 Environmental Risk Assessment.

Key Considerations

- 6.4. The following aspects have been considered when completing this Environmental Risk Assessment:

Data and Information

- Receptor
- Source / Hazard
- Harm
- Pathway

Judgement

- Probability of Exposure
- Consequences
- Magnitude of Risk

Action

- Justification for Magnitude
- Risk Management
- Residual Risk



7. Environmental Risk Assessment

Table 4: Environmental Risk Assessment

Receptor	Source	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for Magnitude	Risk Management	Residual Risk
<p>Local human population – Residential dwellings located within the vicinity of the Site.</p> <p>Nearest residential dwelling; Todhills 250m SE from the Site.</p> <p>Nearby habitats Solway Firth & Solway Flats & Marshes; 1.15km northwest (at the closest point) – SPA, SAC, SSSI, Ramsar Site</p>	Releases of dusts and micro-organisms (bioaerosols)	Harm to human health - respiratory irritation and illness	Air transport then inhalation	Low	Medium	Medium/Low	<p>Permitted waste types may comprise of dusts, powders, or loose fibres.</p> <p>Site activities that have the potential to generate dust include the tipping of waste into stockpiles, stored waste in the open being whipped by wind, deposit of waste in the landfill, and vehicle/plant movement.</p> <p>Movement of waste has the potential to emit dust. There is potential for increased dust generation from permitted activities during prolonged dry periods.</p> <p>It is considered that due to the size of the dust particles, the majority of dust is likely to be deposited within 250m of the source.</p>	<p>Only inert and non-hazardous waste types are accepted on Site.</p> <p>Any waste types delivered to Site that are not listed in the environmental permit are rejected.</p> <p>Any contravening waste discovered is stored in a secure container and promptly removed from Site.</p> <p>Water will be used to dampen the site surface to minimise dust emissions from the movement of the waste, and for dampening down stockpiles of waste to reduce the risk of wind whipping.</p> <p>The same dust management techniques are proposed. However, these are likely to be used more of the time as a result of the</p>	Low



Receptor	Source	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for Magnitude	Risk Management	Residual Risk
							<p>It is considered that the level of dust emissions may increase as a result of waste tonnage limits being increased due to the increase in the rate of waste movement.</p> <p>The predominant wind is from the southwest.</p> <p>The proposed addition of waste codes is not considered to have a significant impact on the risk of dust emissions. The addition of waste codes to the list of permitted waste types does not impact current sources of risk, such as vehicle movements and waste handling. The proposed waste codes are not considered to pose a significant risk of dust do not present an additional source of dust.</p>	<p>increase in tonnage being accepted per annum.</p> <p>In the event of a drought or limited water supply, activities causing dust emissions, will be temporarily ceased.</p> <p>Areas of the landfill will be covered at the end of the day to reduce the risk of wind whipping of waste.</p> <p>The proposed additional waste codes are not considered to pose a significant risk of dusty. As such, no additional dust mitigation measures will required to manage any dust emissions from these wastes.</p>	



Receptor	Source	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for Magnitude	Risk Management	Residual Risk
		Nuisance - dust on cars, clothing etc.	Air transport then deposition	Medium	Low	Medium/low	As above.	As above.	Low
	Smothering of plants and vegetation, reduced plant life	Harm to the health and habitats of protected wildlife.	Air transport then deposition and inhalation.	Low	High	Medium	Wildlife is often sensitive to dust. Dust can impact the health of wildlife and can alter habitats and food supply. As above.	As above.	Low
Nearby habitats Solway Firth & Solway Flats & Marshes; 1.15km northwest (at the closest point) – SPA, SAC, SSSI, Ramsar Site	Litter	Nuisance, loss of amenity and harm to human health	Air transport then deposition	Low	Medium	Medium/low	Permitted waste types have a potential to produce litter. As above	Any litter found will be collected and disposed of regularly to keep the Site tidy. Only inert and non-hazardous waste types are accepted on Site. Any waste types delivered to Site that are not listed in the environmental permit are rejected. Any contravening waste discovered is stored in a secure container and promptly removed from Site The same litter management techniques are proposed.	Low



Receptor	Source	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for Magnitude	Risk Management	Residual Risk
								However, these are likely to be used more of the time as a result of the increase in tonnage being accepted per annum.	
<p>Local human population – Residential dwellings located within the vicinity of the Site.</p> <p>Nearest residential dwelling; Todhills 250m SE from the Site.</p> <p>Nearest road; M6 12m E of the Site, Unnamed local roads (leading up to the Site)</p>	Waste, litter and mud on local roads.	Nuisance, loss of amenity, road traffic incidents, potential for resuspension of dust.	Vehicles entering and leaving the site.	Medium	Medium	Medium	<p>Local residents are often sensitive to waste, litter, mud on roads.</p> <p>Permitted waste types have a potential to produce litter.</p> <p>It is considered that there is potential for mud to be tracked on to local unnamed roads.</p> <p>It is considered there is a low risk of mud impacting the nearby motorway (M6) as the nearest slip road to join the motorway is approximately 650m away. Therefore, the increase in annual tonnage entering the site will not significantly increase this risk.</p>	<p>There will be wheel cleaning facilities to wash mud off vehicles exiting the Site.</p> <p>Site operatives will carry out regular visual inspection of local roads to identify where there is a build up of mud on local roads. A road sweeper will be deployed to clear mud from local roads.</p> <p>Any litter found will be collected and disposed of regularly to prevent litter reaching local roads.</p> <p>The same mud and debris management techniques are proposed. However, these are likely to be used more of the time as a result of the</p>	Low



Receptor	Source	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for Magnitude	Risk Management	Residual Risk
							<p>It is considered that there is a risk of litter reaching the M6 motorway by way of the wind whipping of waste.</p> <p>It is considered that the risk of mud and litter may increase as a result of waste tonnage limits being increased due to an increased number of vehicles entering and exiting the Site and an increased volume of waste being delivered to the Site.</p>	increase in tonnage being accepted per annum.	
<p>Local human population – Residential dwellings located within the vicinity of the Site.</p> <p>Nearest residential dwelling; Todhills 250m SE from the Site.</p> <p>Nearby habitats Solway Firth & Solway Flats & Marshes;</p>	Odour	Nuisance, loss of amenity	Air transport then inhalation	Medium	Low	Medium/low	<p>Local residents often sensitive to odour.</p> <p>Permitted waste types have a potential to give rise to odour.</p> <p>The nearest residential receptors are not located within the predominant wind direction and are separated from Site by the M6 motorway which is considered potentially screen</p>	<p>Only inert and non-hazardous waste types are accepted on Site.</p> <p>Any waste types delivered to Site that are not listed in the environmental permit are rejected.</p> <p>Any contravening waste discovered is stored in a secure container and promptly removed from Site.</p> <p>Incoming waste loads are unloaded</p>	Low



Receptor	Source	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for Magnitude	Risk Management	Residual Risk
1.15km northwest (at the closest point) – SPA, SAC, SSSI, Ramsar Site							<p>the receptors from odour from the Site.</p> <p>The proposed addition of waste codes is not considered to have a significant impact on the risk of odour emissions. The waste codes proposed are not considered to be more odorous than waste types that are currently accepted under the Environmental Permit. As an example, the proposed addition of waste code 18 02 03 for animal faeces would not be considered to be a greater source of odour than other odorous waste codes such as 02 01 06 (animal faeces, urine and manure) that are currently accepted under the environmental permit.</p>	<p>and deposited in the landfill promptly to minimise potential odour emissions from the handling of waste.</p> <p>Vehicles carrying potentially malodorous waste will be enclosed or sheeted.</p> <p>Areas of the landfill will be covered at the end of the day to reduce the risk of odour emissions.</p> <p>The same odour management techniques are proposed. However, these are likely to be used more of the time as a result of the increase in tonnage being accepted per annum.</p> <p>The proposed addition of waste codes is not considered to have a significant impact on the risk of odour emissions. The waste codes proposed are not considered to be</p>	



Receptor	Source	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for Magnitude	Risk Management	Residual Risk
								more odorous than waste types that are currently accepted under the Environmental Permit.	
		Nuisance and harm to the health of local wildlife.	Air transport then inhalation	Low	High	Medium	Wildlife can be sensitive to odour. Odour can impact the behaviour of wildlife and can impact species that rely on olfactory cues for foraging. The nearby protected habitats are not located within the predominant wind direction.	As above.	
	Noise and vibration	Nuisance, loss of amenity, loss of sleep	Noise through the air and vibration through the ground	Low	Medium	Medium/low	Local residents are often sensitive to noise and vibration. Activities at site such as vehicle movements and deposit of waste in the landfill are a potential source of noise. The nearest residential receptors are not located within the predominant wind	All plant and equipment will be maintained in accordance with the manufacturers' recommendations to minimise noise generation. Noise mitigation measures are carried out while the Site is in operation. All staff are required to report any unusual or	Low



Receptor	Source	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for Magnitude	Risk Management	Residual Risk
							direction and are separated from Site by the M6 motorway which is considered potentially screen the receptors from noise from the Site.	abnormal noise to the Site Manager. The same noise management techniques are proposed. Due to the proximity of the motorway, it is not anticipated that the noise emissions from the additional HGV movements would be significant.	
		Nuisance and harm to the health of local wildlife.	Noise through the air and vibration through the ground	Low	High	Medium	Wildlife is often sensitive to noise and vibration. The behaviour of wildlife can be impacted by noise emissions. Vibrations as a result of noise can impact habitats. The protected habitats are not located in the predominant wind direction.	As above.	Low
Local human population – Residential dwellings located within	Scavenging animals and scavenging birds	Harm to human health - from waste carried off site and faeces. Nuisance and loss of amenity	Air transport and over land	Medium	High	High	Permitted waste types are likely to attract scavenging animals and birds but may become	Only inert and non-hazardous waste types are accepted on Site.	Medium/Low



Receptor	Source	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for Magnitude	Risk Management	Residual Risk
<p>the vicinity of the Site.</p> <p>(as above)</p> <p>Nearby habitats</p> <p>(as above)</p>		Nuisance and harm to the health of local wildlife and habitats.					<p>breeding / nesting sites.</p> <p>Scavenging animals and birds may have an impact on local wildlife by way of predation or disturbance of nesting birds, disrupting feeding patterns and introducing disease or pollutants to the protected population of wildlife.</p>	<p>Any waste types delivered to Site that are not listed in the environmental permit are rejected.</p> <p>Any contravening waste discovered is stored in a secure container and promptly removed from Site.</p> <p>Regular housekeeping will minimise the risk from scavenging animals.</p> <p>The same waste storage and handling management techniques are proposed. However, these are likely to be used more of the time as a result of the increase in tonnage being accepted per annum.</p> <p>Areas of the landfill will be covered at the end of the day to reduce the risk of animals nesting in the landfill.</p>	



Receptor	Source	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for Magnitude	Risk Management	Residual Risk
	Pests (e.g. flies)	Harm to human health, nuisance, loss of amenity Nuisance and harm to the health of local wildlife.	Air transport and over land	Medium	Medium	Medium	Permitted waste types likely to attract pests. As above.	As above.	Low
Nearest residential dwelling; Todhills 250m SE from the Site. Local roads. Nearby habitats Solway Firth & Solway Flats & Marshes; 1.15km northwest (at the closest point) – SPA, SAC, SSSI, Ramsar Site	Flooding of site	Harm to human health, nuisance, loss of amenity. Nuisance and harm to the health of local wildlife. Road closures and road traffic incidents.	Flood waters containing waste, contaminated run off from waste or leachate from the Site.	Low	High	Medium	The Site is located within Flood Zone 1. The site is very low risk of flooding from surface water, rivers, and the sea. Waste types are inert and non-hazardous, so harm is likely to be temporary and reversible. The nearby protected habitats and species may be impacted by flood water containing waste, runoff from waste or leachate. Flood waters may reach the protected habitats and species through surface waters connected to the Channel of the River Esk. The proposed changes do not introduce any additional flood risk.	A Flood Management Plan is in place on Site. This plan outlines actions that should be taken in the event of a flood, such as moving plant to higher ground where possible, and containing free materials that could enter flood waters. Only inert and non-hazardous waste types are accepted on Site. Any waste types delivered to Site that are not listed in the environmental permit are rejected. Any contravening waste discovered is stored in a secure container and promptly removed from Site.	Low



Receptor	Source	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for Magnitude	Risk Management	Residual Risk
							The proposed changes do not introduce any hazardous waste types that would potentially contaminate flood waters.		
Local human population and / or livestock after gaining unauthorised access to the Site	All on-site hazards: wastes, machinery, and vehicles	Bodily injury	Direct physical contact	Low	Medium	Medium/low	The structures, equipment and machinery located on the Site are secured outside of operation / manned hours.	The Site will be constantly manned during operational hours. The same maintenance procedures are proposed. However, these are likely to be used more of the time as a result of the increase in tonnage being accepted per annum.	Low
Local human population – Residential dwellings located within the vicinity of the Site. Nearest residential dwelling; Newbiggin 88m E from the Site	Major disruptive incidents – unforeseen events or emergencies that have the potential to temporarily suspend operations at the Site. These include but are not limited to;	Temporary closure of the Site resulting in; Road closures and road traffic incidents. Harm to human health, nuisance, loss of amenity. Nuisance and harm to the health of local wildlife.	Pathways include, but are not limited to; Direct physical contact / inhalation of smoke Contaminated Flood Waters Air transport and over land	Low	High	Medium	The presence of combustible waste on site means that, in the event of a major disruptive incident (such as fire, flood, or severe accident), there is a risk of temporary loss of containment, environmental pollution, and harm to human health or local wildlife.	In the event of a major disruptive incident, site operations will be suspended immediately to prevent further risk. The site's Environmental Management System (EMS) includes contingency and emergency	Low



Receptor	Source	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for Magnitude	Risk Management	Residual Risk
Local Roads	Flooding, Fire, Seismic Activity, Severe Road Accident, Pandemic and Industrial Action.	Loss of containment of the waste, gas, and/or leachate. Loss of stability.					<p>While the probability of such incidents is low due to robust site management and security, the consequences could be significant, justifying a medium magnitude of risk.</p> <p>The site's proximity to sensitive receptors (residential dwellings, local roads, and surface waters) increases the potential impact of such events.</p>	<p>response procedures for fire, flooding, and other emergencies.</p> <p>These include:</p> <ul style="list-style-type: none"> • Immediate closure of the site to all incoming waste and vehicles. • Notification of relevant authorities (Environment Agency, emergency services). • Deployment of fire suppression and containment measures. • Implementation of the Flood Management Plan and containment of any potentially polluting materials. • Communication with alternative waste facilities (e.g., Flusco Landfill) for diversion of waste vehicles if required. <p>Post-incident review and update</p>	



Receptor	Source	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for Magnitude	Risk Management	Residual Risk
								of procedures as necessary.	
<p>Local human population – Residential dwellings located within the vicinity of the Site.</p> <p>Nearest residential dwelling; Todhills 250m SE from the Site.</p> <p>Nearby habitats Solway Firth & Solway Flats & Marshes; 1.15km northwest (at the closest point) – SPA, SAC, SSSI, Ramsar Site</p>	Arson and / or vandalism causing the release of polluting materials to air (smoke or fumes), water or land.	<p>Respiratory irritation, illness, and nuisance to the local population and local habitats and species.</p> <p>Injury to staff, firefighters, or arsonists / vandals.</p> <p>Pollution of water or land.</p>	Air transport of smoke. Spillages and contaminated firewater by direct run-off from site and via surface water drains and ditches	Medium	High	High	<p>Permitted waste types include flammable materials, so a medium magnitude of risk is estimated.</p> <p>The Site is manned during operational hours and secured during operational hours to minimise the risk of arson/vandalism.</p> <p>Pollution of surface water as a result of a fire is likely to impact the nearby habitats and species through surface waters connected to the Channel of the River Esk within the protected area.</p>	<p>Procedures contained within the Environmental Management System (EMS) will identify and minimise the risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances (including fire and spillages).</p> <p>The EMS contains procedures with regards to the risks from arson / vandalism i.e. site security measures.</p>	Medium/Low



Receptor	Source	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for Magnitude	Risk Management	Residual Risk
	Accidental fire causing the release of polluting materials to air (smoke or fumes), water or land.	Respiratory irritation, illness, and nuisance to the local population and local habitats and species. Injury to staff or firefighters. Pollution of water or land.	As above.	Medium	High	High	<p>Permitted waste types include flammable materials, so a medium magnitude of risk is estimated.</p> <p>Contravening waste has the potential to be flammable.</p> <p>Pollution of surface water as a result of a fire is likely to impact the nearby habitats and species through surface waters connected to the Channel of the River Esk within the protected area.</p>	<p>The EMS will contain procedures and forms relating to accidents and incidents on the Site and what actions to take should one occur.</p> <p>Contravening waste will be stored separately and removed from site at the earliest opportunity.</p> <p>In the event of a fire, fire suppression equipment is available on-Site including fire extinguishers and water bowsers.</p> <p>The increase to the annual tonnage limit will not increase the amount of waste stored at any one time. Therefore, there will be no increase in risk of fires on site.</p>	Medium/Low



Receptor	Source	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for Magnitude	Risk Management	Residual Risk
<p>All surface waters close to and downstream of Site.</p> <p>Nearest surface water features; River Eden 1km SW, Channel of River Esk 1.25km NW</p> <p>Solway Firth & Solway Flats & Marshes; 1.15km northwest (at the closest point) – SPA, SAC, SSSI, Ramsar Site.</p>	Spillage of liquids, leachate from waste, contaminated run-off from waste e.g. containing suspended solids	<p>Acute effects: oxygen depletion, fish kill and algal blooms.</p> <p>Chronic effects: deterioration of water quality</p>	<p>Direct run-off from site across ground surface, via surface water drains, ditches etc.</p> <p>Indirect run-off via the soil layer.</p>	Medium	High	High	<p>Surface water from the site drains in to surface waters connected to the Channel of the River Esk. This river forms part of the nearby protected habitats.</p> <p>Waste types are inert and non-hazardous, so harm is likely to be temporary and reversible.</p>	<p>Strict waste acceptance procedures will ensure that only permitted waste types will enter the Site.</p> <p>The same waste acceptance procedures are proposed. However, these are likely to be used more of the time as a result of the increase in tonnage being accepted per annum.</p>	Medium/Low
Groundwater – The Site is not located in a Groundwater Source Protection Zone.	As above.	Chronic effects: contamination of groundwater, requiring treatment of water.	Infiltration through the ground then transport through soil / groundwater then extraction.	Low	Medium	Medium/low	<p>The Site is not located in a Groundwater Source Protection Zone and is reported to be in an area of low risk of flooding.</p> <p>Waste types are inert and non-hazardous, so harm is likely to be temporary and reversible.</p> <p>Landfill cells are lined to minimise</p>	<p>Waste acceptance procedures implemented on the Site will ensure that only permitted waste types are accepted onto the site.</p> <p>The same waste acceptance procedures are proposed. However, these are likely to be used more of the time as a result of the increase in tonnage</p>	Low



Receptor	Source	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for Magnitude	Risk Management	Residual Risk
							<p>the risk of contamination of groundwater.</p> <p>The proposed permit variation increases annual waste input and does not alter cell design. Therefore, the risk magnitude remains unchanged.</p>	<p>being accepted per annum.</p> <p>Implementation of the EMS will ensure that no substances contaminate the groundwater at the Site.</p>	
The landfill itself (containment, stability, and engineered design).	Landfilled waste	<p>Loss of containment of the waste, gas, and/or leachate.</p> <p>Loss of stability.</p>	Landfilled waste	Low	Medium	Medium/low	<p>The landfill engineering / design / containment infrastructure will not change as a result of the increased rate of input of waste.</p> <p>Landfill is designed to be filled with waste, the risks from this are considered / managed by the conditions within the permit. It is not considered that the risks are depended on the time taken to fill the landfill.</p>	<p>Compliance with the requirement of the Environmental Permit.</p> <p>Environmental Monitoring of the Site is undertaken.</p> <p>The same site management techniques are proposed. The increase in annual tonnage of waste entering the Site will not change this.</p>	Low



8. Conclusion

- 8.1. The following conclusions have been considered as a result of this Environmental Risk Assessment:
- No additional risks have been identified as a result of the proposed changes to the Environmental Permit.
 - It is considered that existing risks from landfill activities will be impacted by the proposed changes to the Environmental Permit.
 - It is considered that risks can be adequately managed by existing mitigation measures.
 - Where it is considered that there is an greater risk as a result of the proposed changes, adjustments to the mitigation measures (e.g., rate of deployment) have been proposed.
- 8.2. Based on this Environmental Risk Assessment, it is concluded that the proposed changes do not present a significant increase in risk to environmental pollution or human health.



Drawings

24/012u 001 Sensitive Receptor Plan V2

Legend

Boundary - EPR/BM6026IB

Radius - 1km

Receptors

Leisure

Residential

River

Road

SAC, SPA

SSSI, Ramsar Site

Agricultural

Commercial

SAC,SPA,SSSI,Ramsar Site Approximate Border



Seletia (HW) Limited

Hespin Wood Landfill

Todhills
Carlisle
Cumbria
CA6 4BJ

Drawing Ref: 24/012u 001 Sensitive Receptors Plan

Version Number: 2

29th September 2025

Created By: SW
Checked By: TW

Scale:
Map: 1:20,000

0 500 1,000 m

© OpenStreetMap Contributors



PROVIDING SOLUTIONS, ENSURING COMPLIANCE

T 01952 879705 E info@westburyenv.co.uk

A Agriculture House, Southwater Way
Telford, Shropshire, TF3 4NR

W www.westburyenv.co.uk

id	Name	Type	Bearing	Distance	Noise	Dust	Odour	Fire
1	M6 Motorway	Road	East	12m	No	Yes	No	Yes
2	Blackrigg Bungalow	Residential	Southwest	225m	Yes	Yes	Yes	Yes
3	Todhills	Residential	East	250m	Yes	Yes	Yes	Yes
4	Wilson T Farm	Agricultural	Southwest	365m	No	No	No	Yes
5	Floriston Rigg Commercial Units	Commercial	North	450m	Yes	Yes	Yes	Yes
6	Todhills Services	Leisure	Southeast	580m	Yes	Yes	Yes	Yes
7	Rockcliffe	Residential	Southwest	1km	Yes	Yes	Yes	Yes
8	Solway Firth (Closest Point)	SAC, SPA	Northwest	1.15km	Yes	Yes	Yes	Yes
9	Solway Flats & Marshes (Closest Point)	SSSI, Ramsar Site	Northwest	1.15km	Yes	Yes	Yes	Yes
10	Channel of River Esk	River	North	1.15km	No	No	No	Yes
11	River Eden	River	Southwest	1.2km	No	No	No	Yes