



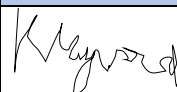

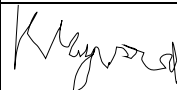

**Noise and Vibration
Management Plan (NVMP)**

**Inert Storage Facility
Towens of Weston Ltd**

Towens Kleen Kutt Yard
Land off Springway Lane,
Westonzoyland,
TA7 0JS

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1.0	19/06/23	Original Draft	Kasia Haywood		Luke Bridges	
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Appendices

Appendix A – Noise Impact Assessment

Appendix B – Site Layout Plan

Appendix C – Environmental Risk Assessment

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1. Introduction

1.1.1 This Noise and Vibration Management Plan (NVMP) addresses the impact of noise and details the control measures implemented by Towens of Weston Ltd at their Kleen Kutt depot to mitigate this risk.

1.1.2 The NVMP addresses the impact of noise and the specific control measures required to mitigate the risk. These abatement measures will be implemented by the Site Manager to ensure that noise and vibration is controlled and does not affect the nearby receptors.

1.1.3 A Noise Impact Assessment was conducted in July 2023 by 24 Acoustics to assess potential impacts from the site and its activities on local receptors (Appendix A). This management plan is written considering the comments and conclusions made in the assessment.

1.1.4 This NVMP will be implemented on site to ensure it operates in accordance with:

- Integrated Pollution Prevention and Control (IPPC)
- Best Available Techniques (BAT)
- Inert and non-hazardous waste: appropriate measures for permitted facilities (EA guidance)

1.1.5 The noise management hierarchy for control should be to:

1. Prevent generation of noise at source by good design and maintenance.
2. Minimise or contain noise at source by observing good operational techniques and management practice.
3. Use physical barriers or enclosures to prevent transmission to other media.
4. Increase the distance between the source and receiver.
5. Sympathetic timing and control of unavoidably noisy operations.

2. Site Details

2.1 Site Location

The Kleen Kutt depot site is located at Land off Springway Lane, Westonzoyland, TA7 0JS (Figure 1). The approximate national grid reference for the site is ST 36554 33904. The site is predominantly surrounded by industrial units with the nearest residential building sitting ~550 m north-west of the centre of the site. There is also a caravan park located ~160m away from the centre of the site.

Figure 1 – Site Location Plan



2.2 Permitted Area

2.2.1 The permit boundary is outlined in red in Figure 1 and on the site layout plan in Appendix B.

2.3 Waste Operations on Site

2.3.1 The site has submitted an application for an Environmental Permit (permit application number: EPR/NP3729SJ/A001) to allow storage and treatment of waste to produce soil, soil substitutes and aggregate. The application is for the operation of physical treatment of non-hazardous waste (1.16.12) under the Environmental Permitting Regulations 2015.

2.3.2 The main waste operation and use of the site is to store inert and non-hazardous soils that meet a certain specification to then be used on flood defence works in the Somerset Levels. Other infrequent waste operations on site include the following:

- The loading and unloading of waste using mobile equipment
- The handling of waste by hand, excavators and grab loaders
- Storage of non-hazardous and inert soils
- Treatment of soils through sorting, separating, crushing, screening and blending
- HGV's and skip vehicle movements

2.3.3 The site will be managed in accordance with the site-specific Environmental Management System (EMS) and the non-hazardous and inert waste: appropriate measures for permitted facilities EA guidance (found on gov.uk).

2.3.4 The site operating hours are from 07:00 to 17:00 on Monday-Friday and 07:00 to 13:00 on Saturdays for core operations, waste deliveries and the collection of materials. There is no processing of waste material at the site on Sundays, during the night-time hours or on Public Holidays.

2.3.5 Any noise generating equipment will only be used during operating hours.

2.3.6 Crushing and screening will be conducted on a campaign basis only when an appropriate amount of material has built up to justify use of the machine. This will prevent the noise generating equipment from being turned on and off continuously throughout the day and therefore will reduce noise production. The on-time of machines is dependent on the amount of material on site which will be variable.

2.3.7 The equipment on site is as follows:

- Wheeled 360° excavator
- JCB Telehandler
- Grab Loader
- HGV movements

2.4 Site Layout

2.4.1 A detailed site layout plan is included in Appendix B. The red line indicates the site boundary. The site is split into different areas for safety reasons with clear safe working areas used for processing.

2.4.2 The site comprises an open yard utilised for storage of soils in open stockpiles placed north to south. Wastes are inspected upon arrival and any non-conforming wastes are rejected and removed from site.

2.4.3 The site is enclosed within wire fencing and established vegetation which acts as both a noise and dust barrier.

2.4.4 Vehicles enter on the east along the haul road off the A372, this is the sole entrance to the site. Loads are inspected from the office before being accepted on site. Once inspected, wastes are tipped into the appropriate stockpile. Vehicles follow the on-site one-way haul road to avoid contact with stockpiled materials.

2.4.5 The office is located near the entrance of the site to allow observation of all vehicles entering and exiting the site.

2.4.6 Once materials are inspected and, if required, processed, they are transferred into their appropriate segregated stockpiles to await collection.

2.4.7 The site has a permeable surface and follows a natural drainage system where all surface run off drains naturally into ground through percolation. The 10m planting buffer zone on the southern border will slow run off into the rhyne to prevent flooding. The site benefits from a mobile water bowser hired in when required, and access to a borehole extraction at the neighbouring site which can provide water for dust suppression and site use.

2.4.8 Processing through crushing and screening will be undertaken by hiring in plant under a Part B permit which operate with their own noise mitigation measures. If sub-contractors are required on site for large volumes of processing, the TCM/designated responsible person will brief the specialist on this NVMP to ensure noise impacts are mitigated. The processing will be carried out within the perimeter wall so activities should not produce fugitive noise emissions outside the site boundary. Measures outlined in this NVMP and the Environmental Risk Assessment (Table A2) will be adhered to during processing activities.

2.4.9 Stockpiles are regularly managed to maintain their size and location on site, they will be kept below 3m so wind-whipping does not occur.

2.4.10 The surface of the open yard is permeable hardstanding which is regularly maintained. This creates a smooth surface for vehicles and HGVs to reduce noise from vehicle movements.

2.4.11 The perimeter fencing and surrounding vegetation will act as a physical barrier to prevent noise escaping from site.

2.4.12 The site has designated one-way paths for the entrance/exit of HGVs to move around the site to avoid the vehicles from disrupting and coming into contact with any materials in the storage area. The site has been designed to minimise vehicle movements on site by having a one-way haul road so that vehicles can tip and load with minimal need to reverse and manoeuvre around the site. This reduces noise from vehicle movements and reversing alarms.

2.4.13 The site is located on an industrial park and is surrounded by other units and operating businesses. This will help with absorbing acoustics from the site to prevent noise leaving the site boundary.

2.4.14 Any sub-contractors hired onto site would be made aware of this NVMP and must adhere to the measures outlined in this document and the Environmental Risk Assessment (Appendix C). Noise suppression controls relating to the specific plant will be measured and controlled in accordance with the Part B permit issued by the local authority where the sub-contractor is based.

3. Noise Receptors

3.1 Noise Receptors

3.1.1 An initial assessment was undertaken by MTS Environmental Ltd to identify all the receptors that may be sensitive to noise generated from the site within a range of 1000m. These are listed in Table 1 below alongside their relative distances from the site.

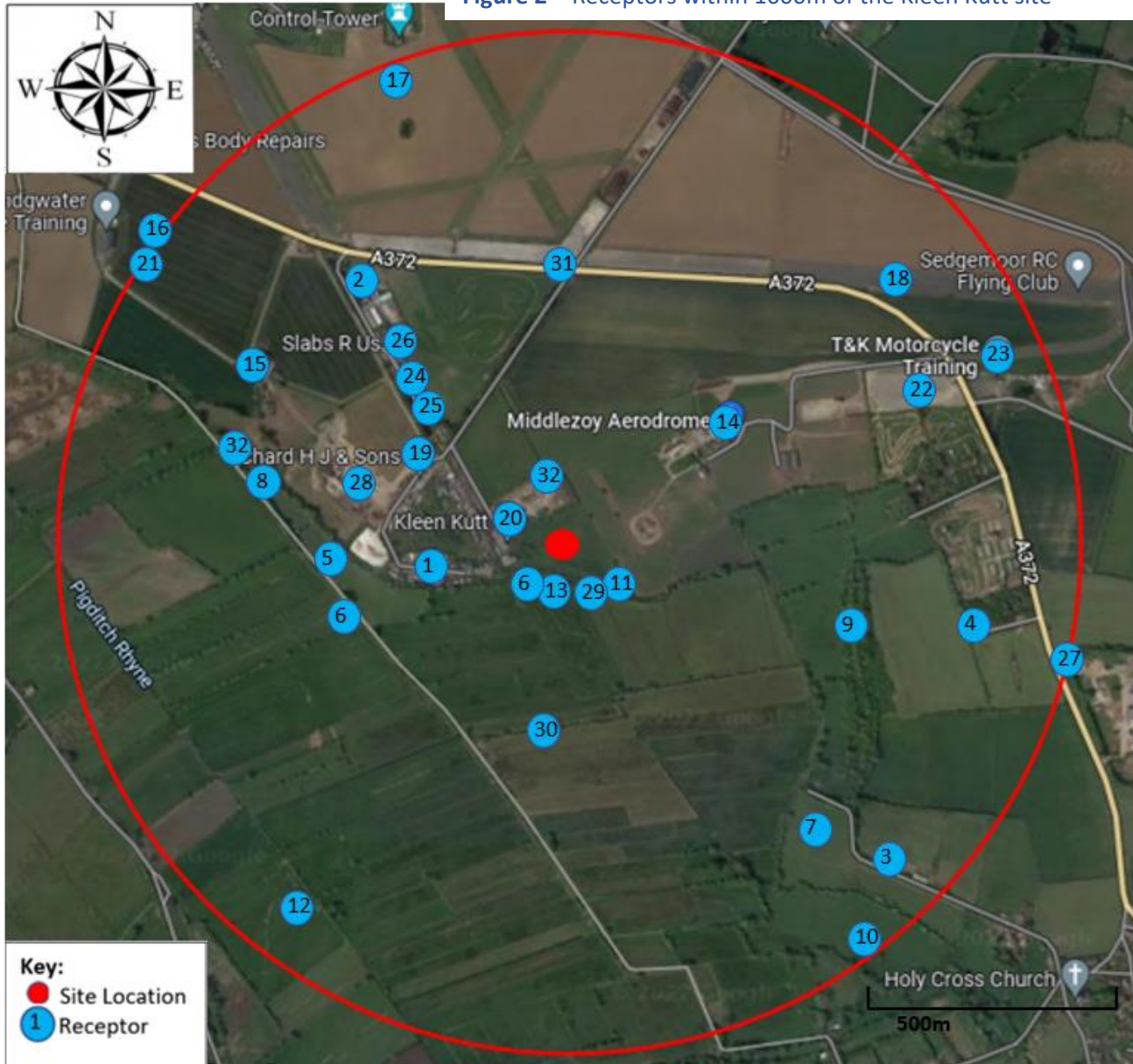
3.1.2 A receptor plan detailing the location of the receptors relative to the site is shown in Figure 2. The red line boundary indicates 1000m threshold area.

Table 1 – Noise receptors within 1000m of the Kleen Kutt site

Receptor	Distance from site (m)	Direction
Residential		
Caravan Park	160m	West
Springway Farm	550m	North West
Property on Knowleyards Road	860m	South East
The Old Ambulance House	755m	East
Designated Land and Waterways		
Site of Special Scientific Interest (SSSI) – Langmead and Weston Level	60m and 350m	South and West
Priority Habitat Inventory (PHI) – Lowland Meadows	155m	South
PHI – Lowland Dry Acid Grassland	635m	South East
PHI – Coastal and Floodplain Grazing Marsh	60m	South and West
PHI – Deciduous Woodland	535m	East

PHI – Traditional Orchards	1000m	South East
Important Plant Areas Plantlife (GB)	60m	South and West
Somerset Levels and Moors	0m	All directions
Pigditch Rhyne Network	60m	South and West
Sensitive Land Uses		
Middlezoy Aerodrome	230m	East
Farm	545m	North West
Westonzoyland Allotments	1000m	North West
Westonzoyland Airfield	700m	North West
Sedgemoor RC Flying Club	950m	North East
Industrial/Commercial		
JWF Engineering	250m	East
Kleen Kutt	70m	East
Bridgwater Motorcycle Training	930m	North West
Grandfields Westonzoyland Motor Track and Learner Driver Area	600m	East
T&K Motorcycle Training	800m	East
Burnham Coal Supplies	345m	North West
Regency	320m	North West
Slabs R Us	400m	North West
Seven Acres Industrial Estate	970m	East
Towens Westonzoyland Depot	280m	West
Public Rights of Way		
Restricted Byway	60m	South
Public Footpath	430m	South
Infrastructure/utilities		
A372	470m	North
Protected species		
Priority Species - Curlew	620m	West
Priority Species - Lapwing	0m	All directions
Priority Species - Redshank	135m	North and West
Protected Species-European Water Vole	Up to 500m	All directions
Badger Sett	60m	South West
Groundwater		
The site is not within a source protection zone or drinking water safeguard zone		

Figure 2 – Receptors within 1000m of the Kleen Kutt site



ID	Receptor
Residential	
1	Caravan Park
2	Springway Farm
3	Property on Knowleyards Road
4	The Old Ambulance House
Designated Land and Waterways	
5	Site of Special Scientific Interest (SSSI) – Langmead and Weston Level
6	Priority Habitat Inventory (PHI) – Lowland Meadows
7	PHI–Lowland Dry Acid Grassland
8	PHI – Coastal and Floodplain Grazing Marsh
9	PHI – Deciduous Woodland
10	PHI – Traditional Orchards
11	Important Plant Areas Plantlife
12	Somerset Level and Moor
13	Pigditch Rhyne Network
Sensitive Land Uses	
14	Middlezoy Aerodrome
15	Farm
16	Westonzoyland Allotments
17	Westonzoyland Airfield
18	Sedgemoor RC Flying Club
Industrial/Commercial	
19	JWF Engineering
20	Kleen Kutt
21	Bridgwater Motorcycle Training
22	Grandfields Motor Track
23	T&K Motorcycle Training
24	Burnham Coal Supplies
25	Regency
26	Slabs R Us
27	Seven Acres Industrial Estate
28	Towens Westonzoyland Depot
Public Rights of Way	
29	Restricted Byway
30	Public Footpath
Infrastructure/utilities	
31	A372
Priority species	
32	Priority Species – Curlew/Lapwing/Redshank/Water Vole

3.1.3 Thirty-two receptors are listed on the map, seven of which are sensitive receptors for noise (highlighted in bold in Table 1): Caravan Park (Receptor 1), Langmead and Weston Level SSSI (Receptor 5), Somerset levels and Moors (Receptor 12), Pigditch Rhyne Network (Receptor 13), and three priority/protected species (Receptor 32). The remaining receptors are low sensitivity receptors, all have been added to Figure 2 and the relative distances to the centre of the site detailed in Table 1.

3.1.4 Activities listed in 2.3.2 could emit noise which could impair these receptors. However, with the control measures set out in this plan and the Environmental Risk Assessment, noise impacts will be effectively mitigated.

3.1.5 Noise could impact the road users on the A372 at Receptor 31, however limited noise will leave the boundary of the site with the implementation of the mitigation measures outlined in this plan. Due to the nature of this receptor which is a busy highway and a large source of noise itself, the site will not generate any noise levels above those produced by this receptor so will not affect users of the road here.

3.1.6 Receptor 13, the Pigditch Rhyne Network surrounding the south of the site have been classed as a sensitive ecological receptor as they are open watercourses with the closest located ~60m from the site. Noise has the potential to cause ecological stress within the animal community in the river. However, damage will be mitigated by the control measures set out in this management plan and the boundary planting between the site and receptor acts as a buffer for any noise that, in the unlikely event, escapes from the site boundary. Any noise from the site will not be blown in the direction of the rhynes by the north easterly prevailing winds as the river is not located to the north east of the site.

3.1.7 Properties in the caravan park (Receptor 1) is considered to be a sensitive receptor as it is within 500m of the site. The properties in the caravan park are not in the direction of the prevailing winds as they are located to the west of the site. However, due to their proximity to the site, noise could have a negative effect on the residents. The site is surrounded by vegetation to act as a boundary against noise escaping the site. Alongside the mitigation measures outlined in this document and the Environmental Risk Assessment, any fugitive emissions and noise will be prevented from escaping the site boundary and impacting this receptor. The operations on site are highly unlikely to produce large amounts of noise as minimal processing takes place. Towens of Weston Ltd will also keep an open-communication channel with the residents at this receptor to ensure any issues with noise are corrected as soon as possible. Due to the nature of the residential site being a caravan park it is unknown how many permanent residents live there, it is expected that there are few which limits the potential impacts.

3.1.8 Other residential properties, Receptors 2, 3 and 4 are all located over 500m from the site. These receptors are unlikely to be susceptible to the adverse effects of exposure to any increased levels of noise due to their proximity. The distance between the site and the residences forms a potential buffer zone and allows time for noise to disperse before it could reach the receptors. Adding to this, noise will be mitigated from leaving the boundary of the site following the measures set out in this management plan.

3.1.9 Receptors 6-12: Priority Habitat Inventories, Important Plant Areas Plantlife and Higher Level Stewardship Target Area (Somerset Level and Moor) are considered ecological receptors. Members of the public using these sites for recreational purposes or plant/animal communities at these sites may

be affected by increased noise. The mitigation procedures outlined in this plan will prevent any fugitive emissions from reaching these areas. The surrounding infrastructure of the site and perimeter planting will also act as a buffer to screen noise from reaching these receptors. No noise will be carried to the receptors on the prevailing winds as they are not located to the north east of the site, the prevailing wind direction. Receptor 12 – the Somerset Level and Moors is considered a sensitive receptor due to its proximity and because it is a Special Area of Protection.

3.1.10 There is a Site of Special Scientific Interest (SSSIs) named as Langmead and Weston Level, Receptor 5, located 60m south and 350m south west of the centre of the site. This is considered a sensitive receptor as it is designated because of grasses and aquatic invertebrate. Natural England (NE) have been consulted. They acknowledge that the prevailing wind is in an opposite direction from the SSSI (Figure 3). As the areas are designated due to grasses, noise will not have a negative impact on the plant ecology here, however there may still be animals residing here which noise may affect. The site is screened from the SSSI by vegetation/planting, boundary fence/wooden barrier and high bank with tall mature scrub and trees, which is potentially also adequate to mitigate the effects of noise in average wind conditions. Noise, if arising at an impactful decibel, will be managed in accordance with our Environmental Management System, which covers this scenario.

3.1.11 There are three areas of priority species of birds (Curlew, Lapwing, Redshank – Receptor 32) with Lapwing covering the area of the site, Redshank located 135m to the North and West of the centre of the site and Curlew located 620m west of the centre of the site. There is one mammal priority species (European Water Vole) which cover the site location (Receptor 32). All of which are considered sensitive receptors except the Curlew species due to their further proximity from the site, therefore noise is unlikely to spread to this receptor. A general ecological impact assessment was conducted for Towens' neighbouring site and found that "No protected or invasive, non-native species of plant were identified and the habitats within the site which will be impacted by the proposed development were not deemed to provide critical resources for any other protected or notable species of animal." Noise will be contained within the site boundary through the boundary planting and suppression measures outlined in this management plan so will not affect these species. The noise level from the site will not be above the existing level produced in the surrounding area. Due to the nature of activities and waste accepted on site, it is highly unlikely that noise will be produced on site as assessed in the Environmental Risk Assessment. Communication with Natural England will be ongoing to ensure that any changes in the species whereabouts are known and appropriate additional measures are implemented.

3.1.12 Middlezoy Aerodrome (Receptor 14) and Westonzoyland Airfield (Receptor 17) are located 230m and 700m from the centre of the site but are not considered sensitive receptors as the nature of activity conducted there will not be impacted by excess noise. Noise may be carried to these receptors through high winds as they lie on the outskirts of the prevailing wind direction. However, noise will be contained within the boundary of the site through the boundary planting and mitigation measures outlined within this document and the Environmental Risk Assessment. Monitoring will be conducted on site daily at and outside the site boundary to ensure that no excess noise emissions are travelling off site and affecting these receptors.

3.1.13 There are multiple other sensitive land uses surrounding the site (Receptors 15-16 and 18) which are considered medium risk receptors. Noise from the site could cause negative environmental and human health impacts at these receptors. However, with the mitigation measures outlined in this noise management plan, noise will be prevented from reaching the receptors. Due to the industrial

uses of the surrounding area, this site will not generate more noise than the existing level at the location.

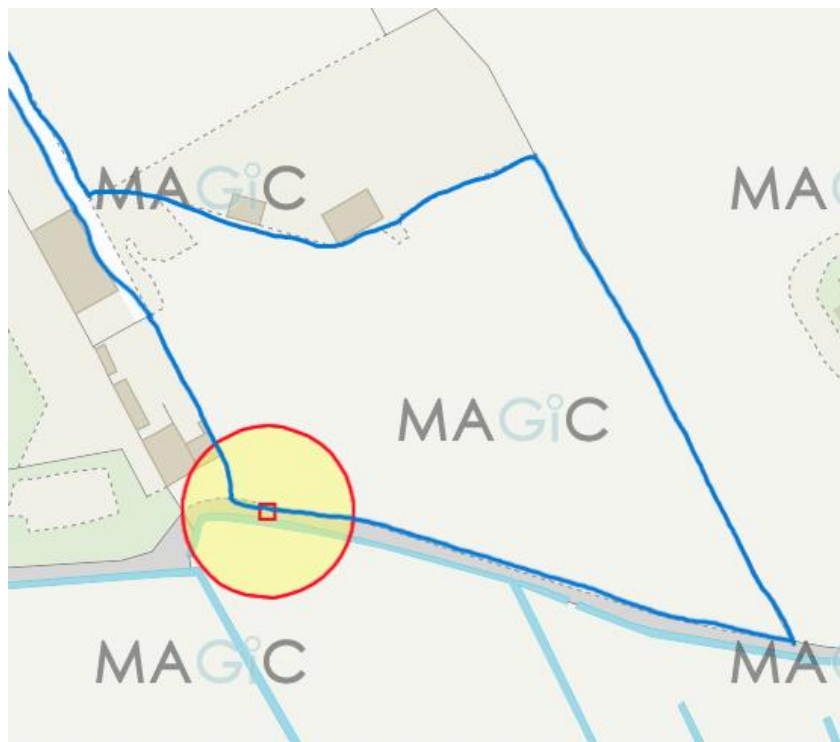
3.1.14 There are multiple industrial and commercial businesses located within 1000m from the site (Receptors 19-28). These are at a low risk due to the nature of the businesses and the fact that they are noise-generating themselves. The likelihood of noise being emitted from the site which would affect these businesses and the people involved is very low with the abatement measures identified within the Environmental Risk Assessment and this document.

3.1.15 There is one public footpath and a restricted byway located within 1000m of the site (Receptors 29 and 30). The perimeter fence and wooden barrier acts as a barrier between the paths and the site. Noise is unlikely to escape from the site and effect these paths due to its location surrounded by other industrial infrastructures and the abatement controls according to this Noise Management Plan.

3.1.16 There are many local wildlife sites, farmland and open space within 1000m of the site that are not marked on Figure 1 that are considered as low risk or low sensitivity in accordance with IAQM guidance. These have not been added as receptors to Figure 2.

3.1.17 An ecological assessment of the site has also been conducted and found that there is an active badger sett at the south west corner of the site, shown in Figure 3. The site has the potential to disrupt the badgers, but the site has implemented a non-disturbing works 30m buffer (shaded yellow on Figure 2) exclusion zone segregated from the site by an animal-proof fence and established planting to ensure no works are conducted near the sett. This will protect the sett from any dust production.

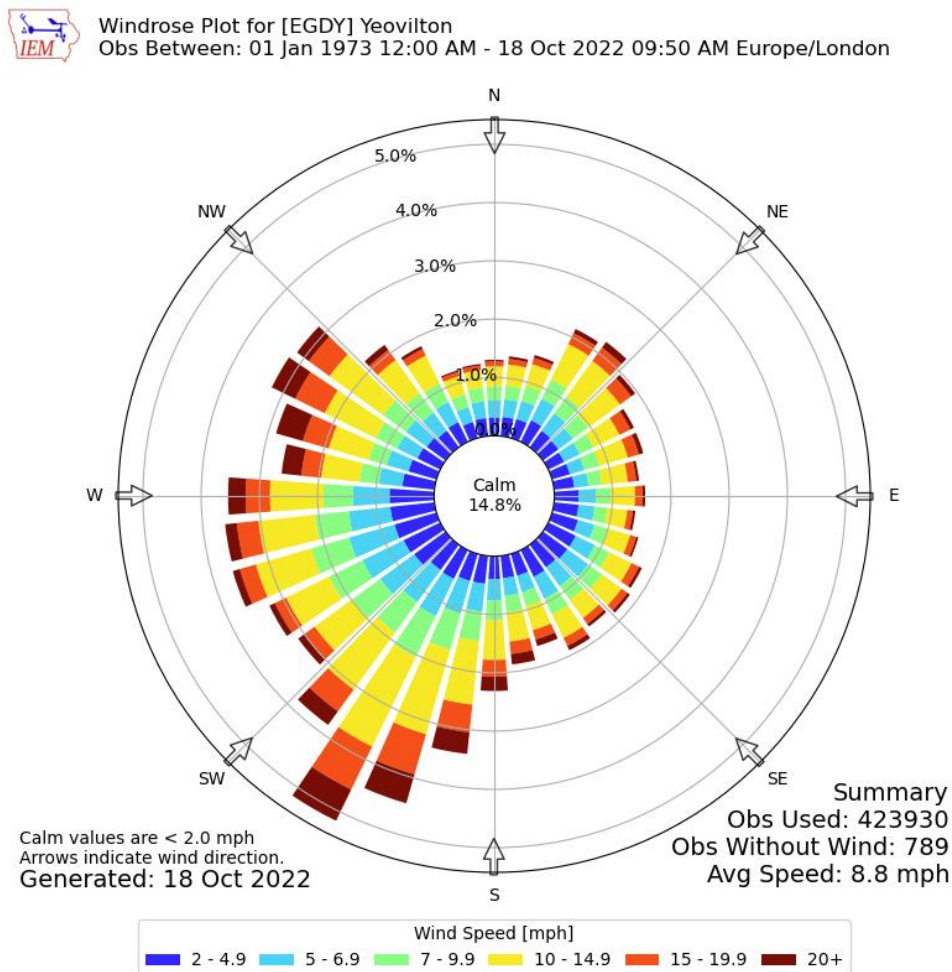
Figure 3 – Location of badger sett identified in an ecological assessment



3.2 Environmental effects – Wind Direction

3.2.1 Wind rose data from Royal Naval Air Station Yeovilton, South Somerset show that the prevailing wind is on average only 3.9 m/s (8.8 mph) (a gentle breeze on the Beaufort Scale) to the North East east where winds of >5m/s occur ~3% of the time, which is considered infrequent (Figure 3). Winds from the west and north west blowing to the east/south east should also be noted as they are above 5 m/s but they occur less than 2% of the time. Winds of >5m/s from all other directions are defined as ‘infrequent’ occurring ~1% of the time.

Figure 3 - Wind rose data showing the average wind direction and strength at Yeovilton Meteorological station (source: Iowa Environmental Mesonet)



3.2.2 Yeovilton Meteorological weather station is located 21.2km from Towens Kleen Kutt yard depot and has a similar topography and similar weather conditions to those at the depot. Therefore, this wind rose data is comparable to that of the site. This station was chosen over Weston-Super-Mare weather station, as it is located inland which is similar to the location of Kleen Kutt depot as opposed to Weston-Super-Mare which is by the coast so will have different weather conditions.

4. Noise Impact Assessment

4.1 Noise Impact Assessment

4.1.1 24 Acoustics were employed to undertake a Noise Impact Assessment (NIA) for Kleen Kutt yard. This can be found in Appendix A.

4.1.2 The data from this NIA is being used to support this NVMP. 24 Acoustics surveyed noise at two locations representative of the existing sensitive residential receptors to the site. Noise measurements of the proposed excavator, crusher and screening plant were undertaken.

4.1.3 The report assessed industrial noise in accordance with the British Standard 4142:2014 and British Standard 8233:2014.

4.1.4 The report assessed noise impact from activities carried out on the Kleen Kutt yard including HGV movements, materials movement, screening and crushing. Crushing operations will have the highest noise impacts, however this will only be undertaken very infrequently on the Kleen Kutt yard.

4.1.5 Natural England were also consulted, and they provided the guidance that:

'Natural England guidance currently suggests that birds begin to react to a noise level of above 55dB. As a general rule, if the noise source is no more than 3dB higher than background noise levels, then Natural England accepts that it is unlikely to be significant. However, knowledge of the site indicates low use of Langmead and Weston Level SSSI by SPA and Ramsar wetland birds, as potentially the land could offer supporting habitat to these European Site qualifying species.'

4.1.6 The noise monitoring was undertaken between 11:00 and 15:00 to capture background noise levels during the quieter periods of the day within the proposed operational hours of the development. An additional measurement was taken at approximately 5m from the crusher machine of a similar existing Towens waste transfer facility in Weston Super Mare in order to establish the likely worst case source noise levels of the proposed development. This was taken between 15:07 and 15:09 when traffic flows near the site were at their lowest.

4.1.7 During the survey, observations were made of the significant noise sources which contribute to the noise levels at the site and sensitive receptors, these include:

- Industrial and commercial noise from Springway Lane Business Park including HGV movements, loading operations and plant movement
- Occasional light aircraft

4.1.8 Findings of the assessment show that the BS 4142 rating sound level will be higher than the background noise level by +7dB at Receptor 1 and +4dB at the Receptor 2. This is indicative of an adverse impact but below the threshold of a significant adverse impact.

4.1.9 Ambient noise levels at the SSSI is unlikely to exceed 55dB(A), thus complying with the Natural England guidance and the site will not cause a negative impact on birds through noise production.

4.1.10 The report concludes that: 'Results are indicative of an adverse impact, but below the threshold of a significant adverse impact. However, when assessed in accordance with BS 4142 and considering the context of the site and proposals, noise arising from the proposed inert waste

recovery operations will employ reasonable and practicable measures to reduce noise to a minimum.'

4.1.11 Potentially noise impacting processing such as crushing is only conducted very infrequently, thus keeping noise impacts to a minimum.

4.1.12 With the mitigation measures outlined in Section 5 of this NVMP the noise will be minimised and will not be out of character for the area.

4.2 Source – Pathway – Receptor Assessment

Table 2 - Source-Pathway-Receptor Routes

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
Noise through vehicle movements on site	Air	Residential properties, businesses, SSSIs, LWS, habitats and rhynes	Intermittent noise disturbance during operating hours	Outlined in Section 5.1
Noise and vibrations from the mechanical loading/ unloading of wastes	Air and vibration	Residential properties, businesses, SSSIs, LWS, habitats and rhynes	Intermittent noise disturbance	Outlined in Section 5.1
Noise from treatment operations such as crushing and screening	Air and vibration	Residential properties, businesses, SSSIs, LWS, habitats and rhynes	Intermittent noise disturbance during operating hours	Outlined in Section 5.1
Engine noise from loading shovel	Air	Residential properties, businesses, SSSIs, LWS, habitats and rhynes	Intermittent noise disturbance during operating hours	Outlined in Section 5.1
Noise from reversing vehicle warnings	Air	Residential properties, businesses, SSSIs, LWS, habitats and rhynes	Intermittent noise disturbance during operating hours	Outlined in Section 5.1

5. Noise Management and Control

5.1 Noise Management Measures

5.1.1 The site has been designed to prevent noise production from vehicle movements on site with a one-way haul road so minimal movement around the site is required, thus reducing queueing of vehicle and reducing vehicle noise. Vehicles will access the site by using the existing access road off the A372 and enter on the west of the site, they will then exit back onto the A372.

5.1.2 The internal haul road and access road have a speed limit of 10 mph and are surfaced with hardstanding producing a smooth surface, both of which reduces the noise from moving vehicles.

5.1.3 HGVs on site will use push alarms whilst reversing which are noise sensitive and quieter than regular reversing alarms. The loading shovel will use a broadband reversing alarm in place of a tonal reversing alarm.

5.1.4 When depositing material into stockpiles or the processing area, drop heights shall be minimised.

5.1.5 Towens of Weston Ltd has an informal 'Anti-Idling Policy' for vehicles queuing for entry onto site or waiting to be serviced with materials which will be enforced on site. A specific toolbox talk regarding this policy will be given to all drivers during inductions. Warnings will be given by site staff if drivers do not conform. Any drivers who continually do not conform will be prohibited from visiting the site in future. This will reduce the production of noise from vehicles waiting in a queue.

5.1.6 Towens of Weston Ltd has an informal 'No Beeping Policy' which will be enforced for vehicles on site, it will be hand signal only. This will be discussed in a toolbox talk during inductions for all drivers.

5.1.7 The site layout is designed to mitigate noise production. The processing area is located in the north of the site, to give as much distance from the most sensitive receptors – the SSSI south of the site and the caravan park to the west, this increases noise dispersion within the boundary of the site (see the internal site layout plan in Appendix B). The stockpiled materials also surround the borders of the site to act as noise barriers that throw noise back into the yard rather than allowing it to escape off site. The boundary fence, wooden barrier and surrounding vegetation provide acoustic screening between noise sources and receivers. The site is screened from the SSSI by a bank with tall mature scrub and trees, which is potentially also adequate to mitigate the effects of noise in average wind conditions.

5.1.8 Care will be taken when tipping materials to avoid noise from tailgate slamming. This will be addressed in a toolbox talk during inductions for all drivers. Formal warnings will be given to drivers who continually make tailgate noise when tipping, and they will be refused entry from site if they continue to produce unnecessary noise.

5.1.9 The site is surrounded by a 2.5m high wooden barrier on the western and southern borders as recommended in the Noise Impact Assessment to reduce noise impacts on the SSSI and caravan park. This acts as an effective acoustic barrier against vehicle and material movements on site as it is absorbent to increase attenuation.

5.1.10 Storage of material is prioritised north to south so that noise from tipping and vehicle movements are minimised in the southern side of the site which is closest to the sensitive receptors.

5.1.11 Plant and machinery will be fitted with bespoke sound insulation and work at a low engine speed to minimise noise output and regular maintenance will be carried out in accordance with manufacturer guidelines.

5.1.12 All plant and machinery will be switched off when not in use to prevent unnecessary noise production.

5.1.13 All staff will be sufficiently trained to use machinery and process material appropriately to produce minimal noise.

5.1.14 The site operating hours are from 07:00 to 17:00 on Monday-Friday and 07:00 to 13:00 on Saturday. The site will not operate on Sundays, Public Holidays or Bank Holidays unless for emergency maintenance. Waste processing which could be a potential source of noise will not start until 08:00, when background noise levels are higher, so that the impact is proportionately reduced and noise nuisance to nearby receptors is avoided.

5.1.15 The crusher is orientated away from the site boundary so that noise generated first spreads into the centre of the site to increase dispersion before it reaches the site boundary.

5.1.16 Processing activities like crushing will be done on a campaign basis and only be done once sufficient material has accumulated to avoid on/off use. It is estimated that processing will occur very infrequently as the main use of the site is storage of materials. The plant will not be in use constantly, it will typically be used for 1-2 hours at a time and will only be used in daytime hours, thus minimising the production of noise from the site as this is the main source of noise.

5.1.17 Personal Protective Equipment (PPE) is made available to site operatives where appropriate. It is unlikely that noise and vibration from site operations will cause a nuisance to visitors to the site. However, all visitors shall be made aware that the site is a working waste transfer facility.

5.1.18 All noise barriers and screening are implemented in accordance with Part 1 of BS 5228:1997.

5.1.19 Industrial noise from the existing site area is already present at the nearest receptor so Towens of Weston Ltd operations are unlikely to cause additional noise nuisance.

5.2 Responsibility of Implementation of this Management Plan

5.2.1 All operatives will be made aware of the issue of noise and vibration on site and should be fully conversant with the contents of this NVMP and other relevant documents.

5.2.2 The Technically Competent Manager (TCM) or the Nominated Competent Person/s (NCP) is responsible for the implementation of this NVMP.

5.2.3 The TCM/NCP will undertake daily sensory checks on all plant and operational activities.

5.2.4 Staff at all levels shall receive the necessary training and instruction in their duties relating to control of the plant and noise emissions. Training will be given to all operatives on all aspects and impacts relating to the operation. All HSEQ (Health Safety Environment & Quality) training will be

delivered in accordance with site RAMS (Risk Assessment & Method Statements) documentation.

5.2.5 The TCM/NCP will review the NVMP during annual audits to make sure it complies with the Environment Agency (EA) guidance. The NVMP will also be reviewed if any noise complaint is received.

5.3 Noise Monitoring

5.3.1 The operator shall monitor emissions and make sensory inspections of operations; Table 3 sets out the measures for olfactory monitoring of noise.

Table 3 - Mitigation measures for noise emissions

Appropriate Measures for Reducing Emissions of Noise	
Daily sensory monitoring of emissions at site boundaries shall be carried out by staff supervising all waste processing operations.	TCM /NCP to monitor operations throughout the day at and outside the site boundary that is downwind of operations in the north eastern corner of the site.
	Observations and weather conditions including wind direction will be recorded on the noise monitoring sheet.
	Complaints to be recorded in the site diary and complaint form.

5.3.2 Inspections should be carried out during daily operational hours, especially when carrying out activities that are noisy (i.e., point 2.3.2). Additional routine monitoring at and outside the site boundary downwind of operations will be carried out during noise-producing operations (crushing) and when the any third-party plant is operational on site. Also, the Part B Mobile Plant Permit conditions supplied by the subcontractor will be reviewed and site-specific risk assessment produced relating to the activity.

5.3.3 The operator shall record any abnormal observations in the site diary and report to the on-site TCM/NCP at the time of recognition who will review the monitoring. The records must include the time, location, and result of the sensory assessment. The records must be kept by the operator for at least two years and be made available to the regulator for examination, on request.

5.3.4 In an event that mitigation measures are not effective, and excessive noise escapes the site boundaries, all noisy activities should be suspended until investigation takes place to identify cause(s) and appropriate mitigation measures.

5.3.5 All site operations and processing will only be carried out during operational hours in the day and no site access will be possible out of hours. Therefore, no noise is expected to be produced out of hours.

6. Reporting and Complaints Response

6.1 Engagement with the Community

6.1.1 A complaint form will be available for those who are affected by the operations. If necessary, a meeting shall be carried out with candidates if noise is causing a serious impact. A complaint form is included in Appendix D.

6.1.2 The site will have a publicly visible sign at the entrance with contact details for the Operator so neighbouring businesses or local residents can contact Towens of Weston if they have any complaints/issues.

6.2 Reporting of Complaints

6.2.1 In the event of a complaint, the TCM/NCP/site manager will immediately investigate the source of noise and whether it is originating from the site. Appropriate measures should be made, and action will be taken to prevent any further excessive emissions leaving the site.

6.2.2 The TCM should respond to a complaint within 2 working days.

6.2.3 A Corrective Action Report (CAR) will be completed describing the incident. A record shall be made in the site diary.

6.2.4 The TCM or the designated responsible person will ensure that the Environment Agency (EA) is informed of these within 24 hours, ideally as soon as possible and as appropriate.

6.2.5 TCM will escalate investigations if successive complaints are received, operations will be suspended if two or more complaints are received within the same week. If complaints are found to be unsubstantiated, operations will continue at the discretion of the TCM.

6.3 Management Responsibilities

6.3.1 The TCM/NCP/designated responsible person/site manager shall take responsibility for any complaints. In the event of a complaint, the Site Manager should carry out procedures set out in Section 6.2.

6.3.2 To maintain good relationships with neighbouring residents, businesses and Natural England, Towens of Weston Ltd will ensure that:

- All neighbours know how to contact the site if they experience a noise and/or vibration nuisance. Contact details are clearly visible on the site notice board along with Environment Agency details.
- Any complaints are recorded and that problems, where possible, are addressed.

6.3.3 Any historical records kept off-site should be made available to the regulator for inspection within one working week of a request.

6.3.4 Any person having duties that are or may be affected by the matters set out in this NVMP shall have convenient access to a copy of this document and the permit. These documents will be available electronically via the Towens of Weston Management System and issued as hard copy.

7. Summary

7.1.1 Treatment carried out at the Towens of Weston Kleen Kutt Depot may produce noise, but it will be limited by the mitigation measures. In any event, noise will not exceed recommended limits and so will not cause nuisance to nearby receptors.

7.1.2 The main causes of noise will be related to transportation and infrequent waste processing activities.

7.1.3 Noise from processing activities will be controlled by effective site management with appropriate mitigation measures, this will include:

- Very infrequent processing activities and completed on a campaign basis
- A boundary wooden barrier at the southern and western borders to act as an acoustic barrier
- Waste processing plant located away from sensitive receptors
- Use of sound insulation on plant
- Appropriate location of stockpiles and site haul road
- Regular maintenance of all plant
- Limiting vehicle speed and procedures
- Careful transfer of material on site
- Design of site layout to reduce vehicle movements and reversing alarms

7.1.4 Daily monitoring of noise levels, a stringent complaints procedure and an annual review of the NVMP will be carried out to prevent any adverse noise impacts from the site.

7.1.5 The procedures outlined in this NVMP apply to all activities carried out at the Towens of Weston Kleen Kutt Depot.



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**TOWENS KLEEN KUTT YARD
NOISE ASSESSMENT**

Technical Report: R10174-1 Rev 0

Date: 27th July 2023



For: MTS Environmental Ltd
Filwood Green Business Park
1 Filwood Park Lane
Bristol
BS4 1ET

24 Acoustics Document Control Sheet

Project Title: Towens Kleen Kutt Yard –Noise Assessment

Report Ref: R10174-1 Rev 0

Date: 27th July 2023

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For and on behalf of 24 Acoustics Ltd				

Document Status and Approval Schedule

Revision	Description	Prepared By	Reviewed By	Approved By
0	Approved for issue	Kiel Edwards	Stephen Gosling	Stephen Gosling

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1.0 INTRODUCTION

- 1.1 24 Acoustics Ltd has been instructed by MTS Environmental Ltd, on behalf of Townes Waste Management Ltd, to undertake an assessment of noise from a proposed inert waste screening facility at Townes Kleen Kutt Yard, Bridgwater.
- 1.2 This report presents the results of the assessment, following site visits, investigations and background noise surveys undertaken on the 20th July 2023.
- 1.3 All noise levels in this report are presented in dB relative to 20 μ Pa.

2.0 SITE DESCRIPTION AND PROPOSALS

- 2.1 The proposed screening facility site is located to the south of Townes' existing inert material storage and distribution facility and adjacent to a forestry contracting company's yard (Kleen Kutt Ltd). Other industrial/commercial uses in the immediate area include a coal supplier (Burnham Coal Supplies), slab retailer (Slabs R Us) and an auto parts store (JWF Engineering).
- 2.2 Middlezoy Aerodrome is located directly east of the site which holds the annual Somerset Aerofest. Westonzoyland Airfield is located north of the site, with the runway aligned toward the site (i.e. aircraft land and take off over directly the site and neighbouring industrial/commercial/residential properties).
- 2.3 It is proposed to use the site for the storage and treatment of inert waste to produce soil, soil substitutes and aggregate for use in flood alleviation projects carried out by the Environment Agency. The site is proposed to be used as a temporary CL:AIRE Hub site and only non-contaminated materials will be stored/treated.
- 2.4 Inert waste material will be transported to the site via HGVs utilising the existing access road to the north (OSGB Ref: ST 36591 34375).
- 2.5 The proposed hours of operation at the site are 07:00 to 17:00 Monday to Friday and 07:00 to 13:00 hours on Saturdays with no processing operations on Sundays.
- 2.6 The nearest residential properties are located within the cluster of commercial/industrial uses and comprise a Travellers' Site (Receptor 1), approximately 100m to the west of the proposed site. Residential properties are also located at Springway Farm (Receptor 2) to the north, adjacent to the A372, approximately 500m from the site.

2.7 Other residential properties are also located to the south and south east, at Middlezoy and Thorngrove, and to the north west at Westonzoyland. Due to these properties being sufficiently distant from the site (i.e. >1km), noise arising from the proposed operation is considered to be very low and, therefore, these properties have not been included in the assessment.

2.8 Figure 1 shows the site location and surrounding area. Figure 2 shows the proposed site layout.

3.0 CRITERIA

3.1 The following represents current relevant guidance in relation to the proposed operations.

Environment Agency Guidance

3.2 EA guidance "Noise and vibration management: environmental permits" [Reference 1] provides guidance on how the agency will assess noise, how to manage noise and in particular how to carry out a noise impact assessment in the context of an environmental permit.

3.3 The guidance refers to BS 4142 to assess noise from industrial processes. It describes how the level of impact relates to BS 4142 descriptors and this is summarised below.

- *Unacceptable level of audible or detectable noise – this level of noise means that significant pollution is being or is likely to be caused at a receptor and you must take further action to reduce or stop operations. The closest corresponding BS 4142 descriptor is 'significant adverse impact'.*
- *Audible or detectable noise – this level of noise means that noise pollution is being (or is likely to be) caused at a receptor – your duty is to use appropriate measures to prevent or minimise noise. You are not in breach if you are using appropriate measures. The closest corresponding BS 4142 descriptor is 'adverse impact'.*
- *No noise, or barely audible or detectable noise – this level of noise means that no action is needed beyond basic appropriate measures. The closest corresponding BS 4142 descriptor is 'low impact or no impact' following consideration of context. The agency may decide that taking action to minimise noise is a low priority.*

BS 4142:2014+A1:2019 - Methods for Rating Industrial and Commercial Sound

- 3.4 BS 4142:2014+A1:2019 [Reference 2] provides a method for rating the effects of industrial and commercial sound on residential areas.
- 3.5 The standard advocates a comparison between the representative measured L_{A90} background noise level and L_{Aeq} noise level from the source being considered. For rating purposes if the noise source is tonal, intermittent or otherwise distinctive in character, a rating correction should be applied.
- 3.6 The standard states that a difference between the rating level and the background level of around +10 dBA is an indication of a significant adverse impact, depending on the context and a difference of around +5 dBA is likely to be an indication of an adverse impact, also depending on the context. Where the rating level does not exceed the background noise level, this is an indication of the specific sound source having a low impact (depending upon the context).

4.0 ASSESSMENT METHODOLOGY

- 4.1 The following assessment methodology has been used:
- i. A background noise survey has been undertaken to determine existing levels of background noise at locations representative of the nearest residential properties to the site;
 - ii. An acoustic model of the proposed operations has been developed. This has predicted the operational noise level at the nearest residential properties;
 - iii. An assessment of the likely noise impact associated with the proposals has been undertaken, in accordance with BS 4142:2014+A1:2019.

5.0 ENVIRONMENTAL NOISE MEASUREMENTS

Methodology

- 5.1 A background noise survey was undertaken on the 20th July 2023. Measurements were undertaken at locations representative of the nearest residential receptors as described below:

- Location 1: To the west of the site, approximately 25m from Receptor 1 (Travellers Site), at a height of 2m above local ground level in free-field conditions (OSBG Ref: ST 36195 34343);
- Location 2: To the north of the site, approximately 15m from Receptor 2 (Springway Farm) and equidistant to the A372. At a height of 2m above local ground level in free-field conditions (OSGB Ref: ST 36270 33901).

5.2 Measurement locations are shown in Figure 1

5.3 The instrumentation was setup to monitor background noise levels and store data in 5-minute intervals of the overall A-weighted L_{eq} , L_{max} and L_{90} using fast time weighting. The following instrumentation was used during the survey:

- 2 x Rion NL32 Type 1 sound level meter;
- Rion NC74 acoustic calibrator.

5.4 Calibration of the equipment was checked before and on completion of the measurements and no drift was recorded. Noise measurements were made in accordance with BS 7445: 1991 'Description and measurement of environmental noise Part 2 – Acquisition of data pertinent to land use' [Reference 3].

5.5 Weather conditions during the measurements were favourable with no periods of precipitation and wind speeds below 5m/s. Meteorological data is shown in Appendix B.

Results

5.6 The measured background noise levels are summarised in Table 1 and shown graphically in Appendix C. It was observed that during the measurement period, industrial/commercial operations were taking place, associated with the surrounding industrial and commercial units, and included HGV movements, loading operations and plant movement. Additionally, occasional light aircraft were noted, associated with Westonzoyland Airfield. These activities form part of the existing ambient noise in the area.

Measurement Location 1 (Receptor 1 – Travellers’ Site)	
Date (20th July 2023)	Background Noise Level dB LA90 1 hour
12:50 – 13:50	41
13:50 – 14:50	43
14:50 - 15:50	43
Representative Level	42

Table 1 - Location 1 - Measured Background Noise Levels

Measurement Location 2 (Receptor 2 – Springway Farm)	
Date (20th July 2023)	Background Noise Level dB LA90 1 hour
12:32 – 13:32	37
13:32 – 14:32	38
14:32 - 15:32	41
15:32 - 16:10	42
Representative Level	38

Table 2 - Location 2 - Measured Background Noise Levels

Source-term Noise Data

- 5.7 Source-term noise measurements of the proposed crusher and screening plant were undertaken at the site on the 20th July 2023. Measurements were undertaken with the following equipment:
- Rion NL52 Type 1 sound level meter;
 - Rion NC74 acoustic calibrator.
- 5.8 Calibration of the equipment was checked before and on completion of the measurements and no drift was recorded.
- 5.9 Measurements were carried out following the guidance of BS EN ISO 3746: 2010 [Reference 4]. The measurement conditions and manufacturer’s details for the crusher and screening plant are described below:

Make	Model	Description	Measurement Conditions
Finlay	883+ TRX883STED GGB3364	Screening plant - Under continuous load	Open flat ground, adjacent to 1.5m high inert waste material mound for test load purposes
Finlay	J1160	Crusher – Under continuous load	Open flat ground, adjacent to 2m high rubble material mound for test load purposes

Table 3 - Manufacturer’s Details – Screening and Crushing Plant Measurement Details

- 5.10 The screener and crusher were loaded by a 360 excavator with inert material/rubble of the same grade expected for the proposed operations. The excavator was in active use approximately 50% of the time (idle while the screener/crusher processed the previous load, active when a new load was being fed into the equipment). Contributions from the excavator were not significant against the level of screening and crushing plant noise.
- 5.11 The average temperature during the measurements was 20.5 Celsius with an atmospheric pressure of 101.8 kPh.
- 5.12 Calculations have been undertaken in accordance with BS EN ISO 3746 to determine the sound power level of each unit. Calculated overall A-weighted sound power levels are shown below with single octave band calculation results shown in Appendix D:
- Screening Plant: 105 dB L_w ;
 - Crusher: 112 dB L_w .
- 5.13 It is relevant to note that the noise instrumentation described in 5.1 was in operation at the time of the above measurements and no significant increase from breaking or screening plant activity was evident in the measurement results (as highlighted in Appendix B).
- 5.14 Manufacturer’s data for the proposed wheeled loading shovels and 360 excavators is shown below.

Screening and Crushing Plant Manufacturer’s Details			
Make	Model	Description	Manufacturer’s Stated Sound Power Level
Kobelco	HX220a HHKHK607VE0000150	360 Excavator	101 dBA
Hyundai	970 HHKH70EL0000275	Wheeled Loading Shovels	107 dBA

Table 4 - Manufacturers’ Detail – Screening and Crushing Plant

- 5.15 For the calculation of noise from HGV movements to the receptor locations from the site's access road, a source noise level of 68 dB $L_{Aeq,T}$ at 5m for a slow-moving HGV has been used, with reference to 24 Acoustics' library database from measurements on similar sites.

6.0 NOISE ASSESSMENT

Proposed Operations

- 6.1 The proposed operations will include the treatment and storage of inert waste, requiring the use of a crusher, screening plant, 360 excavator and wheeled loading shovels. To provide a worst case analysis of the proposals, a scenario comprising full operation of the screening plant and crusher in operation for a 1-hour period, has been used in the assessment. Based on site observations of the loading procedure and equipment, an on-time of 30 mins per hourly period has been used for the 360 material handler and wheeled loading shovel.
- 6.2 The proposed development would not generate HGV movements on a daily operational basis as inert material would be imported for storage and exported for use in flood defence works locally. As advised by MTS Environmental Ltd, campaigns would attract approximately sixty HGV movements per day (thirty in and thirty out). Therefore, six HGV movements per hour with an on-site speed limit of 10mph and a 10 second pass by time for each receptor location have been used in the assessment.
- 6.3 HGVs will utilise the existing access road to the north of the site, from the A372, as shown in Figure 1.

Acoustic Model

- 6.4 The source-term noise data and proposed operations described above have been used to populate an acoustic model of the site. IMMI 30 noise mapping software has been used following the methodology of ISO 9613 [Reference 5] to determine the noise levels from each relevant source at the receptor locations, taking into account the effects of geometric divergence, screening and ground/atmospheric absorption. The model factors an ambient air temperature of 10 Celsius with 70% relative humidity and a $G=0.5$ for ground absorption.
- 6.5 The model is based on the excavator, loading shovels, crusher and screening plant being located to the south of the site, away from the HGV access route and adjacent to the inert waste storage mounds, as shown in Figure 2.

- 6.6 The storage of inert waste to a maximum height of 5m around the perimeter of the site, as shown in Figure 2, will provide significant screening and has been included in the noise model.
- 6.7 Resultant cumulative noise levels from all proposed plant and HGV activities at the receptor locations are shown in Table 5.

Receptor Location	Cumulative Plant Noise Level dB LAeq 1 hour
1	46
2	42

Table 5 - Noise Modelling Results – Receptor Location Cumulative Plant Noise Levels

Assessment

- 6.8 A comparison of the predicted rating noise levels, relative to the prevailing typical background noise level at each receptor location has been carried out in accordance with BS 4142 with the results are shown in Table 6. Due to the potentially impulsive nature of the proposed operations, a + 3 dB rating correction has been applied to the predicted noise levels at Receptor 1 (Travellers’ Site). Due to the significant distances and screening involved, unfavourable noise characteristics from the proposed operations are considered unlikely to be perceptible at Receptor 2 (Springway Farm) hence a rating correction is not applicable.

Receptor Location	Receptor 1	Receptor 2
Specific Source Noise Level	46 dB LAeq 1 hour	42 dB LAeq 1 hour
Rating Level	49 dB	42 dB
Background Sound Level	42 dB LA90 1 hour	38 dB LA90 1 hour
Difference Between Rating and Background Level	+7	+4

Table 6 - Noise Modelling Results – Receptor Location Plant Noise Levels

- 6.9 The assessment outcomes at both receptor locations are indicative of an adverse impact, but below the threshold of a significant adverse impact.

Context

- 6.10 Under BS 4142, consideration must be given to the context of the site and proposals.

- 6.11 In this instance, noise arising from the proposals will be similar in character to surrounding commercial premises.
- 6.12 Additionally, the non-permanent nature of the proposal as well as the daytime only operations reduce the risk of noise disturbance.
- 6.13 Based on the above, it is considered that the proposals employ reasonable and practicable measures to limit noise and will not be out of character for the area.

Uncertainty

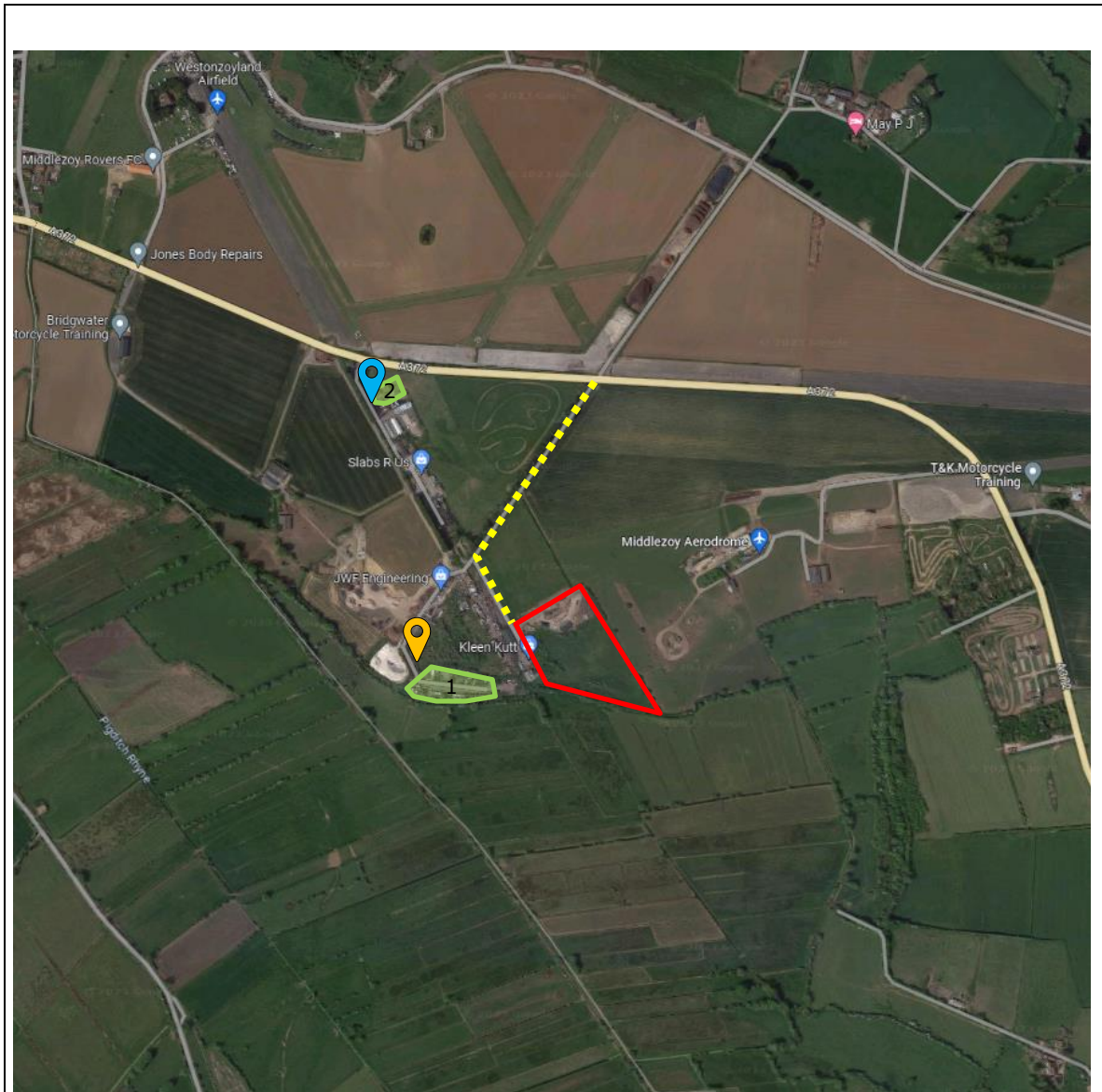
- 6.14 All reasonable measures have been undertaken to ensure minimal uncertainty in the measurement procedures and assessment. This includes:
- Background noise measurements undertaken during suitable weather conditions;
 - Measurement equipment fully calibrated to national standards and traceable with on-site calibration checks undertaken before and after the measurement exercises;
 - Real-world measurement data utilised of the proposed screening and crushing plant to be used at the site;
 - Calculations undertaken using proprietary software including the calculation methodology of ISO 9613;
 - One metre resolution topographical data utilised in the acoustic model to ensure accurate topography of the site and surrounding area.
- 6.15 Based on the above, uncertainty associated with the assessment has been reduced to a minimum.







7.0 CONCLUSIONS


- 7.1 24 Acoustics has been instructed by MTS Environmental Ltd, on behalf of Towens Waste Management Ltd, to undertake a noise assessment in relation to a proposed inert waste recovery operation at Towens Kleen Kutt Yard, Bridgwater.
- 7.2 The assessment has been carried out following background noise measurements undertaken at representative locations of the closest residential properties to the site and, following the production of an acoustic model of the proposed operations.
- 7.3 Results are indicative of an adverse impact, but below the threshold of a significant adverse impact. However, when assessed in accordance with BS 4142 and considering the context of the site and proposals, noise arising from the proposed inert waste recovery operations will employ reasonable and practicable measures to reduce noise to a minimum.

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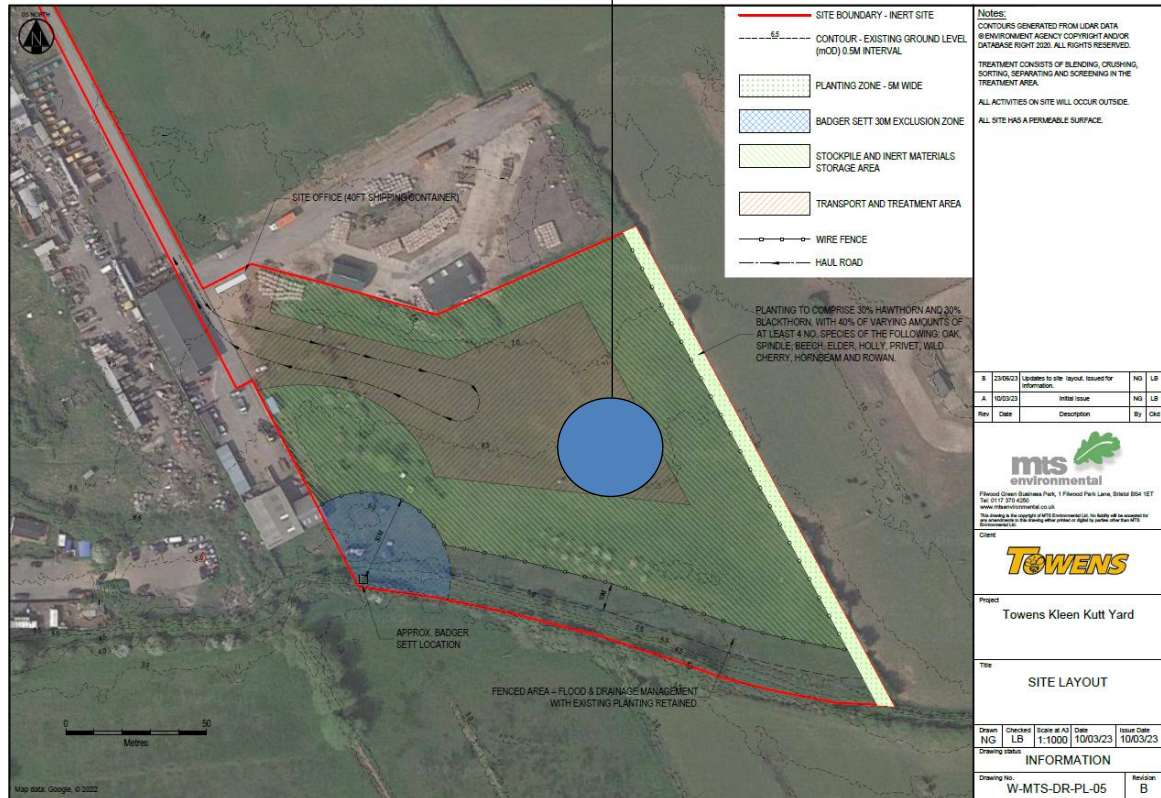
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2. British Standards Institution. British Standard 4142:2014+A1:2019. Methods for Rating and Assessing Industrial and Commercial Sound, 2014.
3. British Standards Institution. BS 7445: 'Description and measurement of environmental noise Part 2 - Acquisition of data pertinent to land use' 1991.
4. British Standards Institution. BS 3746: 2010 Acoustics. Determination of sound power levels and sound energy levels of noise sources using sound pressure. Survey method using an enveloping measurement surface over a reflecting plane.
5. International Standards Organisation. ISO 9613. Acoustics - Propagation of Environmental Noise, 1997.




	Measurement Location 1
	Measurement location 2
	Receptor Location 1 (Travellers Site)
	Receptor Location 2 (Springway Farm)
	Site Access Road
	Site Location

Project: Towens Kleen Kutt Yard		Title: Site, Receptor and measurement Locations		
DWG No: Figure 1	Scale: N.T.S.	Rev: -		
Date: July 2023	Drawn By: KE	Job No: 10174		

Screening plant and Crusher Area



Project: Towens Kleen Kutt Yard	Title: Plant Locations		
DWG No: Figure 2	Scale: N.T.S.	Rev: -	
Date: July 2023	Drawn By: KE	Job No: 10023	

APPENDIX A – SOUND INSULATION TERMINOLOGY

The Decibel, dB

The unit used to describe the magnitude of sound is the decibel (dB) and the quantity measured is the sound pressure level. The decibel scale is logarithmic and, as such, it ascribes equal values to proportional changes in sound pressure, which is a characteristic of the ear. Use of a logarithmic scale has the added advantage that it compresses the very wide range of sound pressures to which the ear may typically be exposed (0.0002Pa to 20Pa) to a more manageable range of numbers. The threshold of hearing occurs at approximately 0dB and the threshold of pain is around 120dB.

Airborne Sound Insulation

Voices, hi-fi systems, television and radio sound and musical instruments are all sources of airborne sound. They excite the air around them and the vibration in the air is transmitted to surrounding surfaces, such as walls, ceilings and floors. This sets these constructions into vibration and this vibration is re-radiated in neighbouring rooms as sound. Energy is lost in the transmission path and this is referred to as transmission loss or more generally, airborne sound insulation. The most simple measure of sound insulation between two rooms is the sound level difference, D , which is the arithmetic difference between the sound level, in dB, in the source room and the sound level in the receiving room.

Other measures of sound insulation include the sound reduction index (R , obtained by laboratory test), the apparent sound reduction index (R' , obtained in field tests) and the standardised level difference (D_{nT} , used mainly in the sound insulation of rooms in dwellings and other cellular rooms). The relevant test procedures are laid down in BS EN ISO 140. The results are obtained over a range of frequencies. A single-figure “weighted” result can be obtained from one-third octave band results measured over the frequency range 100 - 3150Hz by using a curve-fitting procedure laid down in BS EN ISO 717. The subscript “w” is added to the descriptors above, for example; $D_{nT,w}$. The C_{tr} value is a correction factor (normally negative) which takes additional account of low frequency performance of the structure tested.

Impact Sound Isolation

In the case of impact sound, the building construction is caused to vibrate as a result of a physical impact. Footsteps on floors are the most obvious example. The vibration is radiated as sound in neighbouring rooms. Impact insulation is measured using a standard tapping machine, which drops weights cyclically onto a floor. The sound pressure level is measured in the receiving room below and the result is known as the impact level, L_i . This test is used in the evaluation of domestic separating floors. As with airborne sound, the test procedures are set out in BS EN ISO 140 and the single-figure weighting of the results is described in BS EN ISO 717. The descriptor for the final result of a field test is $L'_{nT,w}$.

Reverberation time

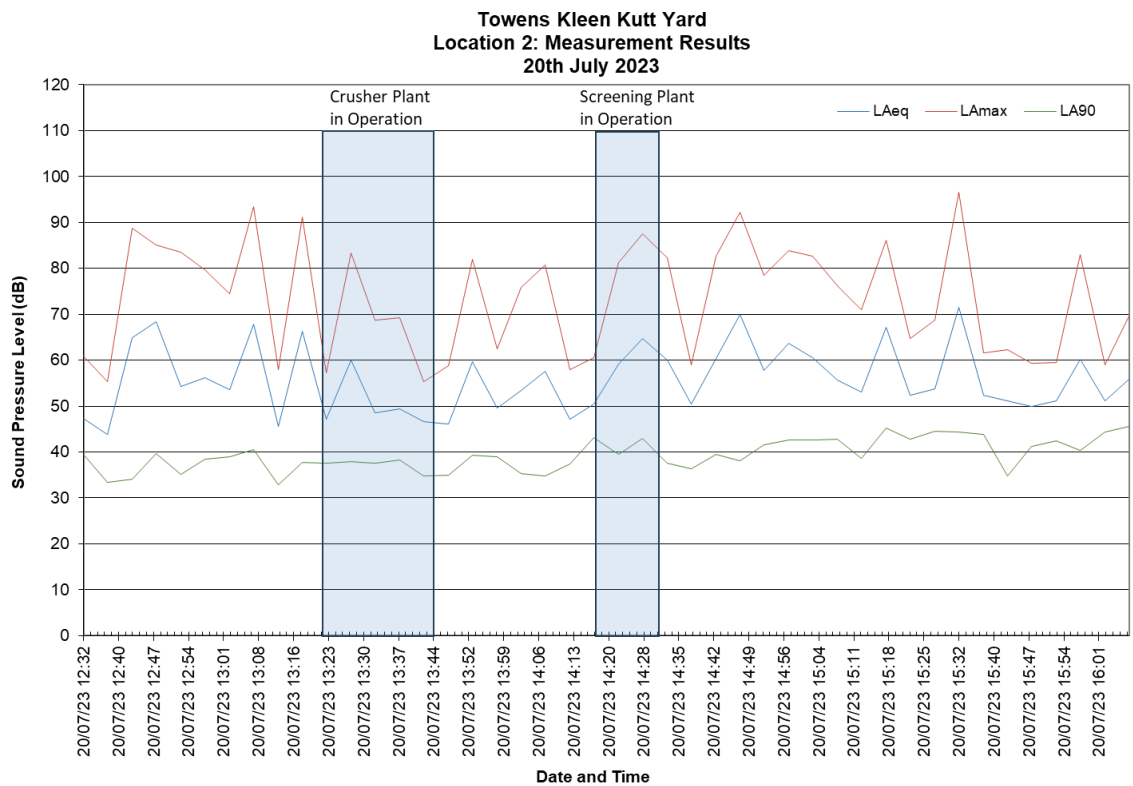
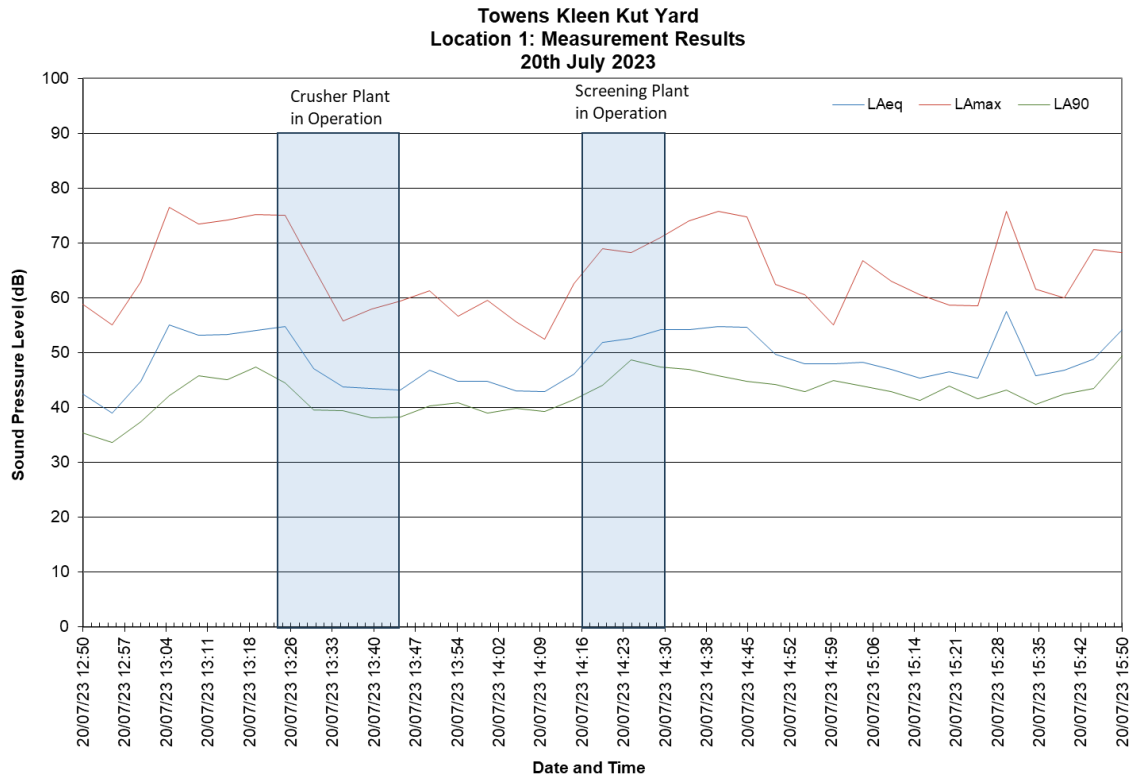
The reverberation time is a measure of the rate of decay of sound in a room and this influences the sound pressure level of noise in that room. It is defined as the time taken, in seconds, for the level of sound in a room to decrease by 60 dB (a millionth of its original energy value) after the discontinuation of a sound. A reverberation time of 0.5s is used to standardise sound insulation test results in dwellings. Reverberation time is measured in accordance with the requirements of BS EN ISO 140.

APPENDIX B – METEOROLOGICAL DATA

Date/Time	Temperature °C	Wind Direction	Wind Speed m/s	Pressure hPa	Cloud Cover Oktas
20/07/2023 12:04	20	East	0.4	1019	5
20/07/2023 12:09	20	NE	0.4	1019	5
20/07/2023 12:14	20	East	0.4	1019	5
20/07/2023 12:19	20	SSE	0.4	1019	5
20/07/2023 12:24	20	SE	0.3	1018	5
20/07/2023 12:29	20	SSW	0.5	1019	5
20/07/2023 12:34	20	NE	0.4	1018	5
20/07/2023 12:39	20	South	0.8	1018	5
20/07/2023 12:44	20	South	0.5	1018	5
20/07/2023 12:49	20	SSW	0.4	1018	5
20/07/2023 12:54	20	SW	0.8	1018	5
20/07/2023 12:59	20	WSW	0.9	1018	5
20/07/2023 13:04	20	South	0.4	1018	5
20/07/2023 13:09	21	NNW	0.7	1018	6
20/07/2023 13:14	20	WSW	1.3	1018	6
20/07/2023 13:19	21	SE	0.5	1018	6
20/07/2023 13:24	21	SE	0.8	1018	6
20/07/2023 13:29	21	South	0.7	1018	6
20/07/2023 13:34	21	SSW	0.8	1018	6
20/07/2023 13:39	21	SW	0.9	1018	6
20/07/2023 13:44	20	WNW	1.0	1018	6
20/07/2023 13:49	20	NE	0.8	1018	6
20/07/2023 13:54	20	SSW	0.6	1018	6
20/07/2023 13:59	20	West	0.8	1018	6
20/07/2023 14:04	20	NNE	0.8	1018	6
20/07/2023 14:09	20	NNW	0.6	1018	6
20/07/2023 14:14	20	WSW	0.8	1018	6
20/07/2023 14:19	20	North	1.2	1018	6
20/07/2023 14:24	21	SE	1.0	1018	6
20/07/2023 14:29	21	West	1.2	1018	6
20/07/2023 14:34	20	NNW	0.8	1018	6
20/07/2023 14:39	19	WSW	1.0	1018	5
20/07/2023 14:44	19	SSW	0.8	1018	5
20/07/2023 14:49	19	WSW	1.1	1018	5
20/07/2023 14:54	19	SW	1.4	1018	5
20/07/2023 14:59	19	SW	0.9	1018	5
20/07/2023 15:04	19	WSW	1.0	1018	5
20/07/2023 15:09	18	WSW	1.5	1018	5
20/07/2023 15:14	18	SSW	0.9	1018	5
20/07/2023 15:19	18	SSW	0.9	1018	5
20/07/2023 15:24	18	SSW	0.8	1018	5
20/07/2023 15:29	18	SW	0.9	1018	5
20/07/2023 15:34	18	SW	1.2	1018	5
20/07/2023 15:39	18	SW	1.3	1018	6
20/07/2023 15:44	18	SW	1.1	1018	6
20/07/2023 15:49	18	SW	1.3	1018	6
20/07/2023 15:54	18	SW	1.1	1018	6
20/07/2023 15:59	19	SSW	0.8	1018	6
20/07/2023 16:04	19	SW	1.0	1018	6

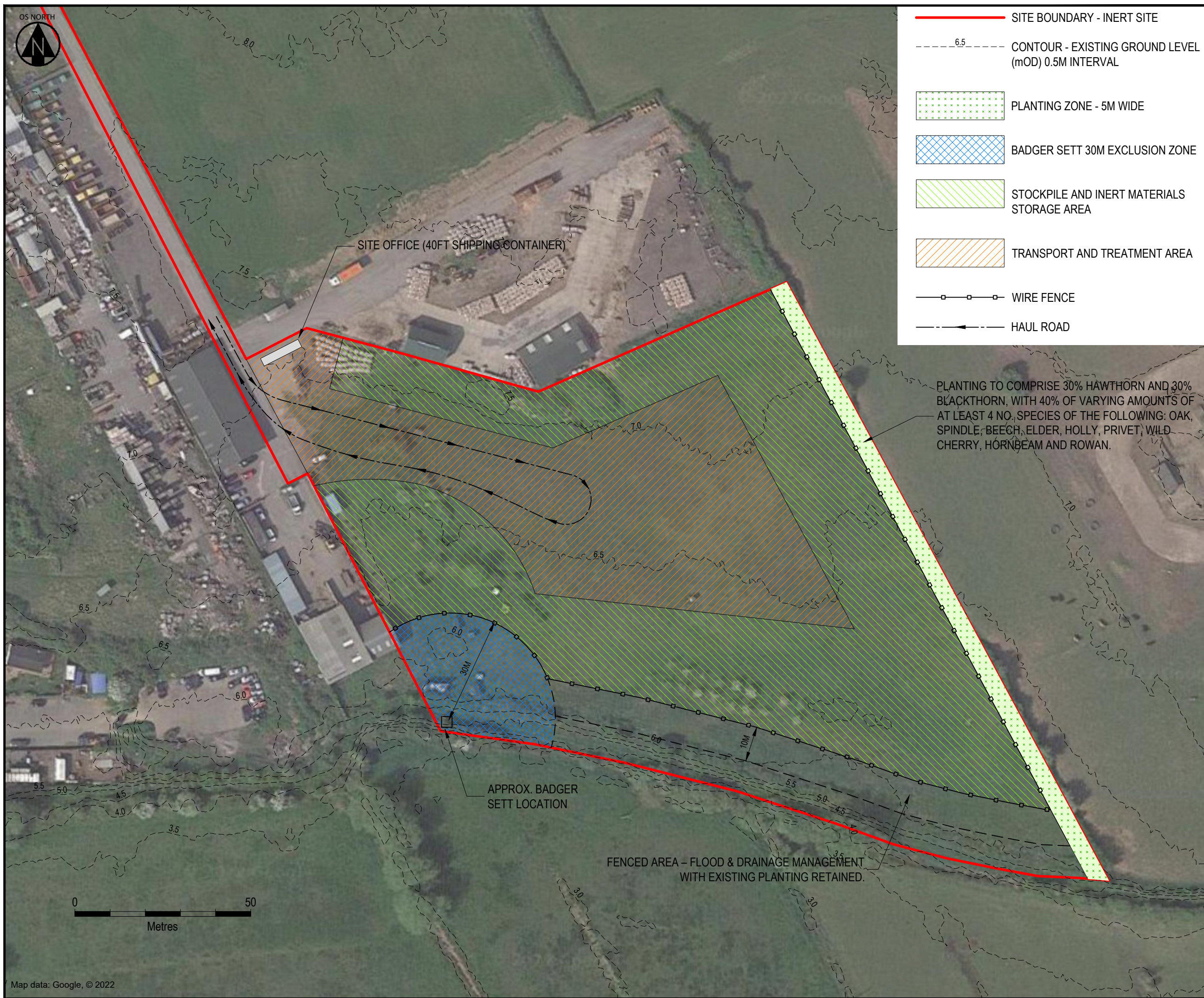
Figure B1: Meteorological Record During Attended Measurements

APPENDIX C – MEASUREMENT RESULTS



APPENDIX D – SOURCE-TERM NOISE DATA, SOUND POWER CALCULATION RESULTS

Plant Item	BS 3746 Calculated Single Octave Band (Hz) Sound Power Levels (dB)								
	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dBA
Screening Plant	109	110	106	101	100	98	91	81	105
Crusher	110	113	114	110	107	102	95	88	112



- SITE BOUNDARY - INERT SITE
- 6.5 CONTOUR - EXISTING GROUND LEVEL (mOD) 0.5M INTERVAL
- PLANTING ZONE - 5M WIDE
- BADGER SETT 30M EXCLUSION ZONE
- STOCKPILE AND INERT MATERIALS STORAGE AREA
- TRANSPORT AND TREATMENT AREA
- WIRE FENCE
- HAUL ROAD

PLANTING TO COMPRISE 30% HAWTHORN AND 30% BLACKTHORN, WITH 40% OF VARYING AMOUNTS OF AT LEAST 4 NO. SPECIES OF THE FOLLOWING: OAK, SPINDLE, BEECH, ELDER, HOLLY, PRIVET, WILD CHERRY, HORNBEAM AND ROWAN.

Notes:
 CONTOURS GENERATED FROM LIDAR DATA © ENVIRONMENT AGENCY COPYRIGHT AND/OR DATABASE RIGHT 2020. ALL RIGHTS RESERVED.
 TREATMENT CONSISTS OF BLENDING, CRUSHING, SORTING, SEPARATING AND SCREENING IN THE TREATMENT AREA.
 ALL ACTIVITIES ON SITE WILL OCCUR OUTSIDE.
 ALL SITE HAS A PERMEABLE SURFACE.

Rev	Date	Description	By	Ckd
B	23/06/23	Updates to site layout. Issued for information.	NG	LB
A	10/03/23	Initial issue	NG	LB



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Project
Towens Kleen Kutt Yard

Title
SITE LAYOUT

Drawn	Checked	Scale at A3	Date	Issue Date
NG	LB	1:1000	10/03/23	10/03/23

Drawing status
INFORMATION

Drawing No.	Revision
W-MTS-DR-PL-05	B



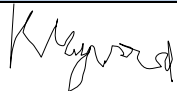



Environmental Risk Assessment

Inert Storage Facility Towens of Weston Ltd

Towens Kleen Kutt Yard
Land off Springway Lane,
Westonzoyland,
TA7 0JS

Document Title	Environmental Risk Assessment
Revision	2.0
Date	19/06/2023
Document Reference	Towens Kleen Kutt ERA 19-6-23
Prepared For	Towens of Weston Ltd
Authored By	MTS Environmental Ltd

Quality Control

Revision No.	Date Revised	Amendments	Authored By	Sign Off	Approved By	Sign Off
1.0	31/01/23	Original Draft for permit application	Kasia Haywood		Luke Bridges	
2.0	19/06/23	Amendments based on duly making information request	Kasia Haywood		Luke Bridges	

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1. Introduction

Towens of Weston Ltd is applying for a new bespoke environmental permit (permit number: TBC) for its Westonzoyland inert storage depot site at Land off Springway Lane, Westonzoyland, TA7 0JS. The permit is for a physical treatment of non-hazardous waste site (Activity 1.16.12). The main activities on site will consist of soils and aggregate storage and treatment through screening to be used in recovery CL:AIRE projects. The site will be used as a CL:AIRE Hub site.

This Environmental Risk Assessment (ERA) is limited to a qualitative assessment of the potential risks to the environment and human health specifically related to the activities, including the proposed activities, undertaken at the Towens of Weston Ltd Westonzoyland site. This report will identify any significant risks and detail the measures that Towens of Weston Ltd will adopt to appropriately manage any risk of pollution.

2. Environmental Risk Assessment

2.1. Methodology

This report has been prepared following the Environment Agency's Risk Assessment guidance. It specifically relates to the potential risks associated with odour; noise and vibration; fugitive emissions and accidents and incidents.

This risk assessment addresses the above risks and is based on the following methodology:

- Identification of potential risks
- Identification of all potential receptors to these risks
- An assessment of each risk type.

The environmental risk assessment (Appendix A) assesses the risks to the environment and human health from activities carried out at the Towens of Weston Ltd Westonzoyland depot and identifies the pollutant linkage i.e. source – pathway – receptor for each risk type.

2.2. Potential Hazards

The potential hazards resulting from the activities carried out at the Towens of Weston Ltd Westonzoyland depot have been considered, as provided in Appendix A, and are summarised below:

- Odour:
 - Waste materials
- Noise and vibration:
 - Engine noise from vehicles
 - Use of reverse vehicle warnings
 - Use of plant and machinery
- Fugitive emissions:
 - Particulate matter i.e. dust
 - Scavenging birds, pests, and vermin
 - Mud and litter
- Accidents:
 - Fire

- Leaks and spillages
- Flooding
- Unauthorised access

2.3. Pathways

The pathways identified for each risk type are shown in Table 1:

Table 1: Potential Pathways

Risk Type	Pathway
Odour	Air
Noise and vibration	Air
Fugitive emissions	Air
Accidents	Air
	Surface water run-off
	Infiltration
	Percolation

2.4. Receptors

Receptors within 1000m of the application site have been identified and are shown in Table 2 below, with high sensitivity receptors highlighted in bold, and in the Sensitive Receptor Plan (Appendix B). The main pathway for the identified sources is the air and as such, atmospheric conditions can affect dispersion rates and the potential risk. Therefore, the location of each receptor in relation to the site may influence the potential impact of the risk, as summarised in Table 2.

Table 2: Location of potential receptors in relation to waste operations

Receptor	Distance from site (m)	Direction
Residential		
Caravan Park	160m	West
Springway Farm	550m	North West
Property on Knowleyards Road	860m	South East
The Old Ambulance House	755m	East
Designated Land and Waterways		
Site of Special Scientific Interest (SSSI) – Langmead and Weston Level	60m and 350m	South and West
Priority Habitat Inventory (PHI) – Lowland Meadows	155m	South
PHI – Lowland Dry Acid Grassland	635m	South East
PHI – Coastal and Floodplain Grazing Marsh	60m	South and West
PHI – Deciduous Woodland	535m	East
PHI – Traditional Orchards	1000m	South East
Important Plant Areas Plantlife (GB)	60m	South and West
Somerset Levels and Moors	0m	All directions
Pigditch Rhyne Network	60m	South and West
Sensitive Land Uses		
Middlezoy Aerodrome	230m	East
Farm	545m	North West
Westonzoyland Allotments	1000m	North West
Westonzoyland Airfield	700m	North West

Sedgemoor RC Flying Club	950m	North East
Industrial/Commercial		
JWF Engineering	250m	East
Kleen Kutt	70m	East
Bridgwater Motorcycle Training	930m	North West
Grandfields Westonzoyland Motor Track and Learner Driver Area	600m	East
T&K Motorcycle Training	800m	East
Burnham Coal Supplies	345m	North West
Regency	320m	North West
Slabs R Us	400m	North West
Seven Acres Industrial Estate	970m	East
Towens Westonzoyland Depot	280m	West
Public Rights of Way		
Restricted Byway	60m	South
Public Footpath	430m	South
Infrastructure/utilities		
A372	470m	North
Protected species		
Priority Species - Curlew	620m	West
Priority Species - Lapwing	0m	All directions
Priority Species - Redshank	135m	North and West
Protected Species-European Water Vole	Up to 500m	All directions
Badger Sett	60m	South West
Groundwater		
The site is not within a source protection zone or drinking water safeguard zone		

2.4. Risk Assessment

The Environmental Risk Assessment (Appendix A) looks at each specific hazard identified and assesses the likelihood of those hazards impacting on nearby receptors. This is achieved by fulfilling the following objectives:

- Identify the location and nature of each hazard
- Identify the specific receptors potentially at risk and assess the sensitivity of each receptor
- Provide an assessment of the risk posed to each sensitive receptor
- Identify management and monitoring techniques to remove or mitigate the risk
- Provide recommendations for more detailed assessments where necessary.

3. Summary

The Environmental Risk Assessment indicates that if the appropriate outlined management techniques are implemented at the site to protect nearby sensitive receptors, the proposed activities as part of the permit variation will have no significant impacts in terms of odour, noise and fugitive emissions, and the likelihood of accidents is minimal.

Appendix A – Environmental Risk Assessment

Table A1: Odour Risk Assessment and Management Plan

What is the risk?			Managing the risk	Assessing the risk		
Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the overall risk?
Odorous Waste Types	Local population in residential dwellings and businesses listed in Table 2 SSSI Priority and Protected Species Site Staff	Air transport then inhalation	<p>Permitted waste types stored onsite are not putrescible and so have a low odour potential. No hazardous wastes are accepted on site.</p> <p>There will be strict waste acceptance procedures in place to minimise the risk of non-compliant wastes being accepted. Details of the waste acceptance procedures are provided in the Environmental Management System (EMS).</p> <p>All loads will be inspected upon arrival and refused if offensively odorous.</p> <p>Any odorous wastes will be transferred to the quarantine area and removed from site within 7 days.</p> <p>All site operatives will be vigilant regarding identifying non-compliant wastes and any non-conformances or odour issues will be reported to the Site Manager.</p>	Very unlikely as the waste types accepted on site do not give off odour unless heated and the material will be stored at ambient temperature	Odour annoyance and complaints	Low

Table A2: Noise and Vibration Risk Assessment and Management Plan

What is the risk?			Managing the risk	Assessing the risk		
Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the overall risk?
Noise and vibrations from loading and unloading of waste	Local population in residential dwellings, and businesses listed in Table 2 SSSI and priority habitats Priority and protected species Site Staff	Air and vibration	<p>All noise generating activities will be undertaken between the hours of 07:00 to 17:00 Monday to Friday and 07:00 to 13:00 on Saturday, except for emergency repairs.</p> <p>All plant and machinery will have effective silencers where practicable and be maintained in accordance with the manufacturer's requirements to minimise the risk of mechanical failure which could result in increased noise emissions.</p> <p>The loading/unloading of wastes will be undertaken in a controlled manner to keep noise/vibration to a minimum. Vehicles will be directed by site operatives to minimise the drop height when depositing loads at the site.</p> <p>All noise and vibration generating activity will be monitored closely and site operatives will be vigilant and report any excessive noise or vibration issues to the Site Manager.</p> <p>The site boundary has a fence and planting to reduce potential noise levels and contain noise within the site boundary.</p>	<p>Intermittent noise disturbance</p> <p>The site is surrounded by other industrial noise generating sites so it is unlikely the site operations will create excess noise above the existing</p>	Noise annoyance and complaints	Low
Vehicle movements on site	Local population in residential dwellings, and businesses listed in Table 2 SSSI and	Air	<p>Loads will only be delivered to the site during working hours (07:00 to 17:00 Monday to Friday and 07:00 to 13:00 on Saturday).</p> <p>The delivery of waste will take place in a controlled manner by limiting drop heights to keep noise to a minimum.</p> <p>Designated one-way haul road for vehicles on site to avoid contact with materials.</p>	<p>Intermittent during operating hours</p> <p>The site is surrounded by other industrial noise generating sites so it is unlikely the site operations</p>	Intermittent noise and vibration disturbance	Low

	<p>priority habitats</p> <p>Priority and protected species</p> <p>Site Staff</p>		<p>Speed limit of 5 mph on site.</p> <p>The site boundary has a southern and eastern fence to reduce potential noise levels and contain noise within the site boundary.</p> <p>All plant and machinery will have effective silencers where practicable and be maintained in accordance with the manufacturer's requirements to minimise the risk of mechanical failure which could result in increased noise emissions.</p> <p>An anti-idling policy ensures that all equipment and vehicles when not in regular use shall be switched off. The Site Manager will be responsible for ensuring the above measures are implemented.</p> <p>Anti-beeping policy in place on site to prevent unnecessary vehicle noise.</p> <p>All noise generated by vehicle movements will be monitored closely and site operatives will be vigilant and report any excessive noise or vibration issues to the Site Manager.</p>	<p>will create excess noise above the existing</p>		
<p>Use of plant and machinery.</p>	<p>Local population in residential dwellings, and businesses listed in Table 2</p> <p>SSSI and priority habitats</p> <p>Priority and protected species</p> <p>Site Staff</p>	<p>Air</p>	<p>All noise generating activities will take place during working hours (07:00 to 17:00 Monday to Friday and 07:00 to 13:00 on Saturday), except for emergency repairs.</p> <p>All plant and machinery will have effective silencers where practicable and be maintained in accordance with the manufacturer's requirements. Only screeners are intended to be used on site which do not ordinarily create significant adverse noise impacts.</p> <p>All equipment and vehicles, when not in regular use, shall be switched off. The Site Manager will be responsible for ensuring the above measures are implemented.</p> <p>Processing activities will be done on a campaign basis to avoid continuous on/off use and noise nuisance. The site is a temporary site for CL:AIRE projects so will not cause continued noise impacts.</p>	<p>Intermittent during operating hours</p> <p>The site is surrounded by other industrial noise generating sites so it is unlikely the site operations will create excess noise above the existing</p>	<p>Intermittent noise and vibration disturbance.</p>	<p>Low</p>

			<p>Minimal plant and machinery is on site, consisting only of a screener, telehandler, crusher (on a campaign basis), grab and mobile water bowser.</p> <p>Locations have been considered to minimise noise production: all processing is done within the fenced site area.</p> <p>The site boundary has planted and vegetated areas to reduce potential noise levels and contain noise within the site boundary.</p> <p>All noise generating activity will be monitored closely and site operatives will be vigilant and report any excessive noise or vibration issues to the Site Manager.</p> <p>Noise to be managed in accordance with the Part B permits of the crusher and screener.</p>			
Noise from reversing vehicle warnings.	<p>Local population in residential dwellings, and businesses listed in Table 2</p> <p>SSSI and priority habitats</p> <p>Priority and protected species</p> <p>Site Staff</p>	Air	<p>All noise generating activities will take place during working hours (07:00 to 17:00 Monday to Friday and 07:00 to 13:00 on Saturday) except for emergency repairs.</p> <p>All noise and vibration generating activity will be monitored closely and site operatives will be vigilant and report any excessive noise or vibration issues to the Site Manager.</p> <p>Designated one-way haul road for vehicles on site to minimise the need for reversing except when tipping into the tipping area or collecting materials.</p> <p>The site boundary has planting and a fence to reduce potential noise levels and contain noise within the site boundary.</p>	Intermittent during operating hours.	Intermittent noise disturbance	Low
Noise from processing of waste materials (crushing and	<p>Local population in residential dwellings, and businesses listed in Table 2</p> <p>SSSI and</p>	Air	<p>All noise generating activities will take place during working hours (07:00 to 17:00 Monday to Friday and 07:00 to 13:00 on Saturday) except for emergency repairs.</p> <p>Processing activities will not generate levels of noise above that originating from the surrounding roads and industrial sites.</p>	Intermittent during operating hours	Intermittent noise disturbance	Low

<p>screening)</p>	<p>priority habitats</p> <p>Priority and protected species</p> <p>Site Staff</p>	<p>All plant and machinery will have effective silencers where practicable and be maintained in accordance with the manufacturer’s requirements to minimise the generation of noise.</p> <p>All plant and equipment will be switched off when not in regular use.</p> <p>Processing activities will be done on a campaign basis to avoid continuous on/off use and noise nuisance. The site is a temporary site for CL:AIRE projects so will not cause continued noise impacts.</p> <p>Minimal plant and machinery is on site, consisting only of a wash plant, telehandler, excavator, crusher (on a campaign basis), grab and mobile water bowser.</p> <p>Locations have been considered to minimise noise production: all activities are contained within the perimeter fence and planting.</p> <p>All noise and vibration generating activity will be monitored closely and site operatives will be vigilant and report any excessive noise or vibration issues to the Site Manager.</p> <p>Noise to be managed in accordance with the Part B permits of the crusher and screener.</p>			
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Table A3: Fugitive emissions risk assessment and management plan

What is the risk?			Managing the risk	Assessing the risk		
Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the overall risk?
To Air						
Dust emissions from vehicle movements	Local population in residential dwellings, sensitive land uses, and businesses listed in Table 2 Site Staff Users of roads - A372 SSSI and priority habitats Priority and protected species	Air transport then deposition	<p>Wastes being delivered to the site will be covered or sheeted to prevent the generation of dust while the waste is in transit.</p> <p>Vehicle speeds will be limited onsite and the access road to 5mph to prevent re-suspension and movement of dust.</p> <p>All equipment and vehicles when not in regular use shall be switched off to minimise the risk of dust emissions that may arise from idling.</p> <p>Designated one-way haul road for vehicles on site to avoid contact with materials.</p> <p>The implementation of dust suppression systems including the use of spray on crushing plant, mobile water bowser for damping down, and regular maintenance of haul roads and site surface with water bowser and road sweeper.</p> <p>The site perimeter is surrounded by a planting and a fence which will act as a screen for dust so no dust escapes from the site boundary.</p> <p>Dust will be managed in accordance with the Dust Management Plan prepared for the site.</p> <p>The Site Manager undertakes a daily visual assessment of dust levels and all site operatives will be vigilant and report any problems to the Site Manager.</p>	Unlikely due to measures in place and the nature of materials accepted on site	Local nuisance i.e. dust on cars, clothing, and vegetation. Nutrient enrichment.	Low

<p>Dust emissions generated during unloading of waste from HGVs.</p>	<p>Local population in residential dwellings, sensitive land uses, and businesses listed in Table 2</p> <p>Site staff</p> <p>Users of roads - A372</p> <p>SSSI and priority habitats</p> <p>Priority and protected species</p>	<p>Air transport then deposition</p>	<p>A water bowser will be used to dampen site haul roads, site surface and stockpiles if necessary.</p> <p>The loading/unloading of wastes will be undertaken in a controlled manner by limiting drop heights to keep dust emissions to a minimum.</p> <p>Wastes will be stored in height limited stockpiles to prevent wind whipping.</p> <p>Designated one-way haul roads and paths for HGVs to avoid contact with waste.</p> <p>Drop heights will be minimised to reduce the generation of dust whilst the waste is being handled.</p> <p>The site is enclosed within planting and a fence surrounding the site perimeter will act as a screen for dust so no dust escapes from the site boundary.</p> <p>Dust will be managed in accordance with the Dust Management Plan prepared for the site.</p> <p>The Site Manager will undertake a daily visual assessment of dust levels and all site operatives will be vigilant and report any problems to the Site Manager.</p> <p>Operations will temporarily cease when winds are likely to generate dust emissions from wastes and materials.</p>	<p>Dust could potentially reach nearby properties when a strong wind blows in their direction. Management actions should prevent this happening.</p> <p>Minimal processing activities undertaken on site</p>	<p>Local nuisance i.e. dust on cars, clothing, and vegetation.</p> <p>Nutrient enrichment.</p>	<p>Low</p>
<p>Dust from haul road</p>	<p>Local population in residential dwellings, sensitive land uses, and businesses listed in Table 2</p>	<p>Air transport then deposition</p>	<p>The use of modern plant and regular maintenance shall be practiced to reduce emissions.</p> <p>The implementation of dust suppression systems including the use of spray on crushing plant, mobile water bowser for damping down, and regular maintenance of haul roads and site surface with water bowser and road sweeper.</p>	<p>Unlikely due to measures in place</p>	<p>Local nuisance i.e. dust on cars, clothing, and vegetation.</p>	<p>Low</p>

	<p>Site staff</p> <p>Users of roads - A372</p> <p>SSSI and priority habitats</p> <p>Priority and protected species</p>		<p>The haul road on the site will be wetted down daily.</p> <p>Designated one-way haul roads and paths for HGVs to avoid contact with waste.</p> <p>Dust will be managed in accordance with the Dust Management Plan prepared for the site.</p> <p>The Site Manager undertakes a daily visual assessment of dust levels and all site operatives will be vigilant and report any problems to the Site Manager.</p>			
<p>Dust emissions from the processing of waste materials (crushing and screening)</p>	<p>Local population in residential dwellings, sensitive land uses, and businesses listed in Table 2</p> <p>Site staff</p> <p>Users of roads - A372</p> <p>SSSI and priority habitats</p> <p>Priority and protected species</p>	<p>Air transport than deposition</p>	<p>All plant is regularly maintained to reduce emissions.</p> <p>The implementation of dust suppression systems including the use of spray on crushing plant, mobile water bowser for damping down, and regular maintenance of haul roads and site surface with water bowser and road sweeper.</p> <p>The site benefits from its own plant so operations can be done on smaller volumes more frequently to ensure that stockpiles are kept to a smaller size. This reduces dust/litter from stockpiles and protects the surrounding receptors.</p> <p>Minimal crushing will take place and no crushing takes place in very dry or windy conditions.</p> <p>The site is mainly used for storage of materials for CL:AIRE projects so minimal processing activities are undertaken on site therefore minimising dust production.</p> <p>All plant and equipment will be switched off when not in regular use.</p> <p>All processing activities conducted within the fenced site to prevent dust escaping and increase the number of dust barriers between receptors.</p>	<p>Unlikely due to measures in place</p>	<p>Local nuisance i.e. dust on cars, clothing, and vegetation.</p> <p>Nutrient enrichment.</p>	<p>Low</p>

			<p>Processing activities will be done on a campaign basis to avoid continuous on/off use and dust nuisance. Minimal processing will take place on site so it is highly unlikely that dust will be produced.</p> <p>Minimal plant and machinery is on site, consisting only of a screener, telehandler, excavator, crusher, grab and mobile water bowser.</p> <p>The site is enclosed within a fence to prevent dust escaping from the site.</p> <p>Dust will be managed in accordance with the Dust Management Plan prepared for the site.</p> <p>The Site Manager undertakes a daily visual assessment of dust levels and all site operatives will be vigilant and report any problems to the Site Manager</p>			
<p>Release of particulate matter (dusts), vapours and polluting gases</p>	<p>Local population in residential dwellings, sensitive land uses, and businesses listed in Table 2</p> <p>Site staff</p> <p>Users of roads - A372</p> <p>SSSI and priority habitats</p> <p>Priority and protected species</p>	<p>Air transport then inhalation</p>	<p>Permitted waste types do not include dusts, powders or loose fibres and waste is not typically dusty unless it is stored during prolonged dry periods when damping down is carried out where required.</p> <p>Asbestos containing waste is not accepted on site, so the release of asbestos fibres is extremely low.</p> <p>Hazardous waste is not accepted on site.</p> <p>Any non-conforming quarantine material is removed from site within 7 days.</p> <p>The potential sources of fugitive emissions to air have been identified and a Dust Management Plan has been prepared to prevent any potential dust emissions from reaching any nearby</p>	<p>Unlikely due to measures in place and the nature of waste accepted on site</p>	<p>Respiratory illness including lung cancer and mesothelioma.</p>	<p>Low</p>



			receptors. The Site Manager undertakes a daily visual assessment of dust levels and all site operatives will be vigilant and report any problems to the Site Manager			
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To Water						
Contaminated rainwater run-off.	Surface water and groundwater SSSI and priority habitats Rhyne network Somerset Levels and Moors	Water	<p>Only non-hazardous and inert wastes are accepted on site consisting of as-dug naturally occurring non-contaminated material to be used for CL:AIRE projects. Therefore, run-off from site will not be contaminated.</p> <p>The site surface is permeable hardstanding with run off naturally draining into ground. Run off directly into local rhynes will be slowed or prevented by the perimeter planting.</p> <p>In the event of a spill, emergency procedures as outlined in the EMS will be followed.</p> <p>The southern planting acts as a protective barrier to run off escaping the site and draining into the ditch to the south.</p> <p>Booms and sand will be used to contain any surface run-off water following a leak, spill or fire event.</p> <p>Fuel and oil is not intended to be stored on site. In the event that it is then it will be stored in a fully bunded bowser.</p> <p>The site is secure through secure lockable gates and fences so theft or damage which may cause spills is minimal. Also, no fuel is intended to be stored on site.</p> <p>There are strict waste acceptance procedures in place at the site to prevent the acceptance of non-conforming waste types. Details of the waste acceptance procedures are provided in the EMS.</p> <p>Any non-conforming material will be stored in the quarantine area and removed from site within 7 days.</p>	Very unlikely due to the nature of wastes accepted on site	Contamination of groundwater surface water bodies	Low
Pest/Scavenging Birds						

<p>Birds and pests</p>	<p>Local population in residential dwellings, sensitive land uses, and businesses listed in Table 2</p> <p>SSSI and priority habitats</p> <p>Priority and protected species</p>	<p>Air transport and over ground</p>	<p>Permitted wastes stored onsite are not putrescible (as dug naturally occurring non-contaminated soils) and will therefore not be attractive to pests or scavenging birds. Green waste is not accepted on site so there will be no useable nesting sites available.</p> <p>No hazardous wastes are accepted on site.</p> <p>There are strict waste acceptance procedures in place at the site to prevent the acceptance of non-conforming waste types. Details of the waste acceptance procedures are provided in the EMS.</p> <p>The site is enclosed within secure animal proof fencing and gates to deny the access of pests.</p> <p>The potential badger sett in the southwest corner of the site is protected by a 30m exclusion zone segregated by an animal proof fence.</p> <p>Materials are stored in segregated stockpiles to prevent cross-contamination and encouraging odour that may attract birds and pests.</p> <p>The Site Manager will undertake regular reviews of pests and scavenging birds at the site. All site operatives will be vigilant and report any problems to the Site Manager.</p>	<p>Very unlikely due to the nature of the waste material</p>	<p>Nuisance to local receptors within 1km of the environmental permit boundary.</p>	<p>Low</p>
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Mud						
Mud from vehicle movements	Users of roads - A372	Tracked on vehicle wheels.	<p>The implementation of dust suppression systems including the use of spray on crushing plant, damping down and regular maintenance of haul roads and site surface with a water bowser and road sweeper.</p> <p>If mud is deposited on the access road and/or highway then a road sweeper will be employed if necessary.</p> <p>All vehicles exiting the site would be checked for exterior mud or debris before leaving the site.</p> <p>The site benefits from a wheel wash station consisting of a jet wash hose and brush.</p> <p>Designated one-way haul road for HGVs on site to minimise contact with materials and tracking of mud.</p> <p>The amount of mud on local roads will be monitored daily by site operatives.</p>	Unlikely due to measures in place.	Local nuisance. Mud on roads is unsightly and can increase the likelihood of road traffic accidents.	Low
Litter						
Litter	All receptors listed in Table 2.	Air transport then deposition	<p>Waste types received by the site generally do not contain litter that could become windblown. Operatives will be vigilant, and any litter reported will be removed immediately.</p> <p>All incoming loads will be sheeted and remain sheeted until they are ready to be tipped.</p> <p>The site perimeter is enclosed by planting and a fence to prevent any litter being blown from the site.</p> <p>Designated one-way haul road for HGVs to avoid contact with waste.</p>	Unlikely due to measures in place.	Local nuisance	Low



			<p>There are strict waste acceptance procedures in place to prevent the acceptance of non-conforming waste types. Details of the waste acceptance procedures are provided in the EMS.</p> <p>Working areas will be regularly cleared and inspected to minimise litter. Housekeeping measures are in place during operating hours.</p>			
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Table A4: Accident and Incident Risk Assessment and Management Plan

What is the risk?			Managing the risk	Assessing the risk		
Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the overall risk?
Fire or failure to contain firewater	Groundwater and surface water. Local residents listed in Table 2 SSSI and priority habitats Rhyne network	Infiltration and contamination of surface water	<p>No combustible or hazardous waste is accepted on site. If any incidental combustible waste is brought to site, then it will be transferred and stored in the quarantine area in containers made of fire-resistant materials to prevent fires spreading.</p> <p>All waste stored on permeable hardstanding.</p> <p>No waste shall be burnt on site and the use of welding/cutting tools (tools with a naked flame) are sanctioned first by the site manager/competent person.</p> <p>The southern planting acts as a protective barrier to run off escaping the site and draining into the ditch to the south.</p> <p>All site operatives are required to recognise signs of smouldering waste at the point of reception. Such wastes shall remain in the container and removed to the quarantine area. The site manager shall be informed.</p> <p>There will be strict waste acceptance procedures in place at the site to prevent the acceptance of non-conforming waste types. Details of the waste acceptance procedures are provided in the EMS.</p> <p>The operator will undertake routine maintenance of equipment in accordance with manufacturer's guidance. This will minimise the risk of mechanical failure which may result in an increased risk of combustion.</p>	Unlikely	Contamination of local groundwater and/or surface water.	Low

			<p>Site notices and training will be undertaken regarding fire hazards.</p> <p>Site Manager will be responsible for actions in the event of a fire.</p> <p>Fire booms, spill kits, fire blankets and extinguishers, sand and buckets available on site and will be used to contain any firewater.</p>			
Leaks and spillages of oil or fuel.	<p>Groundwater and surface water.</p> <p>SSSI and priority habitats</p> <p>Rhyne network</p>	Infiltration	<p>The operator will undertake regular maintenance of plant equipment in accordance with manufacturer's guidance. This will minimise the risk of mechanical failure which may result in leaks.</p> <p>Fuel is not intended to be stored on site. In the event that it is then all fuel, oil and lubricants stored on site will be double-bunded and stored in a secure container. The storage will be maintained and inspected in accordance with the manufacturer's recommendations.</p> <p>Daily vehicle / plant checks to ensure any fuel/oil leaks etc. are repaired as soon as possible.</p> <p>No hazardous or combustible wastes accepted on site.</p> <p>Booms and sand will be used to contain any spills and prevent it from entering the local watercourse.</p> <p>The southern planting acts as a protective barrier to run off escaping the site and draining into the ditch to the south.</p> <p>Spill kits are also readily available on site in case of a spill, these use absorbent mats which soak up any contaminating hydrocarbons.</p>	Unlikely due to measures in place and intention not to store fuel on site	Contamination of land and watercourses.	Low

			<p>The emergency response outlined in the EMS will be followed.</p> <p>The Site Manager will be responsible for ensuring effective remediation and documenting any incident.</p>			
<p>Flooding</p>	<p>Groundwater</p> <p>SSSI and priority habitats</p> <p>Rhyne network</p>	<p>Infiltration and Percolation</p>	<p>The site is in an area at a low risk of flooding from rivers or seas, and at a very low risk of flooding from surface water.</p> <p>The whole site is surfaced in permeable hardstanding to allow natural percolation on site and not increase runoff rates which encourages flooding.</p> <p>No hazardous wastes accepted on site.</p> <p>Waste types stored in open stockpiles are inert or non-hazardous as-dug naturally occurring material so in the event that surface water comes into contact with these wastes, significant pollution or contamination of groundwater or surface water is considered highly unlikely.</p> <p>Booms and sand will be used to contain any spills and prevent it from entering the local watercourse.</p>	<p>Unlikely due to measures in place in the nature of the proposed development.</p>	<p>Disruption to works operations</p> <p>Contamination of local groundwater and/or surface water</p>	<p>Low</p>
<p>Vandalism</p>	<p>Local population in residential dwellings, sensitive land uses, and businesses listed in Table 2</p> <p>Site staff</p>	<p>Unauthorised entry to the site</p>	<p>The site is gated and surrounded by fencing and vegetation.</p> <p>Access to the waste area will be restricted to trained depot staff.</p> <p>No hazardous wastes are accepted on site.</p> <p>No fuel or oil is intended to be stored on site.</p>	<p>Unlikely due to measures in place.</p>	<p>Release of polluting materials to air, water or land.</p>	<p>Low</p>

			<p>Any identified damage to the site security will be recorded and temporarily repaired as necessary before the end of the working day. Permanent repair or replacement will be undertaken as soon as practicable.</p> <p>Procedures are in place which require all visitors to the site to sign in on arrival and sign out on departure.</p>			
All on-site hazards from wastes; machinery and vehicles	Local human population gaining unauthorised entry to the site, site staff and contractors	Direct physical contact	<p>Activities will be managed and operated in accordance with an EMS which will include measures to prevent unauthorised access.</p> <p>No hazardous wastes or fuel stored on site.</p>	There is always a risk of accidents, but measures have been put in place to reduce the risk associated with site activities.	Injury or health effects	Low

Table A5: Climate change risk assessment and management plan

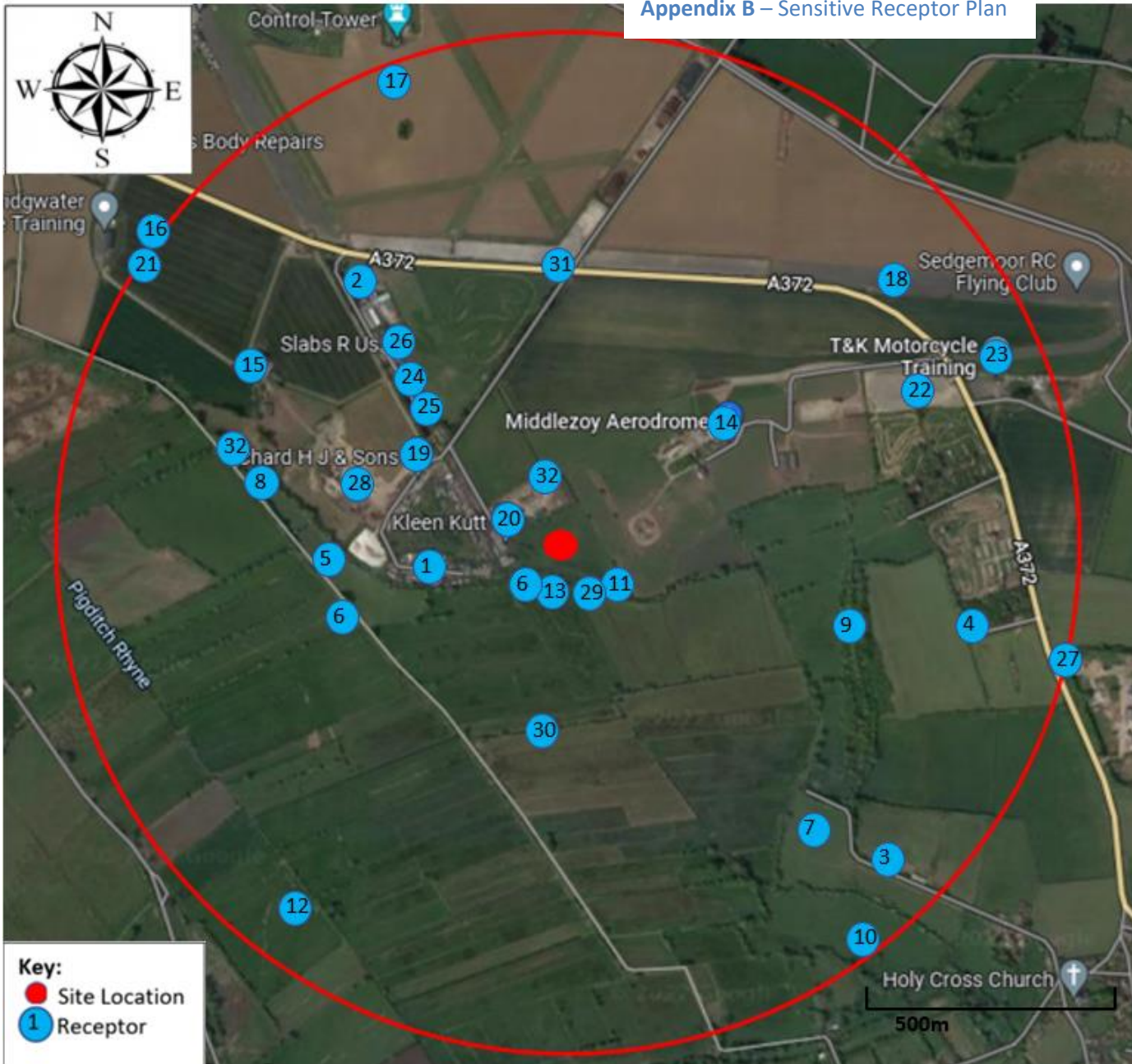
What is the risk?			Managing the risk	Assessing the risk		
Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the overall risk?
Access issues due to flooding or sea level rise	Groundwater and surface water Local residents listed in Table 2 SSSI and priority habitats Rhyne network Site staff	Surface water	<p>The ground level on site and the access road is higher than the level of the nearest watercourse.</p> <p>The site has a permeable surface so water can naturally percolate into ground to prevent flooding.</p> <p>The southern site boundary by the watercourse is protected by a planted barrier to slow flooding.</p> <p>The site is located in Flood Zone 3 but assessed as low risk of flooding from rivers or seas and at a very low risk of flooding from surface water.</p> <p>Towens of Weston are signed up to the EA's flood warning service and have specific actions to take in the event of a flood alert and/or flood warning.</p>	Unlikely	Inability to access site	Low
Wildfires	Site staff Site infrastructure Local residents listed in Table 2 SSSI and priority habitats Rhyne network	Spread of fire	<p>No large areas of woodland for fires to start within 1km of the site. The site is surrounded by moors where wildfires are very unlikely.</p> <p>The rhyne network surrounding the site acts as a barrier for wildfires to prevent spread of wildfires.</p> <p>The site benefits from access to a borehole extraction point at the neighbouring site to provide firewater to fight fires and prevent spread.</p> <p>Fuel is not intended to be stored on site. In the event that it is then all fuel, oil and lubricants stored on site will be</p>	Unlikely due to site location	Site infrastructure damage and risk to staff	Low

			<p>double-bunded and stored in a secure container. The storage will be maintained and inspected in accordance with the manufacturer's recommendations.</p> <p>No combustible wastes accepted on site.</p> <p>The boundary planting on site will be regularly maintained and cleared of weeds. It will be monitored during hot and dry weather.</p> <p>The emergency response outlined in the EMS will be followed.</p> <p>The Site Manager will be responsible for ensuring effective remediation and documenting any incident.</p>			
Failure of essential site services	<p>Site staff</p> <p>Local residents listed in Table 2</p> <p>SSSI and priority habitats</p> <p>Rhyne network</p>	<p>Water</p> <p>Electricity supply</p> <p>Drainage systems</p>	<p>No constructed drainage system on site, the drainage follows natural processes to allow water to naturally percolate into ground.</p> <p>The site benefits from access to a borehole extraction point at the neighbouring site to provide firewater to fight fires and prevent spread.</p> <p>No electricity supply or requirement on site.</p> <p>A mobile water bowser is accessible to the site 24 hours a day to provide water.</p>	Unlikely due to minimal site service requirements	Disruption to works operations	Low

<p>Changing weather patterns</p>	<p>Groundwater and surface water Site staff Local residents listed in Table 2 SSSI and priority habitats Rhyne network</p>	<p>High temperatures (7° higher compared to average summer temperatures) and reduced rainfall Intense rainfall</p>	<p>No hazardous wastes are accepted on site. No fuel or oil is intended to be stored on site. The site benefits from a site office consisting of a 40ft shipping container for site staff to take breaks sheltered from any weather conditions. No constructed drainage system on site, the drainage follows natural processes to allow water to naturally percolate into ground. The site benefits from access to a borehole extraction point at the neighbouring site and a mobile water bowser to provide water for the site for dust suppression during high temperatures/reduced rainfall. Water use will be monitored and baseline requirements calculated. All site staff are trained to identify smouldering waste and waste stockpiles are regularly monitored. Shading electrical equipment if it is subject to direct sunlight for prolonged periods of time. Regular inspection and preventative maintenance of site, plant and equipment. The Site Manager will be responsible for ensuring effective remediation and documenting any incident. The site operations will cease in extreme or adverse weather conditions. No treatment will take place during dry or windy conditions.</p>	<p>Unlikely due to site location and requirements on site.</p>	<p>Site infrastructure damage. Release of polluting materials to air, water or land. Flooding</p>	<p>Low</p>
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			The site follows a flood risk assessment and drainage strategy which will be annually reviewed.			
Changes in flow in rhyne network	Rhyne network Groundwater and surface water	Changes in maximum and minimum flow	<p>No constructed drainage system on site, the drainage follows natural processes to allow water to naturally percolate into ground.</p> <p>No hazardous wastes or fuel stored on site.</p> <p>The site follows a flood risk assessment and drainage strategy which will be annually reviewed.</p> <p>The southern site boundary by the watercourse is protected by a planted barrier to slow flooding.</p>	Unlikely	Flooding Damage to site infrastructure	Low

Appendix B – Sensitive Receptor Plan



ID	Receptor
Residential	
1	Caravan Park
2	Springway Farm
3	Property on Knowleyards Road
4	The Old Ambulance House
Designated Land and Waterways	
5	Site of Special Scientific Interest (SSSI) – Langmead and Weston Level
6	Priority Habitat Inventory (PHI) – Lowland Meadows
7	PHI–Lowland Dry Acid Grassland
8	PHI – Coastal and Floodplain Grazing Marsh
9	PHI – Deciduous Woodland
10	PHI – Traditional Orchards
11	Important Plant Areas Plantlife
12	Somerset Level and Moor
13	Pigditch Rhyne Network
Sensitive Land Uses	
14	Middlezoy Aerodrome
15	Farm
16	Westonzoyland Allotments
17	Westonzoyland Airfield
18	Sedgemoor RC Flying Club
Industrial/Commercial	
19	JWF Engineering
20	Kleen Kutt
21	Bridgwater Motorcycle Training
22	Grandfields Motor Track
23	T&K Motorcycle Training
24	Burnham Coal Supplies
25	Regency
26	Slabs R Us
27	Seven Acres Industrial Estate
28	Towens Westonzoyland Depot
Public Rights of Way	
29	Restricted Byway
30	Public Footpath
Infrastructure/utilities	
31	A372
Priority species	
32	Priority Species – Curlew/Lapwing/Redshank/Water Vole

Towens of Weston Ltd
Noise Complaint Form



Noise Complaint Form		Date:	Ref. No.
Name and address of complainant			
Contact number of complainant			
Time and date of complaint			
Date, time and duration of offending noise			
Weather conditions (e.g., dry, rain, fog, snow)			
Wind strength and direction (e.g., light, steady, strong, gusting)			
Complainant's description of noise (e.g., hiss, hum, rumble, continuous, intermittent)			
Has complainant any other comments about the offending noise?			
Any other previous known complaints relating to installation (all aspects, not just noise)			
Any other relevant information			
Potential noise sources that could give rise to the complaint			
Operating conditions at the time offending noise occurred (e.g., flow rate, pressure at inlet and pressure at outlet)			
Action taken:			
Final outcome:			
Form completed by:		Signed:	