

Caulmert Limited

Engineering, Environmental & Planning
Consultancy Services

Knottingley Waste to Resource Facility

FCC Recycling (UK) Limited

Environmental Permit Variation Application

Noise Management Plan

Prepared by:

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Environmental Permit Variation Application

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5827-CAU-XX-XX-DR-V-1800 Sensitive Receptor Plan

5827-CAU-XX-XX-DR-V-1805) Sampling and Emissions Point Plan

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1.0 INTRODUCTION

1.1 Overview

- 1.1.1 Caulmert Limited have been appointed by FCC Recycling (UK) Limited ('the Operator') to prepare a bespoke environmental permit variation application to vary the existing permit to allow a number of additional activities at Knottingley Waste to Resource Facility on Weeland Road, Knottingley, in West Yorkshire, at postcode WF11 8DZ (hereafter referred to as 'the Site').
- 1.1.2 The proposed amendments to the permit (ref. EPR/JP3547JL) entail a comprehensive revaluation and optimisation of its operational activities. Primarily with the intention to refine existing processes while introducing activities to enhance waste management on site.
- 1.1.3 This Noise Management Plan (NMP) will provide thorough detail of appropriate measures that are required for effective noise management at the site and will outline proposed control measures, in accordance with EA guidance on 'Noise and vibration management: environmental permits' (last updated 31 January 2022).
- 1.1.4 This NMP has the aim of ensuring that potential noise emission sources are identified and controlled at source where possible. The NMP aims to minimise the risk of noise emission impacts on receptors outside of the site boundary. As a minimum, this NMP will consider the following elements:
- An assessment of the risks of noise emissions at the site;
 - Identify the appropriate controls to manage the identified risks;
 - Monitoring to confirm effectiveness of control measures;
 - Complaints handling;
 - Identify actions, contingencies, and responsibilities when noise emissions arise; and,
 - Regular review of the effectiveness of the noise emissions control measures.

1.2 Existing Site Operations

- 1.2.1 The current permitted activities at the Site include the bulk handling and transfer of both hazardous and non-hazardous waste, distillation-based solvent recovery, biological treatment of associated aqueous effluents, the creation of Secondary Liquid Fuel (involving the utilisation of heat and steam from boilers), as well as the storage and management of waste materials and raw substances. Furthermore, the site conducts surface water and process water treatment through a biological treatment plant.
- 1.2.2 It is proposed to remove the distillation of solvents activities and the activity/waste list for Tank S13 from the permit, but to retain two of the previously three permitted boilers using gas and Secondary Liquid Fuels (SLF) as fuel. Currently, the two remaining boilers (boilers numbered 4 and 5) and associated storage tanks are mothballed, however the Operator would

be using the boiler installation to provide steam to the proposed dryer, the ammonia recovery unit and the metals recovery facility as directly associated activities (DAA).

1.2.3 The following activities are also being proposed to be retained in the existing permit but requires amending as follows:

- **Waste Transfer Station** - the storage and transfer of hazardous and non-hazardous wastes, including where appropriate repackaging, size reduction and decanting. To amend the waste list in the permit to add additional waste codes for storage and transfer and to allow these activities to take place on the site as a whole.
- **Associated raw materials/reagents will be stored** and used on site.
- **Discharge of treated effluents** (i.e., site surface water and process water in the aerobic treatment plant) **to sewer** is already permitted but needs updating to reflect the changes that pertains the existing biological treatment activity which is mothballed and will not recommence. However, the Operator has repurposed the infrastructure as a **surface water collection tank**, and no waste treatment activities takes place.
- **The use of existing gas or liquid-fuelled boilers** which is to be reduced to two (i.e., Boiler 4 with rated thermal input of 6.6MWth and Boiler 5 with rated thermal input of 9.0MWth) with tag numbers B01-ZP-01 and B01-ZP-02 and their corresponding boiler stack emission points - EP08 (SE 51324 23809) and EP12 (SE 51333 23792) (currently A12 and A13 in the existing permit ref. EPR/JP3547JL) within the Boiler Complex, indicated on the Sampling and Emissions Point Plan (ref. 5827-CAU-XX-XX-DR-V-1805) will be retained to provide steam to the proposed dryer, the ammonia recovery unit and the metals recovery facility as directly associated activities (DAA).

1.3 Site Description

1.3.1 The Site is in Knottingley, West Yorkshire. It is centred on National Grid Reference SE 51279 23861 and postcode WF11 8DZ. The main site entrance is accessed from Weeland Road on the southern boundary. See Figure 1 below for Site Location map. See Figure 1 below for Location map.



Figure 1: Site Location Plan (approx. permit boundary in red).

1.4 Maintenance and Review of the NMP

- 1.4.1 This NMP has the aim of ensuring that potential noise emission sources on-site are identified and controlled at source where possible. The NMP aims to minimise the risk of noise impact on receptors outside of the site boundary.
- 1.4.2 This NMP will be reviewed by Site Management on a regular basis and at least annually, to ensure that the controls described are effective and reflect best available techniques. The management plan will also be reviewed following any complaint at the site or if there are relevant changes in the site operations or procedures.
- 1.4.3 The integrated management system (IMS) procedure relevant to reporting complaints is 'IMS-PRO-176 Environmental Incident/Near Miss/Complaint and CAR Reporting Procedure'. The records will be stored electronically on the FCC EcoOnline system and will be made available to the regulatory authorities on request. The record keeping will form part of the site's Management System.
- 1.4.4 Site management shall be responsible for ensuring the efficient operation of the entire site and its activities, to ensure full compliance with this Noise Management Plan (NMP).
- 1.4.5 Site management shall ensure that all personnel working at the site or visiting the site are aware of the need to comply with this Noise Management Plan.

- 1.4.6 Site management will be responsible for checking the meteorological conditions for each day to ensure the appropriate noise control measures are in place.
- 1.4.7 As part of the site Management System, staff will receive the necessary training and instruction in their duties relating to all operations, the potential sources of noise emissions on-site and the requirements of this NMP. Emphasis will be given to plant and equipment malfunctions and abnormal conditions. Refresher training will be offered by site management at least once a year, or if the operations on-site changes which will require the NMP to be updated or new site-specific noise control measures and procedures to be implemented.
- 1.4.8 Any persons on-site failing to comply with the requirements of the NMP and site procedures will be re-trained as necessary. Deliveries (i.e., drivers) failing to abide by site rules in respect of vehicle operations and minimising noise emissions will be reported and if required, asked to leave site.
- 1.4.9 Records of training, noise complaints and associated investigations will be maintained in accordance with the site's Management System, which will be overseen by the Site Manager or nominated deputy.
- 1.4.10 The Site Manager or nominated deputy will ensure routine noise monitoring is undertaken as part of the daily site checks and that if noise is identified to be a potential issue on-site, that the source of the noise is investigated, and any additional actions or control measures implemented are recorded as per the Management System procedures.
- 1.4.11 A copy of this NMP should be kept in the Site Office at all times and is intended for use by site operatives and managers for the control of noise emissions at the site. Electronic copies will also be held on FCC's electronic database system.

2.0 POTENTIAL SENSITIVE RECEPTORS

2.1 Overview

2.1.1 A sensitive receptor search was carried out of the surrounding area within a 1km radius of the site boundary using Defra's Magic Maps website¹ and the sensitive receptors identified are listed below in Table 1 and also shown on the Sensitive Receptor Plan drawing ref. 5827-CAU-XX-XX-DR-V-1800. The approximate distance to each receptor is measured from the site permit boundary.

2.2 Sensitive Receptors

2.2.1 The site is within a semi-rural and residential location, with the closest human receptors to the site being the users of the River Aire walking trail, users of the Aire and Calder Navigation Canal and Lock, and users of Stocking Lane. These receptors are all located less than 10m north of the site boundary, with the exception of the A645, Weeland Road, which abuts the southern boundary of the site, and provides access to the site. In addition, the Aire and Calder navigation walk commences 90m south of the site boundary. There are no hospitals located within 1km of the site, however De Lacey High School and Little Acorns Nursery are both located over 900m southwest of the site.

2.2.2 The nearest residential receptors to the site are houses in the residential area of 148 Weeland Road, located 290m SE of the site and Low Green, situated 384m west of the site. The majority of the area located west of the site within the 1km radius is residential. These areas include Fernley Green Close (481m WNW), Springfields Avenue (485m WSW), Marsh End (501m WNW), Broomhill (559m SW), Lamb Inn Road (581m W), and The Croft (873m WNW). Knottingley cemetery is located 822m southwest of the site boundary, and Knottingley RUFC is located 453m west-northwest of the site boundary.

2.2.3 Fernley Green Industrial Estate is located 187m west of the site, comprised of business including Delta MOT and Service Centre Ltd, Beepers Ltd, Allied Glass Group Ltd, Hirst Boatbuilders Ltd, A1 Building Supplies Ltd, and Gillian and Baines Ltd. These are, however, industrial, and commercial receptors and less sensitive to noise. However, it should be noted that the Brick Box Ltd also operates from Fernley Green Industrial Estate and provides children's party services (located 364m NW from site boundary).

2.2.4 A search of the surrounding area using the DEFRA Magic Maps website has established there are no National Nature Reserves (NNRs) within 1km of the site: the closest is Humberhead Peatlands NNR, over 24km southeast of the site. According to the EA Conservation Screen Report (included in Appendix 1 of this report) there are 2 Local Wildlife Sites (LWS), up to 2 protected species and 2 protected habitat within 2km of the site.

2.2.5 There are no Sites of Special Scientific Interest (SSSIs), Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Local Nature Reserves (LNRs), National Nature Reserves

¹ DEFRA Magic Maps 2022: <https://magic.defra.gov.uk/MagicMap.aspx>

(NNRs), Ramsar sites or Areas of Outstanding Natural Beauty (AONBs) within 2km of the site. The closest SSSI is located over 7km to the northwest of the site. The closest AONB is The Nidderdale AONB located over 50km to north-northwest of the site.

2.2.6 The receptor search radius in relation to the permit boundary is shown below in **Figure 2**:

Table 1: Summary of Sensitive Receptors within 1km radius of the permit boundary

Ref.	Receptor	Land use	Distance from site
A	Occupiers of Fernley Green Industrial Estate	Commercial / Industrial	187m
B	Residents of Fernley Green Close	Residential	481m
C	Residents of Marsh End	Residential	501m
D	Residents of Low Green	Residential	384m
E	Residents of Springfields Avenue	Residential	485m
F	Residents of Lamb Inn	Residential	581m
G	Residents of Broomhill Avenue	Residential	559m
H	Users of A645 Weeland Road	Commercial / Industrial	<10m
I	Users of River Aire Walking Trail	Recreational	<10m
J	The Croft	Residential	873m
K	Alex Pol Trans Ltd	Commercial / Industrial	264m
L	Occupiers of Industrial Units	Commercial / Industrial	231m
M	Club members of Knottingley RUFC	Commercial / Recreational	453m
N	Users of Aire and Calder Navigation Walk	Recreational	90m
O	Caddick Construction Ltd	Commercial / Industrial	320m
P	OneCT Manufacturing Park	Commercial / Industrial	634m
Q	Users of Stocking Lane	Commercial / Industrial	<10m
R	Little Acorns Nursery	Commercial	900m
S	De Lacey High School	Commercial	1000m
T	Occupiers of 148 Weeland Road	Residential	290m

2.2.7 Neighbouring dwellings and businesses are likely to be the most sensitive receptors to noise nuisances. Good relationships with neighbouring residents, landowners and businesses are essential in order to anticipate potential problems and avoid them, where possible, before official complaints are made. The Operator will ensure the following:

- All the neighbours know how to contact the site if they consider noise to be a problem.
- That any complaints are recorded and that problems, where possible, are dealt with promptly.



Figure 2: 1km radius from the site boundary (approx. permit boundary in red)

2.3 Meteorological Setting

- 2.3.1 Fugitive emissions of dust, litter, odour and noise from the site are likely to be affected by local weather conditions, in particular by wind direction. Wind statistics observed from Normanton weather station, the closest weather station actively recording wind statistics, are considered to be representative of the typical conditions at the site (Figure 3 below).
- 2.3.2 Based on the data recorded daily between April 2013 and April 2025 on the Windfinder.com² website, the most dominant wind direction will be from the west-southwest towards the east-northeast. With reference to the Sensitive Receptor Plan ref. 5827-CAU-XX-XX-DR-V-1800, predominant annual wind conditions are likely to blow towards the Willow Garth Nature Reserve and the River Aire to the northeast.

² [Wind & weather statistics Normanton - Windfinder](#)

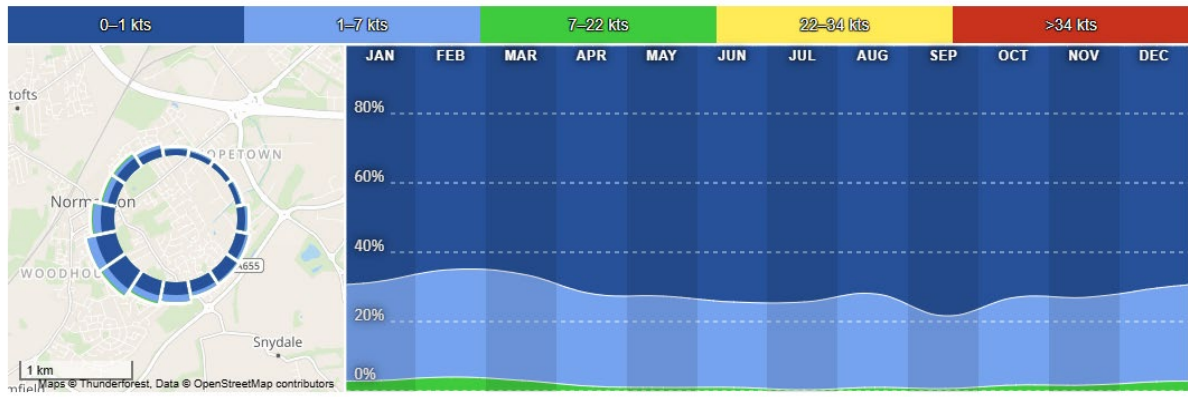


Figure 3: Normanton weather station wind statistics – average wind direction & strength 2013-2025.

3.0 NOISE SOURCES & PROCESSES

3.1 Noise Impact Assessment (NIA)

- 3.1.1 FCC Recycling (UK) Limited commissioned Axis to undertake an environmental noise impact assessment to evaluate the likely significant environmental effects of noise and vibration on the identified nearest sensitive receptors following the commencement of the proposed new activities at the Knottingley Waste to Resource Facility, located off Weeland Road, Knottingley, WF11 8DZ.
- 3.1.2 The assessment (included **Appendix 1** of this report) describes the methods used to assess the effects, the existing sound climate and the evaluation of future baseline sound levels in the vicinity of the Site. It also highlights the sources of information used in the noise impact assessment.
- 3.1.3 The Site was assessed against the current baseline which includes permitted noise sources in the area around the Knottingley Waste to Resource Facility and it suggests that in the absence of adding new activities to the Site, the baseline levels will not change due to the influence of existing ambient noise from existing local noise sources.
- 3.1.4 The sound survey and baseline methodology undertaken at NSR (i.e., noise sensitive receptor) in the vicinity of the Site was to ascertain existing representative background and residual sound levels. The aim of the sound survey was to:
- Identify the existing baseline sound levels for use as a reference for background and residual sound levels in the assessment of impacts related to the demolition, construction and operation of the Knottingley Waste to Resource Facility.
 - Enable the assessment baseline to be established and understand the effects of permitted developments on the future baseline; and
 - Characterise the nearest NSR or noise sensitive sites.
- 3.1.5 The existing baseline sound survey was undertaken at the fixed locations (listed below) which was considered to provide representative baseline sound levels:
- Position NMP1 (off Weeland Road) – Southeast of the Site (grid reference: 451584 423677);
 - Position NMP2 (off Common Lane) – Southwest of the Site (grid reference: 451162 423476);
 - Position NMP3 (off Weeland Road) – West of the Site (grid reference: 450860 423756);

- Position NMP4 (Marsh Lane) – Northwest of the Site (grid reference: 450913 424081).

3.1.6 The sources of noise and vibrations anticipated from the proposed additional activities were discussed in detail under the following headings:

Operational Phase Noise Effects – Plant

3.1.7 In terms of the potential noise characteristics of the proposed activities at the Site, the following noise criteria were applied in the assessment:

- Tonality;
- Impulsivity; and
- Intermittency.

3.1.8 Based on the above criteria, it was concluded that with the proposed noise mitigation strategy and controls of specific plant selection and design, there is no character penalty required. See the Noise Impact Assessment report in **Appendix 1** of this report for further details.

3.1.9 According to BS4142: 2014+A1:20195, the rating level (which includes a +3dB noise character allowance) relative to the assessment baseline noise would indicate **negligible** impact magnitude at receptors, where the impact significance would be **neutral** level of effect. The effects would be **not significant**.

3.1.10 In relation to the IEMA guidelines¹³ (which considers the increase in existing residual noise and therefore the context of the impact), it can be seen that the magnitude of the impact during daytime periods shows that there is a change of up to +0.3dB in noise level, which indicates a **negligible** impact. The predicted level of effect that would be experienced by residential receptors would therefore be a **neutral** level of effect in relation to this guidance

3.1.11 According to BS4142: 2014+A1:20195, the rating level relative to the assessment baseline noise indicates a **negligible** impact magnitude. The operational noise impacts from the facility are therefore considered to represent a **neutral** level of effect and **not significant**. As the result does not show a low impact according to BS4142, additional noise mitigation measures are therefore not required.

3.1.12 In relation to the IEMA guidelines¹³, it can be seen that the magnitude of the impact during night-time periods shows that the change in noise level ranges between +0.1dB and +0.2dB LAeq which indicates **negligible** impact. The predicted level of effect would therefore be **neutral** for all NSRs in relation to this guidance

Operational Road Traffic Noise

3.1.13 The Transport Assessment considers the assessment year 2030 for the traffic demand from the new activities at the Site for these periods compared to a 'Do-nothing' scenario. **Table**

7.19 in the Noise Impact Assessment report provide details of the noise impact due to the increased traffic flow along the local road network based on a daytime and evening/night-time period maximum demand for Site as provided within the Transport Assessment.

- 3.1.14 Based on an operational HGV period assessment during the daytime period, the increase in noise level is between +0.2dB L_{A10} to +0.5dB $L_{A10,12hrs}$. The impact magnitude is shown to be **negligible** and a **neutral** level of effect in respect of traffic movements relative to the nearest local road network and at nearest residential properties. In terms of the DMRB8 LA111 guidance, in relation to short-term effects an increase of <3dB(A) is minor and <1dB(A) is negligible.
- 3.1.15 There would be minimal HGV movements during the evening and night-time operational period. Between 1900 and 2100 hours there would be 1 two-way HGV movement per hour and 6 two-way HGV movements between 0500 to 0700 hours.
- 3.1.16 Based on an operational HGV period assessment during the daytime period, the increase in noise level is between +0.1dB $L_{A10,12hrs}$ to +0.2dB $L_{A10,12hrs}$. The impact magnitude is shown to be **negligible** and a **neutral** level of effect in respect of traffic movements relative to the nearest local road network and at nearest residential properties. In terms of the DMRB8 LA111 guidance, in relation to short-term effects an increase of <3dB(A) is minor and <1dB(A) is negligible.

Operational Phase Vibration Effects

- 3.1.17 In terms of operational vibration, the type of fixed and mobile plant being used on Site would inherently produce vibration levels lower than the movement of HGVs and therefore based on the separation distance to NSR would produce zero vibration. The impact would be **negligible** and a **neutral** level of effect.
- 3.1.18 Conclusively, during the demolition and construction period there would be a variety of noise sources in use at different stage, and their associated activities would vary from day to day. The highest noise levels relative to nearest receptors are likely to occur during piling and infrastructure activities. The peak noise activities do not normally occur over long periods of time and best practicable means would be employed to control the noise being generated. It is concluded that the increase in construction noise with the implementation of mitigation measures, using best practicable means, is likely to result in an impact magnitude classification of **negligible to slight** and a **neutral to minor** level of effect.
- 3.1.19 The assessment of impact on existing residential areas from any increase in road traffic noise during the daytime construction or operational stage of the Proposed Development shows no significant change in noise levels and therefore there is likely to be a **negligible** impact at receptors and **neutral** level of effect and **not significant**.
- 3.1.20 terms of ground-borne vibration during the demolition/construction or operational period, there would be a **negligible** impact and **neutral** significance at the nearest residential receptor and well within guidance limits for nuisance and cosmetic damage and **not significant**.

3.1.21 The assessment of cumulative impacts from other permitted or proposed development in the local area is shown to produce a ***negligible to slight*** impact and a ***neutral to minor*** level of effect and ***not significant***.

3.1.22 In summary, no significant noise effects have been identified by the noise assessment in relation to construction or operation of the Proposed Development noise or plant vibration. **Table 7.23** in the Noise Impact Assessment report summarises the predicted effects of the construction, and operational of the development.

3.2 On-Site Noise Sources - Site Operations

3.2.1 It is anticipated that noise levels from the proposed waste activities will have a low impact at the nearest residential receptors. Low noise impact is especially true for operations that will take place within buildings, including waste storage and processing, which make up the majority of the activities. The enclosed operations tend to generate a low hum noise, and the buildings help to attenuate the noise levels.

3.2.2 Based on the site layout and the proposed waste operations, the significant operational on- site sources comprise:

- Truck deliveries, vehicle/HGV movements on site and access route;
- HGV Loading/unloading vehicles (vehicle movements including reversing, loading and unloading operations), tankers will discharge liquid wastes into pipes, hence less noisy;
- Pumps, motors, blowers, etc;
- Forklift trucks;
- Roller shutter doors in the respective waste processing buildings;
- Scrubber fans;
- Heat exchangers;
- Air blast coolers;
- Compressors;
- Aeration system located inside bioreactors or tanks;
- Gas or electric boiler engines, etc.
- Material movement by CAT 950 loading shovel or similar within buildings;
- RDF preparation building – shredders, mobile plant, tipping of waste in storage bays, forklift trucks entry and exit via roller shutter doors (this is generally applicable to the proposed activities), including Waste Processing 01 and 02, where the shredders will

be used for reducing bulk material or segregate packaging from contents prior to further processing);

- Forklift truck to deliver waste from reception to the relevant waste processing building.

3.2.3 The Site will be operational 24/7 for 365 days of the year. The gates will be closed and locked outside of operational hours, with no unauthorised access out of hours.

3.2.4 The Site has an existing car park, of which a new pedestrian access to the car park and crossing is being proposed. Vehicular access will be via the site main entrance accessed on Weeland Road on the southern boundary.

3.2.5 There is one proposed vehicle reception area located after the weighbridge on the right, providing 6 spaces. This is where incoming deliveries will be held for a short time for documentation/verification purposes prior to being directed to the designated waste processing building. Manoeuvring space is provided in the respective areas for traffic management.

3.2.6 Depending on the type of waste and proposed waste treatment activities, wastes may be delivered to the site in covered containers, drums, skips/RORO skips. There are three proposed tanker off-loading bays around the Leachate and Aqueous Waste treatment area.

3.2.7 It is proposed that all HGV arrival and departure movements are via the site's main entrance on the concrete road located at the southern boundary of the Site.

3.2.8 The Operator has advised that waste reception will occur during operating hours. It is proposed that the facility operates as per Section 3.1.3 above. Overall, the assessment concludes that the noise impact of the site operations would have no impact at the nearest residential receptors, and that operational traffic generated by the proposed new waste activities would have negligible noise impacts on off-site receptors.

3.2.9 The proposed processing activities/operations will typically be during the daytime operating hours, and some equipment will run 24 hours.

3.2.10 Activities associated with the site operation outside the core hours (19:00-07:00), include:

- Housekeeping – machine movements;
- End of shift inspections, refuelling plant, maintenance/servicing;
- Occasional HGV movements, articulated HGVs exchanging an empty trailer for a preloaded trailer; and,
- Pre-start inspections, greasing machines, maintenance/servicing, pumps, motors, blowers, etc. associated with the aerobic effluent treatment and reverse osmosis plants that will run 24 hours;
- Pumps blowers running 24/7.

3.3 Off-Site Noise Sources

3.3.1 The Fernley Green Industrial Estate is located 187m west of the permit boundary, operating as industrial and commercial businesses, including the Brick Box Ltd, which operates from Fernley Green Industrial Estate and provides children's party services, located 364m NW from permit boundary. There is the potential for these business operations and associated vehicle movements that could give rise to noise emissions.

3.4 Overview of Site Layout and Processes

3.4.1 Noise can only cause an impact when it is perceived at a receptor site. This NMP has identified that the key opportunities for release of noises are anticipated to be:

1. When wastes are delivered to, and removed from, site.
2. When waste products are loaded and unloaded.
3. When the waste processing occurs.
4. When materials are moved around site or between storage areas/bays.
5. When wastes are being shredded or crushed (e.g., shredding of packaged waste using a shredder or drum crushing apparatus).

3.4.2 The impacts of any noise released by the proposed new activities will be linked to the receptors listed in Table 1 above. The receptors are more likely to be impacted upon by noise in the following conditions:

- Prevailing wind direction is towards receptors;
- Local weather conditions. Warm still weather will contribute to the perceived noise at receptors; and
- Cumulative impacts. It is anticipated that cumulative impacts will be minimal. The site is not in an area dominated by facilities which may cause additional noise.

3.4.3 The impacts of noise from the proposed new activities are anticipated to be minimal, given the nature of the operation and the location within an industrial setting. However, this will be confirmed regularly with monitoring and communication with neighbours.

3.4.4 The proposed new activities to be carried out at the site are as follows:

- **Refuse Derived Fuel (RDF) Preparation** - processing of non-hazardous industrial wastes into RDF fuel for Energy from Waste (EfW) facilities inc. shredding and storage.
- **Packaged Waste Processing** – including sorting, washing, shredding, drum crushing and storing of drums.
- **Leachate and Aqueous Wastes Treatment** - the physico-chemical and biological treatment of landfill leachate and similar aqueous wastes in a biological treatment plant and two reverse osmosis plants, with treated effluent discharged to sewer or surface water as appropriate, which will include stripping of ammonia from wastes and the recovery of ammonia as an aqueous solution.

- **Physical and physico-chemical Treatment of Aqueous & Inorganic Wastes, Solids and Sludge** - the physico-chemical treatment of solid and liquid wastes so as to facilitate recovery or disposal, the drying of solid and sludge wastes so as to facilitate recovery or disposal; including mixing, blending, separating, washing, filtering, precipitating out, filter pressing, drying, storing. **Also, inspection, storage, and processing (e.g., dismantling and sorting, separation, bulking or shredding)** of hazardous and non-hazardous materials for recovery.
- **Metals and Inorganic Salts Recovery** – pH adjustment, precipitation reactions, separation of precipitated solids and storage for recovery of the precipitated solids; with the remaining liquid effluent either being treated on site or being removed for treatment at a suitable facility.
- **Temporary Storage of Hazardous and Non-Hazardous containerised/palletised wastes.**
- **Discharge of treated effluent to surface water** (river) from leachate and aqueous wastes treatment.
- **Discharge of uncontaminated site surface water run-off to surface water** (river).

3.4.5 Some of the proposed additional activities will be operated in a phased approach, for example, the installation of the leachate and aqueous wastes treatment process is phased so that the RO units may be installed and the concentrate produced, subject to ammonia recovery, with the resulting wastewater available for biological treatment or tankered from site to a suitable treatment plant. Alternatively, if ammonia solution is desired not to be produced, the biological process can be used to treat RO concentrate without the ammonia removal.

4.0 NOISE CONTROL MEASURES

4.1 Overview

- 4.1.1 This section details the control measures and routine noise monitoring that will be undertaken on site to mitigate and monitor noise from the proposed new waste activities. The control measures set out in this NMP are commensurate with the noise potential of the site operations.
- 4.1.2 Further mitigation from the proposed site operations is highlighted within the Noise Impact Assessment included in **Appendix 1** of this document.

4.2 Management of Noise

- 4.2.1 Management measures to control noise release at the site will include:
- **Reducing the loading/unloading time on site.** Minimal handling of wastes and minimising drop heights will ensure that noise is minimised. If the Site Manager considers noise to be causing a disturbance, they will investigate and log this as an incident, using the appropriate forms from the Integrated Management System and will take corrective action. Site staff will liaise with the drivers/deliveries/haulers with a view to minimising noise emissions relating to delivery and unloading of waste material, where applicable.
 - **Unanticipated noises.** Any unexpected noise generated on-site shall be recorded at source, date and time and corrective action taken.
 - **Containment and abatement.** Waste processing and storage will be undertaken inside enclosed buildings/units, which will minimise the majority of noises produced from site operations.

4.3 Site Specific Control Measures

- 4.3.1 The following site-specific control measures will be implemented:
- Adhere strictly to the operating hours of the site;
 - All plant and equipment should comply with recommended noise emission limits. Also, equipment such as the pumps, scrubber fans, compressors and heat exchangers that may generate noise will be selected to be of low noise generating potential, positioned and operated in a manner that will minimise the impact of noise on any off-site receptors, including giving consideration to noise control when purchasing and installing new equipment;
 - Ensure machinery is regularly well maintained to reduce the potential of noise generating from malfunctioning or faulty parts;
 - The use of visual or low-noise alternatives to audible alarms at the site (such as on fixed plant), where appropriate;

- Avoid unnecessary horn usage and revving of engines by drivers;
- Switch off equipment and engines when not required (including auto shut off will be employed to minimise unnecessary run time);
- When hiring or procuring plant, select plant and equipment which is of low noise generating potential where possible. For example, compressors should be sound-reduced models with sealed acoustic linings, and pneumatic tools should be fitted with manufacturer specified silencers or mufflers;
- Machinery to be fitted with SMART beepers or white noise reversing alarms to reduce the impact and travelling-distance of noise;
- Where reasonably practicable, select quieter working methods should there be a suitable alternative with a lower noise impact, such as lowering drop heights of equipment, etc;
- Keep internal haul routes well maintained and free of potholes, and restrict site speed limits to minimise noise from moving plant and vehicles;
- Minimise drop heights of materials, particularly external to buildings, where possible;
- Operatives should be trained to employ appropriate techniques to keep site noise to a minimum and should be effectively supervised to ensure that best working practices in respect of noise reduction is followed;
- Appropriate housekeeping including closing doors and windows of buildings housing operational waste processing equipment to minimise noise emissions.

4.3.2 The site layout has been designed by the operator to minimise noise impacts on nearby receptors, including considering the heights and orientations of the proposed waste processing and storage areas (i.e., buildings) to reduce the amplification of noises in certain directions.

4.3.3 The new waste processing and storage activities will be undertaken within enclosed buildings which will attenuate noise considerably and limit noise emissions reaching receptors from the processing areas and other areas of site.

4.3.4 All plant and machinery will be maintained following the manufacturer's specifications, to ensure the smooth and effective running of the plant and to detect and fix any faults or defects which may increase noise or vibration emissions. All mobile plant and equipment are maintained in accordance with manufacturers specifications and are serviced at least annually or per the recommended maintenance schedule for that plant or equipment.

4.3.5 Mobile plant and equipment (e.g., forklifts) and site infrastructure are checked daily as part of daily site checks. Anything that is found damaged or identified as defective during the site inspection will be reported to site management and fixed or replaced as soon as practicable.

4.3.6 Trained operators of mobile plant and equipment (e.g., forklift drivers) will undertake checks of the plant/equipment at the start of every shift and ensure that any problems are rectified prior to using the equipment to prevent noise emissions from defective moving parts.

- 4.3.7 Any malfunction or breakdown leading to abnormal noise emissions during site operations will be dealt with promptly and operations will be modified or suspended until normal working conditions can be restored.
- 4.3.8 All site staff and contractors will receive a site Induction covering noise and vibration awareness and how to report noise and vibration emissions.
- 4.3.9 Any new/replacement plant will be selected to meet all legislation and statutory guidance on minimising noise levels and maintained to reduce noise emissions where possible.

5.0 MONITORING & ACTION PLAN

5.1 Overview

5.1.1 To ensure that the noise control measures set out in Section 4.0 are being effective, the Operator will ensure routine noise monitoring is undertaken as part of daily site checks and that communication with potential receptors is maintained.

5.1.2 This Noise Management Plan forms part of the site's Integrated Management System (IMS) and will be reviewed and updated accordingly. The IMS includes procedures for managing external complaints. The application of these procedures for handling noise complaints are detailed in Section 6.

5.2 Routine Noise Monitoring

5.2.1 The IMS includes a range of monitoring and recording procedures, including the following activities, which are regularly undertaken to ensure continuous improvement:

- Daily site inspections by the Site manager (or deputy);
- Site audits conducted by the company's management;
- Site audits and inspections by the Environment Agency and other regulators.

5.2.2 All site personnel will be responsible for reporting any noise problems immediately to the site manager (or deputy).

5.2.3 Noise monitoring on site will be undertaken by trained site personnel specifically trained to listen out for noise, which may be extended to outside the site perimeter following a substantiated noise complaint and the noise monitoring would be in the direction of the complaint.

5.2.4 On a daily basis, routine noise monitoring will be undertaken as part of daily site checks whilst the site is operational. All routine noise monitoring and the monitoring results will be recorded as per management system procedures.

5.2.5 If elevated noise levels are identified during the daily site checks, the Site Manager (or deputy) will attempt to identify the source of the elevated noise, for example:

- Off-site sources such as traffic;
- Local industrial operations (on neighbouring sites or in the local vicinity);
- Site operations.

5.2.6 If the elevated noise levels are considered to possibly be attributed to site operations, then the steps detailed in Section 5.3 below will be followed.

5.3 Additional Noise Monitoring

- 5.3.1 Additional noise monitoring on- and off-site will be undertaken following any noise complaints received at the site, or if site staff identify any potential concerns around noise during site checks or at any other time during operational hours. Additional noise monitoring may also be undertaken by site staff if there are any significant changes to operations that could give rise to noise (e.g. new or different plant or machinery) such as checking for noise outside permit boundary whilst the new plant is operational.
- 5.3.2 Noise monitoring will be undertaken by site staff trained to listen out for noise where applicable, including how to use hand-held noise monitors that can record both instantaneous noise (right at that moment) and for longer period of time (such as over the course of 5 minutes), whichever the Operator deems appropriate. The training of site staff will be conducted by a qualified acoustic consultant in the use of hand-held monitors and noise perception techniques. All training will be recorded in accordance with the IMS.
- 5.3.3 Monitoring points for noise on-site will be around the site, targeting noisiest operations, and off-site immediately outside the site perimeter, particularly between active site operations and the closest sensitive receptors.
- 5.3.4 If a complaint(s) is received, and it is substantiated, then noise monitoring will also be undertaken as soon as possible after receiving the complaint when the site operations are noisiest, such as during active tipping in waste storage areas or shredding within the Waste Processing 03 building. Noise monitoring will aim to be undertaken at the same time of day during normal operations as when the complaint was recorded.
- 5.3.5 Background noise levels will also be recorded at the time (e.g. when there is a lull in active operations or when they have been stopped). If required, off-site monitoring may also include monitoring for noise directly at the closest sensitive receptor location and determining whether the noises are intrusive at this location above background levels (which are stated in the Noise Impact Assessment).

5.4 Noise Action Plan

- 5.4.1 Elevated levels of noise may be identified either by receipt of a noise complaint from a third party suggesting that there is excessive noise from the site, or by detection of noise as a result of the routine monitoring by site personnel. This section details the contingency measures in place to identify the source of elevated noise levels, bring noise levels back under control and minimise their impact.
- 5.4.2 If noise is detected to be an issue at the site during routine noise monitoring, or if a noise complaint is received and this is judged to be a moderate or unacceptable noise impact, then the Site Manager and Management Team will be informed immediately, and corrective actions will be determined and implemented.

- 5.4.3 Additional on-site noise monitoring and potentially off-site noise monitoring at nearby sensitive receptors may be undertaken where deemed necessary by Site Management to determine the cause of the noise and the impact on nearby sensitive receptors.
- 5.4.4 The Operator recognises that persistent noise can be a concern for neighbours and particularly for residential areas. Every complaint is a trigger for management to take action to investigate the cause of a complaint.
- 5.4.5 The site will have a legible signboard giving contact details for the Environment Agency and the operator. These numbers can be used to make a complaint. All complaints will be treated seriously by the Operator and recorded.
- 5.4.6 As part of any noise complaint investigation, the Site Manager will ensure that:
- The complaint is investigated to identify the cause, and if necessary, this may involve direct communication with the complainant;
 - In the event of elevated noise being detected, the source of the noise will be identified and if required, the activity stopped until control measures can be implemented. If the noise is due to the presence of 'abnormal' on-site activity, then this is assessed and if necessary, preventive action is taken that will prevent a reoccurrence of the same problem;
 - The complainant will be contacted and given information on the investigations conducted and actions taken as appropriate;
 - All complaints are reported to the Site Manager, recorded on the FCC EcoOnline database and discussed at site meetings;
 - If the investigation indicates that the complaint has not been justified, this will be clearly recorded on the incident report. All complaints will be logged.

5.5 Elevated Noise Levels

- 5.5.1 If any elevated levels of noise are identified, the following procedure will be implemented:
- The site manager will investigate the source of the noise and carry out a range of checks at the identified source of the elevated levels if it is found to be operating within the site. As part of these checks, the site manager will consider the need for quantitative noise monitoring around the site and at nearby receptors.
 - The results of any noise monitoring will determine whether the site is causing an unacceptable impact at the receptor(s) in question.
 - Site operations creating the unacceptable noise impact will be reduced to acceptable levels or cease operations until the reasons for elevated sound levels are ascertained and remediated.

- The Site Manager will then ensure that the relevant plant is being operated to the manufacturer's specification, and within the requirements of this management plan and ensure that any improvements required to minimise the noise levels are made.
- Further monitoring will be undertaken to ensure that improvements are effective and if necessary, remedial action will continue until noise levels are deemed acceptable. This may include the replacement of any equipment identified as the cause of the unacceptable noise levels, if remedial measures prove ineffective.

5.5.2 If operational failings are identified, the re-training of employees will take place to ensure that all employees operate to the required standards. If the failings are identified as part of the operating techniques, then the problem will be raised as part of the review of control measures and the Management System.

6.0 COMPLAINTS REPORTING

6.1 Engagement with the Community

6.1.1 As part of this Noise Management Plan, engagement with the local community will be undertaken.

6.1.2 Typically, any complaints received at the site are likely to be through the Environment Agency or Local Authority, although the operator is willing to deal directly with the complainants and where necessary the following can be implemented:

- Information can be provided to the local community (via the Local Authority) regarding the point and method of contact for the site in the event that noise from the site has been detected or they want to discuss any activities at the site;
- Complainants can be advised that any complaints/concerns will be addressed immediately following identification/notification and contingency action measures implemented;
- Complainants can be advised of any corrective action and a follow up call carried out by the Site Manager if required.

6.1.3 Where it is confirmed that the complaint has been made to the Operator only, the EA will be notified by email, together with the findings and any actions taken as a result of the complaint.

6.1.4 The primary point of contact at the site for complaints and liaison with the local community is the Site Manager, who will ensure that the recording, investigation and close-out of any complaints is undertaken as described below and in accordance with integrated management system procedures. Typically, feedback for noise complaints will be provided to the complainant by the Site within 48 hours of receiving the complaint.

6.2 Reporting of Complaints

6.2.1 In the event of a noise complaint being received by the Local Authority, the complaint is passed to the Operator for investigation and recorded. Each complaint record will include the following information:

- Date and time of complaint;
- Extent of complaint;
- Meteorological conditions at time of complaint;
- The complainant's contact details including name and contact telephone;
- Name of person filling out the details;
- Action taken to resolve complaint or investigate complaint further;
- Depending on the severity, the complaint can be escalated to senior management for even further investigation if necessary.

- 6.2.2 Any complaints received directly by the site or via the regulatory bodies, will be recorded as per the 'IMS-PRO-017 Environment Incident Near Miss Complaint and CAR or CAS Reporting Procedure'. If required, noise monitoring at the location of the complaint and on-site will be undertaken to determine the extent and location of the noise and the source of the noise. If necessary, monitoring will also be carried out at the nearest sensitive receptors to the site and the monitoring results recorded.
- 6.2.3 Where it is confirmed that the complaint has been made to the Operator only, the EA will be notified by email, together with the findings and any actions taken as a result of the complaint.
- 6.2.4 If a number of complaints are received at the site for noise, then the matter will be escalated and a further review of the site operations, cause of the noise and remedial actions will be carried out by Site Management or their nominated deputy. If necessary, site operations will be stopped, where appropriate, in order to allow for noise emissions to cease and possible causes to be identified. All complainants will be informed of actions taken and whether this has improved the situation.

6.3 Management Responsibilities

- 6.3.1 Any significant noise emissions occurring with the potential to travel beyond the site boundary will be reported to the Site Manager/designated person who will be responsible for investigating the cause and taking immediate action to minimise further emissions.
- 6.3.2 Site management (or designated persons) will also be responsible for daily checks of noise which will be carried out as part of their normal operational procedures. In particular, this is in relation to:
- Any part of the site where movement of vehicles or operation of mobile plant may generate excessive noise;
 - Transport and handling of material on-site.
- 6.3.3 If a complaint regarding noise emissions is received, this will be recorded and any corrective and preventative actions also will be recorded.
- 6.3.4 Complaints will be handled by the Site Manager, who will ensure that the recording, investigation and close-out of any complaints is undertaken as described above and in accordance with management procedures.

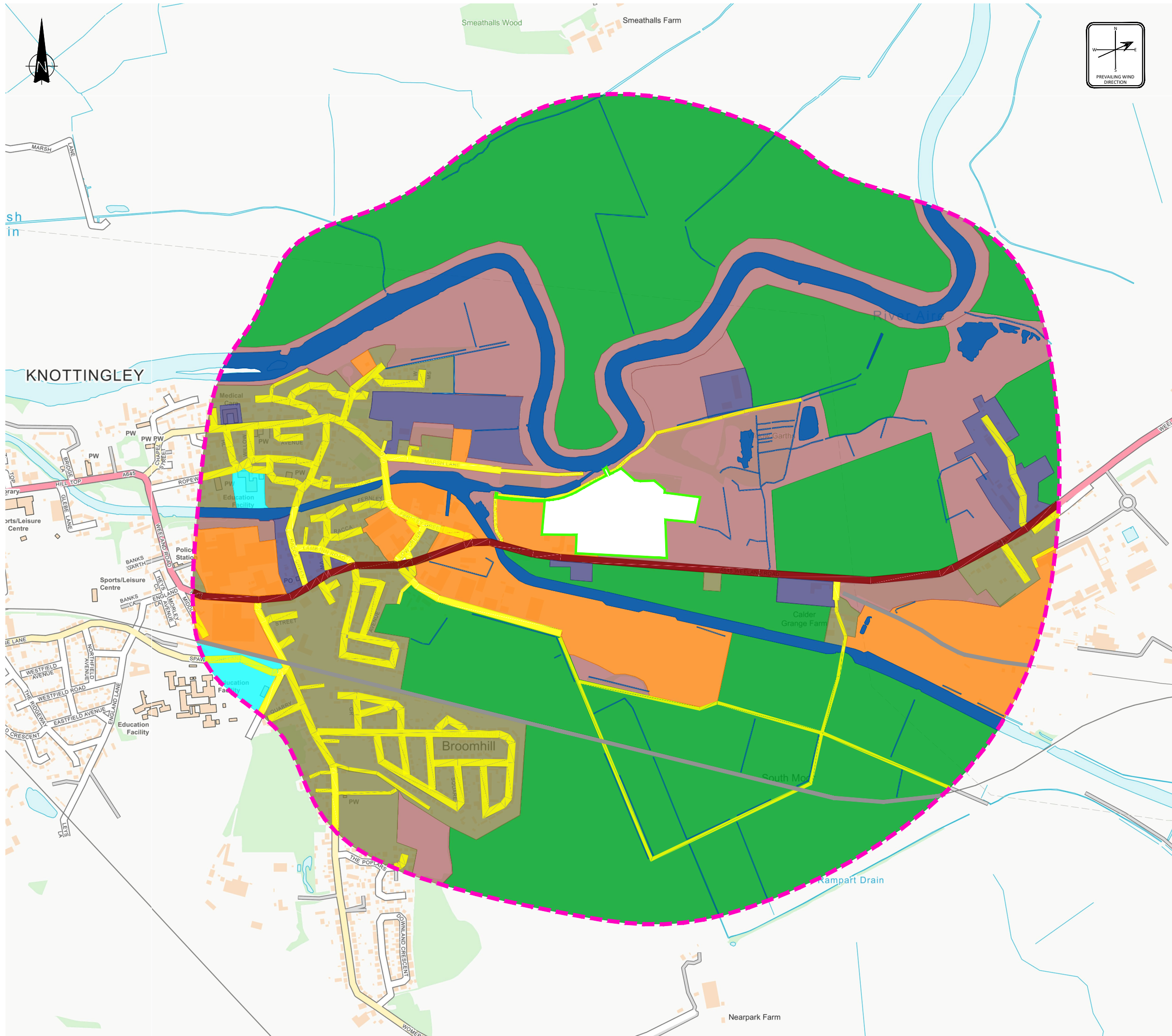
DRAWINGS

5827-CAU-XX-XX-DR-V-1800

Sensitive Receptor Plan

5827-CAU-XX-XX-DR-V-1805

Sampling and Emissions Point Plan



LEGEND

- PERMIT BOUNDARY
- 1000m OFFSET
- SURFACE WATER
- WOODLAND / SCRUBLAND
- COMMERCIAL / LEISURE
- EDUCATIONAL FACILITY
- INDUSTRIAL
- RESIDENTIAL
- MAJOR ROAD
- MINOR ROAD
- RAIL

P03	LEGEND UPDATED	EJD	JC	JC	06.08.25
P02	PERMIT BOUNDARY UPDATED	EJD	JC	JC	09.07.25
P01	ISSUED FOR INFORMATION	EJD	ER	ER	16.04.24
REV	MODIFICATIONS	BY	RE	AP	DATE
PURPOSE OF ISSUE				STATUS	
FOR INFORMATION				S2	

CLIENT:

PROJECT:

KNOTTINGLEY WASTE TO RESOURCE FACILITY

TITLE:

SENSITIVE RECEPTOR PLAN

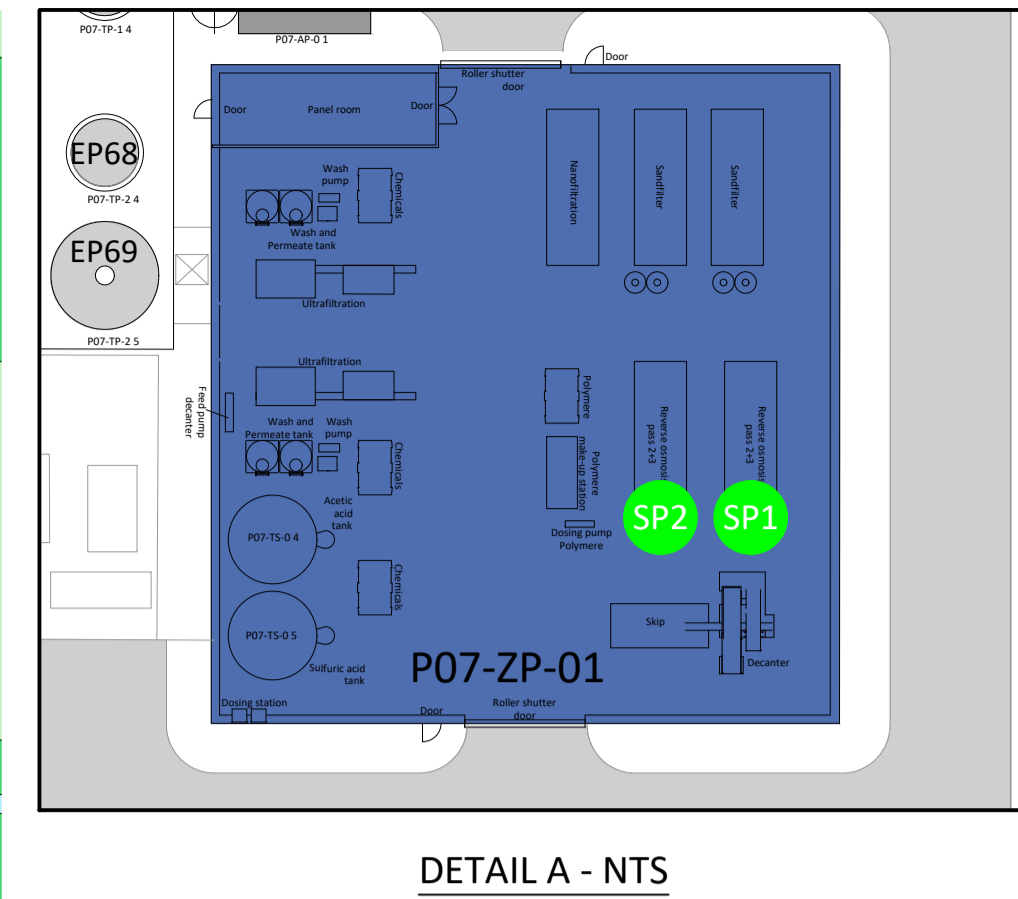
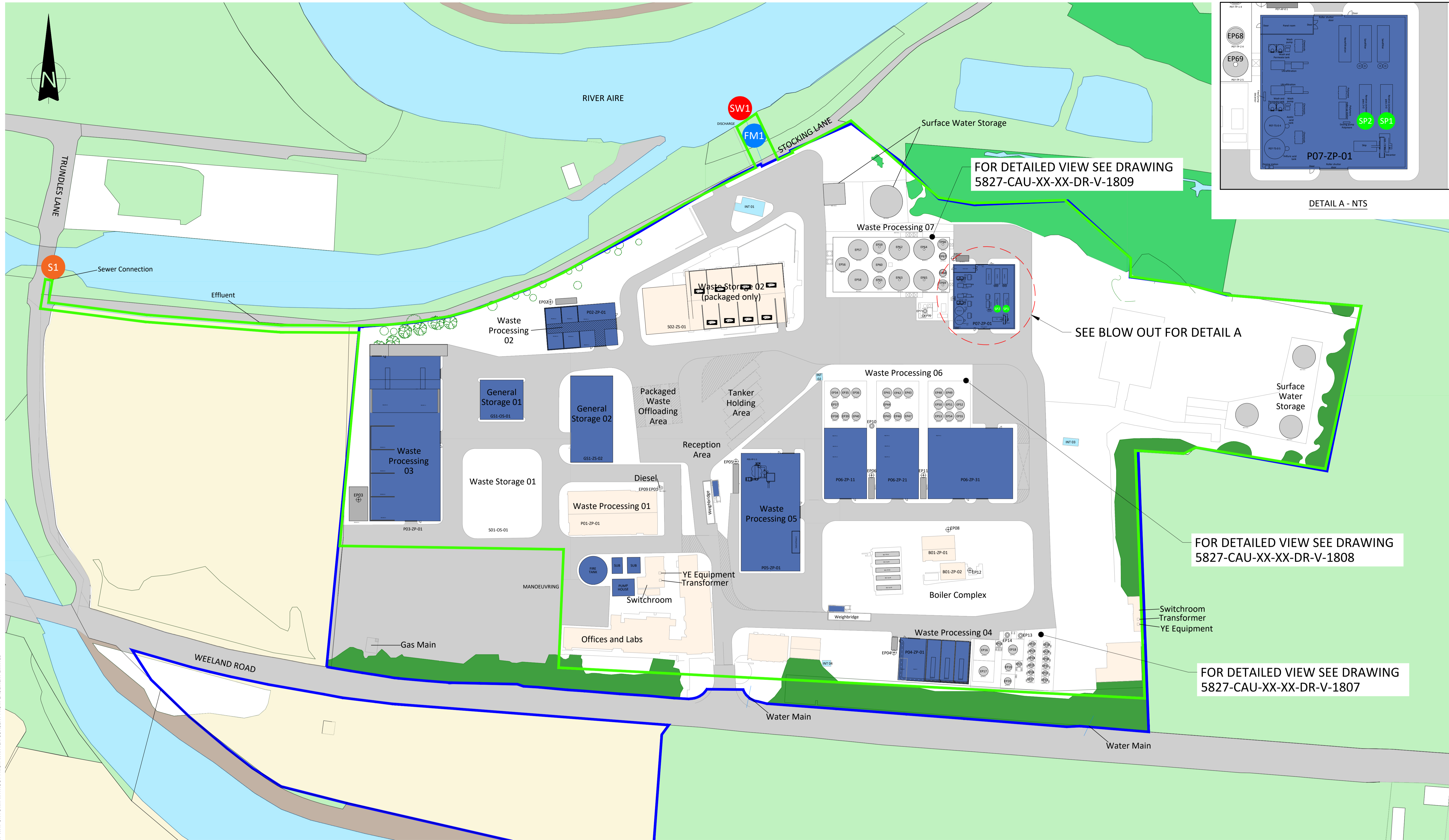
DESIGNED BY	DRAWN BY	REVIEWED BY	AUTHORISED BY
EJD	EJD	ER	ER
DATE	SCALE @ A3	JOB REF:	REVISION
16.04.2024	1:10000	5827	P03

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- LEGEND**
- OWNERSHIP BOUNDARY
 - PERMIT BOUNDARY
 - BUILDINGS
 - SURFACE WATER MONITORING
 - FOUL WATER MONITORING
 - SAMPLING POINTS
 - FLOW METER

	CLIENT:			PURPOSE OF ISSUE: FOR INFORMATION		STATUS: S2
	PROJECT: KNOTTINGLEY WASTE TO RESOURCE FACILITY			DESIGNED BY: EJD	DRAWN BY: EJD	REVIEWED BY: JC
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	DRAWING NUMBER: 5827-CAU-XX-XX-DR-V-1805					
TITLE: SAMPLING AND EMISSION POINT PLAN						
REV	MODIFICATIONS	BY	RE	AP	DATE	
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P02	PERMIT BOUNDARY AMENDED	EJD	JC	AS	06.08.25	
P01	ISSUED FOR INFORMATION	EJD	JC	AS	10.07.25	

APPENDIX 1

Noise Impact Assessment and Model Files



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Knottingley Waste to Resource Park

Environmental Statement - Volume 1 Main Report

Chapter 7.0 – Noise and Vibration

Prepared for



FCC Environment (UK) Limited

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Figure 7.1 Noise Sensitive Receptor Locations and Monitoring Positions

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- Appendix 7.1 Noise Terminology
- Appendix 7.2 Noise Survey Instrumentation
- Appendix 7.3 Baseline Noise Survey Data
- Appendix 7.4 Construction Plant Inventory
- Appendix 7.5 Predicted Noise Level Results
- Appendix 7.6 Empirical Data of Vibratory Sources



7.0 NOISE AND VIBRATION

7.1 Introduction

7.1.1 This Chapter assesses the likely significant environmental effects of the Waste to Resource Park (hereafter referred to as the WRP or Proposed Development) on land off Weeland Road, Knottingley, WF11 8DZ (the Site) with regards to noise. It describes the methods used to assess the effects, the existing sound climate and the assessment of future baseline sound levels in the vicinity of the site. In addition, the potentially affected noise sensitive receptors are identified.

7.1.2 The Chapter sets out direct and indirect likely significant effects arising from the construction and operation of the WRP and provides details of mitigation measures to minimise noise (where necessary).

Scope of Assessment

7.1.3 The assessment includes:

- Description of the existing sound environment;
- Outline of the likely evolution of the future baseline sound levels;
- Identification of those aspects of the Proposed Development that may cause noise effects;
- Predictions of noise levels during the demolition/construction and operation phase upon the nearest Noise Sensitive Receptors (NSR);
- Predictions of vibration levels during the demolition/construction and operation phase upon the NSR;
- Details of potential cumulative effects where noise from other potential developments may also affect the same NSR; and
- Likely residual significant effects taking account of proposed mitigation.

7.1.4 Potential noise effects are considered in the context of the predicted background sound levels at nearest sensitive receptors, which at this location are influenced by road traffic and other existing industrial activities.

7.1.5 **Appendix 7-1** provides details of technical terms used within the Chapter. There is also a chart showing typical everyday noise levels to assist in understanding the subjective level of noise in terms of decibels (dB).

Future Baseline

- 7.1.6 The Site has been assessed against the current baseline which includes permitted noise sources in the area around the WRP. If the WRP was not granted the baseline levels would not significantly change due to the influence of existing ambient noise from existing local noise sources.

Proposed Development and its Location

- 7.1.7 A full description of the WRP is provided in Chapter 4.0 of this ES Main Report Volume 1. The site's location and context are provided in Chapter 1.0 of this ES. In short, the site is located off Weeland Road as illustrated by **Figure 7.1**.
- 7.1.8 The WRP would operate 24 hours per day and 7 days per week but with limited plant operations during night-time periods. This would include Bank Holidays, except Christmas Day, Boxing Day and New Year's Day.
- 7.1.9 A sound survey was carried out in July 2025. The baseline methodology was undertaken at NSR in the vicinity of the Site to determine existing representative background and residual sound levels. The aim of the sound survey was to:
- Identify the existing baseline sound levels for use as a reference for background and residual sound levels in the assessment of impacts related to the demolition, construction and operation of the WRP;
 - Enable the assessment baseline to be established and understand the effects of permitted developments on the future baseline; and
 - Characterise the nearest NSR or noise sensitive sites.
- 7.1.10 The methodology and approach to the sound survey and assessment included the following:
- Establishing the nearest noise sensitive receptors;
 - Evaluation of present and assessment background and ambient sound levels;
 - Evaluation of noise sources from the Proposed Development in terms of typical operating levels;
 - Assessment of specific noise sources in relation to appropriate guidance and standards (e.g. BS4142: 2014, BS8233: 2014); and
 - Identification of any additional noise control necessary (beyond the incorporated mitigation measures) where noise generated from the Proposed Development

has been identified as exceeding noise limits or would have the potential to cause a significant increase in noise levels from the assessment baseline

7.1.11 The noise assessment has benefited from pre-application discussions and submissions relating to the scoping exercise to enable agreement to be made with the relevant officers at Wakefield Council (WC) on the approach to assessment methodology and noise criteria.

Competence

7.1.12 The author of this assessment has over 40 years' experience in the field of industrial and environmental acoustics with a Masters' Degree in Acoustics and is a Member of the Institute of Acoustics, Member of the Association of Noise Consultants, Member of the Academy of Experts and an Incorporated Engineer.

7.2 Methodology

Legislation and Guidance

General

7.2.1 To establish the impact of the WRP in respect of noise on existing or proposed residential receptors it is necessary to consider the relevant noise guidance, standards and policy for an industrial development. The following section examines the guidance and establishes the methodology to be adopted for assessing noise impacts.

7.2.2 Information used in this assessment has been obtained from the following sources:

- Ordnance Survey maps of the local area;
- General layout and elevation drawings of the WRP facility;
- National Planning Policy Framework (NPPF)¹ – December 2024;
- Noise Policy Statement for England (NPSE)² – March 2010;
- National Planning Practice Guidance (PPG)³ – July 2019;
- Environment Agency (EA) Noise and vibration management: environmental

¹ https://assets.publishing.service.gov.uk/media/67aafe8f3b41f783cca46251/NPPF_December_2024.pdf

² <https://www.gov.uk/government/publications/noise-policy-statement-for-england>

³ <https://www.gov.uk/government/collections/planning-practice-guidance>



permits (December 2023)⁴;

- British Standards (BS) BS4142: 2014+A1:2019 Method for rating industrial noise affecting mixed residential and industrial areas⁵;
- BS8233: 2014 Guidance on sound insulation and noise reduction for buildings⁶;
- BS5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites⁷;
- Design Manual for Roads and Bridges (DMRB) : LA111 Noise and Vibration (May 2020)⁸;
- World Health Organisation (WHO): Guidelines for Community Noise⁹ - April 1999;
- WHO Night Noise Guidelines for Europe¹⁰– 2009;
- ISO 9613-2: 2024 Acoustics – Attenuation of Sound During Propagation Outdoors¹¹; and
- Department of Transport Calculation of Road Traffic Noise: 1988¹²;

7.2.3 The following section outlines the key planning policy and guidance that relates to the assessment of residential amenity and protection of residents from general environmental and industrial noise and specific guidance on impacts relating to changes in road traffic noise.

Assessment Methodology

The National Planning Policy Framework

7.2.4 The latest version of the National Planning Policy Framework (NPPF) was published in December 2024, noting that a small amendment was made in February 2025. Chapter 15 relates to 'Conserving and Enhancing the Natural Environment' and includes the following.

⁴ <https://www.gov.uk/government/publications/noise-and-vibration-management-environmental-permits>

⁵ BS 4142:2014+A1:2019 Methods for Rating and Assessing Industrial and Commercial Sound <https://knowledge.bsigroup.com/>

⁶ BS 8233: 2014 Guidance on Sound Insulation and Noise Reduction in Buildings

⁷ BS 5228-2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites' – Part 1: Noise & Part 2: Vibration

⁸ Highways England Design Manual for Roads and Bridges (May 2020) LA 111 Noise and Vibration World Health Organisation (WHO): Guidelines for Community Noise (1999) (Rev 2).

⁹ World Health Organisation: Guidelines for Community Noise

¹⁰ World Health Organisation (WHO): Night Noise Guidelines for Europe (2009).

¹¹ ISO 9613-2: 2024 Acoustics – Attenuation of Sound During Propagation Outdoors – Part 2 General Method of Calculation.

¹² Department of Transport Calculation of Road Traffic Noise: 1988

- 7.2.5 Paragraph 187 e) refers directly to noise and states that: *“preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans...”*
- 7.2.6 Paragraph 198 also states: *“Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:*
- a) mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life;*
 - b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason; and*
 - c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.”*

Noise Policy Statement for England

- 7.2.7 The Noise Policy Statement for England (NPSE) was published in March 2010. It specifies the following long-term vision and aims: *“Noise Policy Vision: Promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development. This long term vision is supported by the following aims: Through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development:*
- Avoid significant adverse impacts on health and quality of life;*
 - Mitigate and minimise adverse impacts on health and quality of life; and*
 - Where possible, contribute to the improvement of health and quality of life.”*
- 7.2.8 The NPSE introduced three concepts to the assessment of noise, as follows:

- NOEL – No Observed Effect Level: This is the level below which no effect can be detected and below which there is no detectable effect on health and quality of life due to noise.
- LOAEL – Lowest Observable Adverse Effect Level: This is the level above which adverse effects on health and quality of life can be detected.
- SOAEL – Significant Observed Adverse Effect Level: This is the level above which significant adverse effects on health and quality of life occur.

7.2.9 The above categories are undefined in terms of noise levels and for the SOAEL the NPSE indicates that the noise level will vary depending upon the noise source, the receptor and the time of day / day of the week, etc. More research is therefore required to establish what may represent a SOAEL. It is acknowledged in the NPSE that not stating specific SOAEL levels provides policy flexibility until there is further evidence and guidance.

7.2.10 The NPSE indicates how the LOAEL and SOAEL relate to the three aims listed above. The first aim of NPSE requires that: *“significant adverse effects on health and quality of life should be avoided while also taking into account the guiding principles of sustainable development.”*

7.2.11 The second aim of the NPSE (mitigating and minimising adverse impacts on health and quality of life) refers to the situation where the impact lies somewhere between LOAEL and SOAEL. It requires that all reasonable steps should be taken to mitigate adverse effects on health and quality of life whilst also taking into account the guiding principles of sustainable development. This does not mean that such adverse effects cannot occur, as there may be situations where there is a limit to the effect of mitigation to try and minimise impacts, due to other essential operational requirements.

7.2.12 The third aim envisages pro-active management of noise to improve health and quality of life, again taking into account the guiding principles of sustainable development.

Planning Practice Guidance

7.2.13 In October 2014, the Ministry of Housing, Communities & Local Government updated the Planning Practice Guidance (PPG) on noise. The PPG guidance on noise was

updated in July 2019, but it is acknowledged that there have been more recent updates to other parts of the PPG.

7.2.14 The main planning section of PPG includes a table summarising the noise exposure hierarchy, based on the likely average response to noise. Under the heading of ‘can it be established whether noise is likely to be a concern’ assessment of noise is defined as: *“noise has no adverse effect so long as the exposure does not cause any change in behaviour, attitude or other physiological responses of those affected by it. The noise may slightly affect the acoustic character of an area but not to the extent there is a change in quality of life.”* The effect level under these conditions is deemed to be ‘no observed adverse effect’ and no specific measures are required.

7.2.15 The PPG includes a table summarising the noise exposure hierarchy, based on the likely average response. **Table 7.1** below provides the perception, example of outcome, effect and action required relative to noise:

Table 7.1: Noise Exposure Hierarchy

Response	Examples of Outcomes	Increasing Effect Level	Action
Not present	No Effect	No Observed Effect (NOEL)	No specific measures required
Present and not intrusive	Noise can be heard but does not cause any change in behaviour or attitude. Can slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life.	No Observed Adverse Effect (NOAEL)	No specific measures required
Lowest Observed Adverse Effect Level (LOAEL)			
Present and intrusive	Noise can be heard and causes small changes in behaviour and/or attitude, e.g. turning up volume of television; speaking more loudly; closing windows for some of the time because of the noise. Potential for non-awakening sleep disturbance. Affects the acoustic character of the area such that there is a perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum
Significant Observed Adverse Effect Level (SOAEL)			
Present and disruptive	The noise causes a material change in behaviour and/or attitude, e.g. having to keep windows closed most of the time, avoiding certain activities during periods of intrusion. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	Avoid
Present and very disruptive	Extensive and regular changes in behaviour and/or an inability to mitigate effect of noise leading to psychological stress or physiological effects, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory.	Unacceptable Observed Adverse Effect	Prevent

BS4142: 2014 Methods for Rating and Assessing Industrial and Commercial Sound

7.2.16 BS4142: 2014 Methods for Rating and Assessing Industrial and Commercial Sound is based on the measurement of background sound using L_{A90} noise measurements, compared to source noise levels measured in L_{Aeq} units. Once any corrections have been applied for source noise tonality, distinct impulses etc., the difference between these two measurements (i.e. known as the ‘rating’ level) determines the impact magnitude.

- Typically, the greater the difference between the site ‘rating’ level (i.e. the noise source contribution with any noise character penalties) and the representative background sound level, the greater the magnitude of the impact.
- A difference of around +10 dB or more is likely to be an indication of a significant adverse impact (although this can be dependent on the context).
- A difference of around +5 dB is likely to be an indication of an adverse impact, depending on the context.
- The lower the rating level is, relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact (although this can be dependent on the context).

7.2.17 In order to establish the rating level, corrections for the noise character need to be taken into consideration. The Standard states that when considering the perceptibility: *“Consider the subjective prominence of the character of the specific sound at the noise-sensitive locations and the extent to which such acoustically distinguishing characteristics will attract attention.”*

7.2.18 The subjective method adopted includes the following character corrections.

Table 7.2: BS4142: 2014 Character Corrections

Level of perceptibility	Correction for tonal character dB	Correction for impulsivity dB	Correction for intermittency dB	Correction for other character dB
Not perceptible	0	0	0	0
Just perceptible	+2	+3	0	0
Clearly perceptible	+4	+6	+3*	+3*
Highly perceptible	+6	+9	+3*	+3*

*Standard defines this should be readily distinctive against the residual acoustic environment, it is interpreted therefore to be either clearly or highly perceptible as a character.



BS8233: 2014 Guidance on Sound Insulation and Noise Reduction for Building

7.2.19 BS8233 provides additional guidance on noise levels within buildings. These are based on the WHO recommendations and the criteria given in BS8233 for unoccupied spaces within residential properties.

7.2.20 The guidance provided in section 7.7 of BS8233 provides recommended internal ambient noise levels for resting, dining and sleeping within residential dwellings. Table 7.3 provides detail of the levels given in BS8233.

Table 7.3: BS8233: 2014 Indoor Ambient Noise Levels for Dwellings

Activity	Location	07:00 to 23:00	23:00 to 07:00
Resting	Living Room	35dB LAeq	
Dining	Dining Room/area	40dB LAeq	
Sleeping (daytime resting)	Bedroom	35dB LAeq	30dB LAeq
Speech or telephone conversations	Cafeteria, canteen, kitchen	50-55dB LAeq	

7.2.21 BS8233 is appropriate to apply to existing or proposed residential development. and offices. The Site noise contribution should be within the proposed internal noise levels, which include the following noise limits:

- Living room areas: $\leq 35\text{dB } L_{Aeq,16\text{hours}}$ (0700-2300 hours) [equivalent to an external level of approximately $65\text{dB } L_{Aeq,16\text{hours}}$ based on typical standard double-glazed units in the closed position and approximately $50\text{dB } L_{Aeq,16\text{hours}}$ in the open position].
- Bedrooms: $\leq 30\text{dB } L_{Aeq,8\text{hours}}$ (2300-0700 hours) [equivalent to an external level of approximately $60\text{dB } L_{Aeq,8\text{hours}}$ based on typical standard double-glazed units in the closed position and approximately $45\text{dB } L_{Aeq,8\text{hours}}$ in the open position]
- Cafeteria: $50\text{dB to } 55\text{dB } L_{Aeq, 8\text{hours}}$ [equivalent to an external level of approximately $60\text{dB to } 65\text{dB } L_{Aeq, 8\text{hours}}$ based on an open window].

7.2.22 The above internal bedroom limits comply with sleep disturbance criteria defined by World Health Organisation guidelines (WHO). The WHO night noise guidelines for Europe refers to sleep disturbance limit of $42\text{dB-}45\text{dB } L_{Amax}$ for regular peak events within bedrooms [which is approximately $57\text{dB-}60\text{dB } L_{Amax}$ external to the bedroom window in the open position].

- 7.2.23 BS8233:2014 also advises that external noise in amenity space should aim to work within a range of 50-55dB $L_{Aeq,T}$ (ref. paragraph 7.7.3.2). This would be applicable to recreational receptors or amenity garden areas (such as outdoor spaces for café's), where practicable.

World Health Organisation (WHO) Guidelines for Community Noise: April 1999

- 7.2.24 This document provides further updated information on noise and its effects on the community. Within the document for noise 'In Dwellings' it states that: *"To enable casual conversation indoors during daytime, the sound level of interfering noise should not exceed 35dB L_{Aeq} . To protect the majority of people from being seriously annoyed during the daytime, the outdoor sound level from steady, continuous noise should not exceed 55dB L_{Aeq} on balconies, terraces and in outdoor living areas. To protect the majority of people from being moderately annoyed during the daytime, the outdoor sound level should not exceed 50dB L_{Aeq} . Where it is practical and feasible, the lower outdoor sound level should be considered the maximum desirable sound level for new development."*

World Health Organisation (2009) – Night noise guidelines for Europe

- 7.2.25 The WHO regional office for Europe set up a working group of experts to provide scientific advice to the Member States for the development of future legislation and policy action in the area of assessment and control of night noise exposure. Considering the scientific evidence on the thresholds of night noise exposure indicated by $L_{night,outside}$ as defined in the Environmental Noise Directive (2002/49/EC), an $L_{night,outside}$ of 40dB should be the target of the night noise guidance (NNG) to protect the public, including the most vulnerable groups such as children, the chronically ill and the elderly. $L_{night,outside}$ value of 55dB is recommended as an interim target for the countries where the NNG cannot be achieved in the short term for various reasons, and where policy-makers choose to adopt a stepwise approach.

Environment Agency (EA) – Guidance: Noise and Vibration Management: Environmental Permits (December 2023) ⁴

- 7.2.26 To operate the Proposed Development, an Environmental Permit will be required and therefore this EA Guidance is relevant. As stated within the above guidance:

“Environmental permits have conditions that require operators to control pollution – this includes controlling noise and vibration.”

7.2.27 This guidance covers:

- *“how the environment agencies will assess noise from certain industrial processes;*
- *what the law says you must do to manage noise and vibration; and*
- *advice on how to manage noise – in particular, how to carry out a noise impact assessment and what operators should include in a noise management plan.”*

7.2.28 Operators (or permit applicants) must consider the potential noise impact of their site. They may need to carry out noise impact assessments:

- At the permit application stage;
- When applying to vary a permit; and
- To comply with specific permit conditions.

7.2.29 The guidance advises on four steps that are required when carrying out a noise impact assessment, these include:

- Desktop risk assessment – identification of any audible noise plant or operations, identification of NSR, description and ranking of noise sources in terms of potential off-site impact, description of land between site and NSR.
- Off-site monitoring survey – for new development this would relate to a study of the existing baseline sound conditions.
- Source assessment – noise modelling of plant or operations, and if industrial source, using BS4142 and ISO9613 for prediction.
- Best Available Techniques (BAT) or appropriate measures justification – measures to be adopted to avoid unacceptable noise pollution and demonstrate that BAT or appropriate measures would be introduced to prevent, or where that is not practicable, minimise noise impact.

Guidance on Construction Noise

BS 5228-1:2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites

7.2.30 BS5228 refers to: *“the need for the protection against noise and vibration of persons living and working in the vicinity of, and those working on, construction*



and open sites. It recommends procedures for noise and vibration control in respect of construction operations and aims to assist architects, contractors and site operatives, designers, developers, engineers, local authority environmental health officers and planners.”

- 7.2.31 Part 1 deals with noise in terms of background legislation and gives recommendations for basic methods of noise control relating to construction and open sites where significant noise levels may be generated. The guidance is aimed at giving advice on achieving ‘best practice’ in controlling noise and vibration from construction and open sites. There is an example of noise limits given in Annex E, which sets out cut-off limits between 65dB(A) and 75dB(A), or 5dB(A) above the ambient noise, whichever is the greater. Part 2 of BS 5228 deals specifically with vibration control and provides the legislative background to the control of vibration and recommendations for controlling vibration at source and management controls (e.g. liaison with communities, supervision, preparation and choice of plant etc.).

Consultation

- 7.2.32 Liaison with WC Environmental Health Team was undertaken via a scoping report, which provided information on the relevant national and local policies, guidance for the assessment of noise impact on NSR and location of sensitive receptors relative to the Site.

Assessment of Significance / Assessment Criteria

- 7.2.33 The level of an effect is a function of the sensitivity or importance of the receiver, or receptor, and the scale or magnitude of the impact. In the case of this assessment the level of the effect has been determined by reference to existing guidance and standards that are explained below.
- 7.2.34 The following types of receptors have been identified:
- Residents of existing houses in closest proximity to the Site who could experience site operational noise during daytime and night-time periods.
 - Residents of existing houses who could experience additional road noise from the development.
 - Residents of existing houses in closest proximity to the Site who could experience the construction works noise during daytime periods.

Construction Noise

- 7.2.35 For the assessment of impacts from construction noise, the appropriate methodology is presented in the Design Manual for Roads and Bridges (DMRB), LA 111 Noise and Vibration guidance. This document sets out the requirements for assessing, reporting and management of environmental effects, specifically from the changes in noise and vibration from construction, operation and maintenance projects.
- 7.2.36 The DMRB LA 111 guidance provides a means of determining the magnitude of the impact, the observed effect level and the resultant significance of construction noise.
- 7.2.37 For the prediction of construction noise, the DMRB LA 111 guidance refers to BS5228-1. For residents of houses that could be exposed to construction noise, BS5228-1:2009+A1:2014 is therefore considered to be the appropriate standard. This standard requires 'best practicable means' (BPM) to be employed to control noise generation.
- 7.2.38 At this stage it is not possible to identify precise detail of what temporary construction plant would be required and where it would be sited and for how long. As a consequence, an indicative range of levels of noise and vibration from specific types of tasks at the closest and most distant approach to all the working areas within the Site have been used to calculate the range of highest likely noise and vibration conditions relative to the NSR.
- 7.2.39 The construction impact semantic scale is set out in DMRB LA 111 and provided in **Table 7.4** (i.e. ref. Table 3.12 of LA 111). We have added in column 4 to show the range of threshold levels for ease of reference, which is referred to in column 3 of **Table 7.4** and taken from BS5228-1:2009+A1:2014 Annex E.3.2. The threshold level is determined by measuring typical ambient noise at the NSR and comparing this with three threshold limits between the stated range (e.g. daytime weekday would be 65dB, 70dB or 75dB L_{Aeq}). The specific limit for the project is determined by establishing whether the baseline noise level (rounded to the nearest 5dB) at NSR is either lower, equal to or higher than the three limits.
- 7.2.40 In order to relate the threshold level in terms of an effect level and an impact magnitude, the guidance compares the calculated noise level at the NSR with the measured baseline and the determined threshold limit. For example, if the calculated

level is lower than the baseline level then it is considered to be a negligible impact (i.e. below the Lowest Observable Adverse Effect Level LOAEL). If the level is equal to or greater than +5dB above the threshold limit, then it is considered to be a major impact (i.e. 5dB or greater than the Significant Observable Adverse Effect Level SOAEL). **Table 7.4** provides the relative impact magnitude and how this is defined relative to the construction noise level.

Table 7.4: Impact Magnitude Category – Construction Noise

Time Period	LOAEL	SOAEL	Threshold Level LAeq1hr dB
Day (0700-1900 Weekday and 0700-1300 Saturdays)	Baseline noise levels LAeq,T	Threshold level determined as per BS5228-1:2009+A1:2014 Section E3.2 and Table E.1 BS 5228-1:2009+A1:2014	65-75
Night (2300-0700)	Baseline noise levels LAeq,T	Threshold level determined as per BS5228-1:2009+A1:2014 Section E3.2 and Table E.1 BS 5228-1:2009+A1:2014	45-55
Evening and weekends (time periods not covered above)	Baseline noise levels LAeq,T	Threshold level determined as per BS5228-1:2009+A1:2014 Section E3.2 and Table E.1 BS 5228-1:2009+A1:2014	55-65

7.2.41 The magnitude of impact for construction noise, shall be determined in accordance with **Table 7.5** (as defined in DMRB LA 111⁸).

Table 7.5: Magnitude of Impact and Construction Noise Descriptions

Magnitude of Impact	Construction Noise Level
Negligible	Below LOAEL
Minor	Above or equal to LOAEL and below SOAEL
Moderate	Above or equal to SOAEL and below SOAEL +5dB
Major	Above or equal to SOAEL +5dB

Construction Phase Road Traffic Impacts

7.2.42 According to the DMRB LA 111 guidelines, the magnitude of impact at noise sensitive receptors from construction traffic is set out in **Table 7.6**. The magnitude of impact is determined by establishing how much the existing baseline levels would increase by as a result of the temporary activity.

Table 7.6: Magnitude of Impact at Receptors

Magnitude of Impact	Increase in Basic Noise Level of Closest Public Road Used for Construction Traffic (dB)
Negligible	Less than 1.0
Minor (Slight)	Greater than or equal to 1.0 and less than 3.0
Moderate	Greater than or equal to 3.0 and less than 5.0
Major	Greater than or equal to 5.0

7.2.43 As this is a temporary activity, to establish whether a significant effect would occur at the NSR, the activity would have to be equal to or greater than an increase in 3dB and also occur for a relatively long period of time.

7.2.44 According to DMRB LA 111 (ref. paragraph 3.19 of the guidance) the period of time that this would occur is defined below: “*Construction noise and construction traffic noise shall constitute a significant effect where it is determined that a major or moderate magnitude of impact will occur for a duration exceeding: (1) 10 or more days or nights in any 15 consecutive days or nights; (2) a total number of days exceeding 40 in any 6 consecutive months.*”

Construction Phase – Vibration Impacts

7.2.45 To establish whether or not vibration generated by vibratory plant used during the construction phase would be significant it is necessary to predict the likely vibration level at the NSR.

7.2.46 The DMRB LA 111 guidance provides a means of determining the magnitude of the impact, the observed effect level and the resultant significance of construction vibration.

7.2.47 In order to relate the threshold level in terms of an effect level and an impact magnitude, the guidance compares the calculated noise level at the NSR with two threshold limits. The first threshold (i.e. 0.3mm/sec PPV) is the level at which vibration is said to be just perceptible and the threshold of LOAEL. At a vibration level below 0.3mm/sec would represent a negligible impact and the second threshold (i.e. 1mm/sec PPV) was set as the level at which construction vibration can be tolerated with prior warning and the threshold of SOAEL. Below this level would be a minor impact. At levels above 1mm/sec and below 10mm/sec PPV would relate to a moderate impact and above 10mm/sec PPV a major impact.

7.2.48 For construction phase vibration the LOAEL and SOAEL is set out in DMRB LA 111 and provided in **Table 7.7**.

Table 7.7: Construction Vibration LOAELs and SOAELs

Time Period	LOAEL	SOAEL
All time periods	0.3mm/sec PPV	1.0mm PPV

7.2.49 The magnitude of impact for construction vibration, shall be determined in accordance with **Table 7.8** (as defined in DMRB LA 111).

Table 7.8: Magnitude of Impact at Receptors

Magnitude of impact	Vibration Level
Negligible	Below LOAEL
Minor (Slight)	Above or equal to LOAEL and below SOAEL
Moderate	Above or equal to SOAEL and below 10mm/s PPV
Major	Above or equal to 10mm/s PPV

7.2.50 As this is a temporary activity, to establish whether a significant effect would occur at the NSR, the activity would have to be equal to or greater than 1mm/sec and also occur for a relatively long period of time.

7.2.51 According to DMRB LA 111 (ref. paragraph 3.34) the period of time that this would occur is defined below: *“Construction vibration shall constitute a significant effect where it is determined that a major or moderate magnitude of impact will occur for a duration exceeding: (1) 10 or more days or nights in any 15 consecutive days or nights; (2) a total number of days exceeding 40 in any 6 consecutive months.”*

Operational Noise

7.2.52 **Table 7.9** below shows the proposed impact magnitude methodology considering the guidance contained within BS4142: 2014+A1:2019⁵ for fixed and mobile plant noise.

Table 7.9: Impact Magnitude Scale – Site Operations

Rating* level above background noise dB(A) as BS4142:2014+A1:2019	Description of Effect	Impact Magnitude	PPG Effect Level
-10 to 0	No discernible effect on the receptor	Negligible	NOEL to NOAEL
+0.1 to +4.4	Non-intrusive – Noise impact can be heard but does not cause any change in behaviour or attitude. Can slightly affect the character of the area but not such that there is a perceived change in the quality of life.	Slight	LOAEL
+4.5 to +9.4	Intrusive - Noise impact can be heard and causes small changes in behaviour and/or attitude. Affects the character of the area such that there is a perceived change in the quality of life. Potential for non-awakening sleep disturbance.	Moderate	LOAEL to SOAEL
+9.5 or greater	Disruptive – Causes a material change in behaviour and/or attitude e.g. avoiding certain activities during periods of intrusion. Potential for sleep disturbance resulting in difficulty getting to sleep. Quality of life diminished due to change in character of the area.	Substantial	SOAEL
Undefined**	Physically Harmful – Significant changes in behaviour and/or inability to mitigate effect of noise leading to psychological stress or physiological effects e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm.	Severe	UOAE

Note: The 'rating' level is the difference between the noise contribution from site and the existing background sound level allowing for any adjustments required for noise characteristics (i.e. tonal, impulsive or intermittent noise character). The Standard advises that rounding of numbers to one decimal place should relate to levels of 0.5dB or above, which is reflected in the table limits. The impact magnitude scales in Tables 6.7 and 6.8 are used in the assessment of operational noise impacts. *The intrusiveness depends on the context of the residual environment and therefore may fall into SOAEL if background and residual levels are similar. **Difficult to define physical harmful effect as this depends on numerous site-specific factors which may include type and character of noise source, location, human sensitivities, duration and receptor expectations etc.

7.2.53 The Institute of Environmental Management and Assessment (IEMA)¹³ has provided 'Guidelines for Environmental Noise Impact Assessment'. The guidelines set out an example of how changes in noise level may be assessed in terms of residual LAeq. This assists in determining the impact of Site operational noise relative to the context of the noise climate, which is detailed in Table 7.10.

¹³ Institute of Environmental Management and Assessment (IEMA) 'Guidelines for Environmental Noise Impact Assessment: October 2014.



Table 7.10: Impact Magnitude Scale – General Site Noise

Change in sound levels. LAeq dB	Description of Effect	Impact Magnitude	PPG Effect Level
< +2.9	No discernible effect on the receptor	Negligible	NOEL
+3.0 to +4.9 (high receptor sensitivity)	Non-intrusive - Noise impact can be heard but does not cause any change in behaviour or attitude. Can slightly affect the character of the area but not such that there is a perceived change in the quality of life.	Slight	NOAEL
+5.0 to +9.9 (high receptor sensitivity)	Intrusive - Noise impact can be heard and causes small changes in behaviour and/or attitude. Affects the character of the area such that there is a perceived change in the quality of life. Potential for non-awakening sleep disturbance.	Moderate	LOAEL
10 or greater (high receptor sensitivity)	Disruptive – Causes a material change in behaviour and/or attitude e.g. avoiding certain activities during periods of intrusion. Potential for sleep disturbance resulting in difficulty getting to sleep. Quality of life diminished due to change in character of the area.	Substantial	SOAEL
Undefined*	Physically Harmful – Significant changes in behaviour and/or inability to mitigate effect of noise leading to psychological stress or physiological effects e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm.	Severe	UOAEL

Operational Road Traffic Noise

- 7.2.54 To assess the likely impact on NSR from noise due to any increased traffic on the local road network associated with the Proposed Development, noise calculations have been undertaken using CRTN¹³ calculation methodology and traffic flow information for the WRP.
- 7.2.55 The DMRB LA 111⁸ provides guidance on the magnitude of change in terms of road traffic noise. The procedure for assessing noise impacts advises the use of a LA₁₀ measurement index based on a daytime 18-hour time period (i.e. 0600 to 2400 hours) and night-time period (i.e. 0000-0600 hours). Further assessment of the impact would be required where changes of 1dB(A) or more are expected in the short-term and changes of 3dB(A) in the long term.
- 7.2.56 DMRB LA 111⁸ defines the short term and long-term scenarios which are considered to represent the situation when a new road opens (short term) and 15 years after a road opens (long term). The magnitude of change criteria is set out in **Table 7.11** for the short term and **Table 7.10** for the long term.

Table 7.11: Magnitude of Change – Road Traffic Noise - Short Term

Short Term Magnitude	Short Term Noise Change (dB LA10,18hr or Lnight)
Negligible	Less than 1.0
Minor (Slight*)	1.0 to 2.9
Moderate	3.0 to 4.9
Major (Substantial/Severe)	Greater than or equal to 5.0
*This has been amended by the author of this assessment to reflect the impact matrix	

Table 7.12: Magnitude of Change – Road Traffic Noise - Long Term

Long Term Magnitude	Long Term Noise Change (dB LA10,18hr or Lnight)
Negligible	Less than 3.0
Minor (Slight)	3.0 to 4.9
Moderate	5.0 to 9.9
Major (Substantial/Severe)	Greater than or equal to 10.0

Receptor Sensitivity and Overall Level of Effect

7.2.57 In order to determine the level of the effect, not only must the magnitude of this impact be determined but also the sensitivity of the receptors to the impact. For this assessment, the categories presented in **Table 7.13** have been adopted.

Table 7.13: Receptor Sensitivity

Receptor Sensitivity	Type of Receptor
High	Dwellings / residential properties including houses, flats, old people's homes, hospitals, schools, churches, caravans and open spaces / conservation areas.
Moderate	Commercial premises including retails and offices etc.
Low	Industrial premises including warehouses and distribution etc.

7.2.58 Based upon the assessment of impact magnitude and the sensitivity of individual receptors, the matrix shown in **Table 7.14** has been developed in order to provide an indication of the possible level of effect for each predicted noise impact. Given that there are many factors which may affect the level of the effect of an impact, not least, the character of the noise and timescales over which the noise operates, the overall level of effect must be assessed on an individual basis using professional

judgement and experience. Therefore, whilst the matrix provides a useful indication of the likely significance it cannot be applied in all situations.

Table 7.14: Level of Effect Matrix

Impact Magnitude	Receptor Sensitivity		
	High	Moderate	Low
Severe	Major	Major/Moderate	Moderate/Minor
Substantial	Major/Moderate	Moderate	Minor
Moderate	Moderate	Moderate/Minor	Minor/Neutral
Slight	Minor	Minor/Neutral	Neutral
No significant impact (negligible)	Neutral	Neutral	Neutral

7.2.59 Where a level of effect is defined as Major or Major / Moderate then the effect is likely to be considered significant, i.e. an impact that is likely to be a key material factor in the decision-making process.

Limitations

7.2.60 No specific limitations were encountered in the preparation of this assessment chapter.

7.3 Baseline

7.3.1 The Site is located circa 2km to the east of Knottingley Train Station. More specifically, it is bound to the:

- i) North by Stocking Lane, beyond which is Bank Dole Cut Canal and the River Aire.
- ii) South (of the main part of the site) by the A645 Weeland Road, beyond which is the car park (associated with the site) and an agricultural field. Further to the south is the Aire and Calder Navigation (Knottingley and Goole Canal). Beyond this is former industrial land that is the subject of an allocation for mixed use (employment and residential development) in the Wakefield Local Plan.
- iii) West by land benefiting from planning permission for the development of a tyre recycling facility, the Aire and Calder Navigation and various commercial / industrial premises extending into Knottingley itself, including the substantial buildings and chimney stacks associated with the Allied Glass Works.

7.3.2 The local sound environment is generally formed by a mixture of noise from local and distant road traffic and local industrial activities.

7.3.3 The monitoring positions are shown on **Figure 7.1**. The noise monitoring positions are representative of NSR relative to the location of the WRP and provide broadband data of the existing sound climate at these receptors. Details of the instrumentation used for the survey are detailed in **Appendix 7.2**.

7.3.4 The existing baseline sound survey was undertaken over a weekday and weekend period from Friday 11th July through to Wednesday 16th July 2025 at five fixed locations and is considered to provide representative baseline sound levels.

7.3.5 The existing background sound survey was carried out in accordance with the advice given in BS4142: 2014+A1:2019.

7.3.6 The monitoring positions were as follows:

Position NMP1 (off Weeland Road) – Southeast of Site (grid reference:451584 423677)

7.3.7 This monitoring position is representative of the closest existing NSR southeast of the Site (at circa 120m from the site boundary) and is located adjacent to Weeland Road. Noise levels at this location are dominated by regular intermittent local road traffic noise. The noise meter was positioned on open land in proximity to the nearest residential dwelling and set back from the road. **Figure 7.1** shows the location.

Position NMP2 (off Common Lane) – Southwest of Site (grid reference: 451162 423476)

7.3.8 Position NMP2 was chosen as a suitable monitoring position to represent typical baseline levels in the vicinity of proposed residential properties southwest of Site off Common Lane (planning reference: 22/00345_FUL) which are located circa 150m to the south of the car park and circa 200m to the south of the main site area boundary. Noise levels at this location are dominated by distant road traffic noise and local industrial activities. **Figure 7.1** shows the location. The noise meter was located in the field to the east of the proposed housing land area.

Position NMP3 (off Weeland Road) – West of Site (grid reference:450860 423756)

7.3.9 Position NMP3 was chosen as a suitable monitoring position to represent typical baseline sound levels in the vicinity of properties west of the Proposed Development closer to the town of Knottingley (i.e. Low Green and Fernley Green Road). The closest properties are located circa 200m from the nearest site boundary, albeit within and surrounded by established industrial / commercial development. Noise levels at this location are dominated by road traffic noise and industrial noise activities. The monitoring position was located in open land south of Weeland Road. **Figure 7.1** shows the location.

Position NMP4 (Marsh Lane) – Northwest of Site (grid reference: 450913 424081)

7.3.10 Position NMP4 was chosen as a suitable monitoring position to represent typical baseline sound levels in the vicinity of Marsh Lane at circa 300m from the site boundary. Receptors in this location also include canal boat users and a mobile home parking area at circa 160m to 250m. Noise levels at this location are dominated by industrial noise from the glass manufacturer site. The monitoring position was located in open land north of Marsh Lane. **Figure 7.1** shows the location.

7.3.11 Although ambient noise levels can vary depending on weather conditions, the purpose of the baseline survey is to monitor sound levels under suitable weather conditions. This then provides a typical and representative indication of ambient conditions. The effect of wind on noise levels can be significant, as an example, BS8233: 2014 states: *“Whether noise levels are measured or predicted, wind gradients, temperature gradients and turbulence affect the level of received sound and audibility over short periods. The magnitude of these effects, i.e. variations in noise level and audibility, increases with increasing distance between source and receptor. The effects are asymmetrical and, for distances of 500m to 1000 m, typically range from increasing the level by typically 2 dB downwind to reducing it by typically 10 dB upwind. It is not usually practicable to use these factors in design, but the prevailing wind direction should be considered when planning building orientation. Noise from wind and precipitation, including the wind-generated noise from trees, can also affect noise measurements.”* (Paragraph 6.8)

7.3.12 For the purpose of this assessment, it is confirmed that monitoring and assessment of operational noise from the Proposed Development was undertaken under appropriate weather conditions and therefore any significant positive or negative vector from wind direction is not representative. The effect of wind speed and

direction can also increase background noise levels thereby masking any potential increase in site-specific noise levels. For this reason, it is assumed that typical weather conditions apply and no increase or decrease for the wind vector is required.

Existing Background Sound Survey Results

7.3.13 The baseline results of measurements taken at the fixed monitoring positions are presented in **Table 7.15** and detailed measurements are provided in **Appendix 7.3**.

Table 7.15: Existing Background Sound Levels at Monitoring Positions

Monitoring Position (Refer to Figure 1)	Time Period	Av. LAeq dB	Av. LA90 dB	LAmix dB	Representative LA90 dB
NMP1: Weeland Road (receptor closest to Site in SE direction)	0700-1900	59	52	62-91	51
	1900-2300	57	50	66-93	49
	2300-0700	55	51	54-93	51
NMP2: Off Common Lane (new residential development area) Southwest of Site.	0700-1900	48	44	50-78	40
	1900-2300	46	39	48-87	39
	2300-0700	44	41	41-71	38
NMP3: Off Weeland Road (near receptors adjacent to industrial area – west of Site)	0700-1900	58	45	64-94	45
	1900-2300	55	41	64-88	40
	2300-0700	51	42	44-84	39
NMP4: Off Marsh Lane (receptors NE of Site) incl. canal users.	0700-1900	52	48	53-84	46
	1900-2300	49	47	51-81	46
	2300-0700	49	46	49-78	45

7.4 Assessment of Effects

Identification of Noise Sensitive Receptors (NSR)

Existing Residential Receptors

7.4.1 The closest NSR southeast of the Site are off Weeland Road (Receptor R1). The Site boundary is located circa 120m from this receptor and the NSR is located approximately 2m from Weeland Road kerbside. [Grid reference: 451529 423698]

7.4.2 The NSR in a westerly direction are located at Low Green and Fernley Green Road off Weeland Road (R2) at circa 250m to 300m from the site boundary. [Grid reference: 450742 423754, 450754 423817 & 450715 423790]

7.4.3 The closest NSR in a northwestern direction from Site are located off Marsh Lane (R4), which includes permanent and canal boat residence at a distance of circa 200m to 300m from the site boundary. [Grid reference: 450770 424016 & 450897 423964]

Proposed Residential Receptors

- 7.4.4 The proposed residential NSR (as approved via planning ref. 22/00345_FUL) to the southwest are to be located off Common Lane (Receptor R2) which are circa 200m from the Site boundary [Grid reference: 451004 423526, 451053 423454]
- 7.4.5 Refer to **Figure 7.1** for location of NSR.

7.5 Initial Development Design & Impact Avoidance/Reduction Measures Overview

- 7.5.1 General design measures to avoid or minimise the potential for significant effects are described in ES Chapter 4.0 (Description of the Proposed Development).
- 7.5.2 The predicted noise levels from the Proposed Development have been calculated using the noise levels provided within **Appendix 7-5**. The noise levels are based on data provided by the Applicant on other projects operating in the UK having similar types of plant.
- 7.5.3 The following sets out aspects of the Proposed Development that have been designed at the outset or through the earlier development/design stages to avoid or minimise the potential for significant effects.

Demolition & Construction Noise

- 7.5.4 In accordance with BS5228⁷, BPM would be employed to control the noise generation (e.g. using equipment that is regularly maintained, where practicable use equipment fitted with silencers or acoustic hoods).
- 7.5.5 In consideration of the likely highest levels of demolition and construction noise, the following approach would be considered as part of any Construction Environmental Management Plan (CEMP) which would form part of any planning consent condition:
- Restriction of construction hours to non-sensitive times of day would normally form part of the planning consent conditions. The construction delivery hours proposed would be generally limited to 08.00 to 18.00hrs Monday to Friday and 08.00 to 13.00hrs Saturday. No work on Sundays or Bank Holidays, however there may be occasions when construction would need to be undertaken outside of the core hours, for example, during major concrete pours or the transfer of abnormal loads.

- If piling required, careful choice of piling rigs to minimise noise (e.g. hydraulic or CFA piling).
- Avoid un-necessary plant operation and revving of plant or vehicles.
- Locate plant away from nearest sensitive receptors or in locations which provide good screening in the direction of sensitive receptors.
- Use of broadband noise reverse alarms (where practicable) on mobile plant.
- Fitting of mufflers or silencers of the type recommended by manufacturers.
- Use of compressors, generators and pumps fitted with properly lined and sealed acoustic covers or enclosures, which will be kept closed whenever the machines are in use.
- Regular maintenance of plant and equipment.
- Inform local residents of the works being undertaken and provide a complaints procedure for local residents to enable them to contact the Site should any issues arise in terms of noise.
- Contact local residents prior to construction works commencing advising of anticipated duration and a contact number to advise of any issues/concerns.

Operation

7.5.6 Design measures to avoid or minimise the potential for significant noise effects are summarised below:

- (i) Building constructed from single skin cladding having a minimum $R_w=24\text{dB}$.
- (ii) The southern facade of Building 6 canopy would be fitted with single skin cladding to open areas.
- (iii) The southern façade of Building 16 canopy would be fitted with single skin cladding to open areas.
- (iv) The southern façade of Building 9 canopy would be fitted with single skin cladding with openings for access where required.
- (v) AHU fan stack designed to operate to a sound pressure level not exceeding $70\text{dB } L_{Aeq15\text{mins}} @ 1\text{m}$ from exit of stack.
- (vi) Doors closed into processing buildings except for access to vehicles for offloading and collection unless for maintenance or emergency.
- (vii) Where a shredder is required in the processing buildings, this to be an electric type to minimise noise.

- (viii) Design to ensure no tonal noise character is perceptible at NSR in accordance with BS4142: 2014+A1:2019.
- (ix) Tanker delivery discharge or loading on Site to be limited to daytime operating periods between 0700 to 1900 hours.
- (x) Sound power levels of plant as detailed in **Appendix 7.5**.
- (xi) Mobile plant and site-controlled vehicles fitted with non-tonal reversing alarms (i.e. broadband noise, 'white noise' or SMART type reversing alarms).

7.6 Assessment of Potential Effects

Introduction

- 7.6.1 The following section sets out the assessment of effects taking into consideration the initial development design and impact avoidance/reduction measures detailed in sub-section 7.5 above.

Demolition & Construction Phase Noise Effects – Plant Noise

- 7.6.2 During the demolition stage this will include the demolition to slab level of any residual buildings, structures and plant that has not removed from Site.
- 7.6.3 High reach excavators with hydraulic breaker, rotating selector grabs, low level excavators, haulage lorries, telehandlers, front loaders, MEWPS, hand power tools, skip lorries and dozers could all, at some time during the demolition programme, be operating on the Site. In addition, ancillary equipment such as small generators, pumps and compressors may also be operating on occasion.
- 7.6.4 Construction works would involve the movement of soils, CFA piling and the construction of new buildings and infrastructure. Excavators, haulage lorries, piling rigs, cranes, concrete mixers, dumpers, telehandlers, MEWPS, concrete plant, hand power tools, diggers, generators, pumps, compressors and paving machines would all, at some time during the construction programme, be operating at the Site.
- 7.6.5 The above noise sources and their associated activities would vary from day to day and may be in use at different stages of the construction period for relatively short durations. The noisiest activities are expected to be generated during soil movement and piling work during the initial stages of construction when excavators, piling rigs, dozers or similar may be in use.

7.6.6 The actual noise level produced by demolition or construction work would vary at the nearest property boundary at any time depending upon a number of factors including the plant location, duration of operation, hours of operation, intervening topography and type of plant being used. Refer to **Appendix 7.4** for construction plant inventory that has been taken into account in the assessment.

7.6.7 The construction works would take place during normal daytime operating hours. The daytime activities and associated noise levels are provided below in **Table 7.16**, which is based on the ABC method of assessment within BS5228: 2009⁷ (Annex E.3.2.).

Table 7.16: Noise Predictions for Highest Likely Demolition & Construction Noise for existing NSR (daytime activities)

Position	Approximate Distance to receptor (m)	Activity	Predicted Noise Level Range, LAeq dB1hr [LAmax]	Typical Residual Noise LAeq [LAmax] dB	BS5228 Threshold Value LAeq dB (daytime)	Increase above threshold LAeq dB
Residential NSR						
R1: Weeland Road (SE)	250-450	Demolition	49-56 [54-71]	59 [62-91]	65	0
	150-470	Site Preparation Piling	47-57 [52-65]	59 [62-91]	65	0
	190-470	General activities	49-57 [55-69]	59 [62-91]	65	0
	200-400	Infrastructure	44-52 [49-60]	59 [62-91]	65	0
	160-470	Building Constr'n	44-59 [49-67]	59 [62-91]	65	0
	190-470	Plant Install	47-56 [52-68]	59 [62-91]	65	0
	150-470		43-52 [48-60]	59 [62-91]	65	0
R2: Common Lane (SW)	240-550	Demolition	50-54 [55-69]	48 [50-78]	65	0
	240-550	Site Preparation Piling	45-52 [50-60]	48 [50-78]	65	0
	250-550	General activities	48-54 [54-66]	48 [50-78]	65	0
	300-400	Infrastructure	45-47 [50-55]	48 [50-78]	65	0
	240-550	Building Constr'n	43-55 [48-63]	48 [50-78]	65	0
	250-550	Plant Install	46-53 [51-65]	48 [50-78]	65	0
	250-550		42-49 [47-57]	48 [50-78]	65	0
R3: Weeland Road (W)	330-600	Demolition	48-51 [53-66]	58 [64-94]	65	0
	280-570	Site Preparation Piling	45-50 [50-58]	58 [64-94]	65	0
	280-570	General activities	48-52 [54-64]	58 [64-94]	65	0
	350-450	Infrastructure	45-46 [50-54]	58 [64-94]	65	0
	280-570	Building Constr'n	42-53 [47-61]	58 [64-94]	65	0
	280-570	Plant Install	46-52 [51-64]	58 [64-94]	65	0
	280-570		41-48 [46-56]	58 [64-94]	65	0

Position	Approximate Distance to receptor (m)	Activity	Predicted Noise Level Range, LAeq dB1hr [LAmax]	Typical Residual Noise LAeq [LAmax] dB	BS5228 Threshold Value LAeq dB (daytime)	Increase above threshold LAeq dB
R4: Marsh Lane (NW)	200-420	Demolition	46-51 [51-66]	52 [53-84]	65	0
	160-480	Site Preparation Piling	47-56 [52-64]	52 [53-84]	65	0
	160-480	General activities	49-58 [55-70]	52 [53-84]	65	0
	200-400	Infrastructure	43-52 [48-60]	52 [53-84]	65	0
	160-480	Building Constr'n	44-59 [49-67]	52 [53-84]	65	0
	160-480	Plant Install	47-58 [52-70]	52 [53-84]	65	0
	160-480		43-54 [48-62]	52 [53-84]	65	0

7.6.8 In respect of the residential NSR, on the basis of the above predictions, as a result of construction activities, the result show an impact magnitude classification of **negligible to slight** resulting in a **neutral to minor** level of effect at all residential receptors and **not significant**. Refer to **Table 7.5**.

7.6.9 The application of applying best practice in accordance with BS5228-1:2009+A1:2014⁷ will assist in reducing and minimising impact from demolition and construction noise. Further details are provided in the Construction Environmental Management Plan (CEMP) which is Appended to Chapter 4.0 of this ES.

Construction Phase Noise Effects – Road Traffic Noise (off-Site)

7.6.10 Chapter 4.0 and Chapter 5.0 of the ES outlines the potential construction phase activities and the level of staff and HGV traffic that could arise during the temporary construction period. **Table 7.16** includes for associated HGV vehicle movements on-site.

7.6.11 The number of vehicle movements (off-site) associated with the temporary construction phase of the Proposed Development will be lower than that assessed for the operational phase and therefore according to the DMRB LA 111⁸ methodology, the impact will not be any higher than a **negligible** impact magnitude and a **neutral** effect based on the weekday and Saturday construction periods. The results of analysis show that impacts would be **not significant** at NSR.

Construction Phase Vibration Effects

- 7.6.12 The highest levels of vibration generated by construction plant is likely to include the following:
- piling;
 - vibratory rollers and compactors;
 - material offloading onto hard surfaces; and
 - large bulldozer.
- 7.6.13 Typical field measurements taken at sites in the UK where piling or vibratory compaction might occur have been used (as indicated in the example empirical data of vibratory sources in **Appendix 7.6**).
- 7.6.14 The distance from the nearest residential receptors to any likely use of piling or vibratory compaction is likely to be a minimum distance of between 150m relative to residential receptors. The vibration levels at this separation distance would be below 0.05mm/sec (i.e. below perceptible levels of vibration) and according to **Table 7.7** and **Table 7.8**, would result in a ***negligible impact*** and ***neutral*** level of effect and ***not significant***.

Operational Phase Noise Effects – Plant

Noise Characteristics

- 7.6.15 In terms of the potential noise characteristics of the Proposed Development, the following provides the details of the appropriate noise criteria applied in the assessment in accordance with BS4142: 2014+A1:2019⁵:

Tonality

- 7.6.16 In terms of tonality, given the separation distance, residual sound levels and mitigation strategy any tonal noise from associated fan systems or reversing alarms on vehicles are highly unlikely to be perceptible at the nearest receptors and we would therefore not apply a correction. The fan systems and reversing alarms, would in any case, be designed to eliminate tonal character by the design and/or mitigation measures.

Impulsivity

- 7.6.17 In terms of impulsivity this is unlikely to be a characteristic of any external plant and mobile plant moving waste would occur inside the building and is therefore not deemed to be perceptible.

Intermittency

- 7.6.18 In terms of intermittency the plant would operate continuously, the only intermittent activity is likely to be noise from daytime HGV and forklift movements on-site. The vehicle movements are unlikely to be distinctive at NSR (due to the influence of existing local road traffic movements along the local road network).
- 7.6.19 In conclusion, with the proposed noise mitigation strategy and controls of specific plant selection and design there is no character penalty required. However, in order to comply with the latest EA Guidelines: Noise and Vibration Management: Environmental Permits (December 2023)⁴; for robustness a penalty of +3dB for noise character is allowed.
- 7.6.20 **Tables 7.17** and **Table 7.18** show the highest noise prediction relating to fixed plant and vehicular noise sources on Site operating during the daytime and fixed plant during evening and night-time operating periods. Calculations include the embedded noise control measures outlined at paragraph 7.5.6.

Daytime Operations

- 7.6.21 **Table 7.17** below provides information on the predicted noise levels during daytime operations (i.e. in accordance with section 7.2 Note 1 of BS4142: 2014+A1:2019⁵ 07.00 to 23.00 hours) at the Proposed Development.

Table 7.17: Predicted Noise Contribution from Proposed Development during Daytime (with Embedded Noise Mitigation Measures)

Receptor Position (Refer to Figure 7.1)	Time Period (0700-2300 hours)	Predicted Rating ¹ Noise Level from Site LAeq _{1hr} dB	Assessment ² Baseline Sound Level LA90 _{1hr} dB [LAeq]	Rating ¹ compared to Baseline Sound LAeq _{1hr} dB	Noise Change ³ LAeq dB
Residential Receptors					
R1: Weeland Road (SE)	Daytime	47 ¹	51 [59]	-4	+0.1
	Evening	41 ¹	49 [57]	-8	+0.1
R2: Common Lane (SW)	Daytime	39 ¹	40 [48]	-1	+0.3
	Evening	37 ¹	39 [46]	-2	+0.3
R3: Weeland Road (W)	Daytime	39 ¹	45 [58]	-6	0
	Evening	37 ¹	40 [55]	-3	0
R4: Marsh Lane (NW)	Daytime	32-42 ¹	46 [52]	-14 to -4	0 to +0.2
	Evening	32-41 ¹	46 [49]	-14 to -5	0 to +0.3

Note 1: Whilst noise characteristics at receptor locations is not expected, to comply with EA guidelines a +3dB penalty is included in the assessment for robustness.

Note 2: Based on a 5-day & 5-night period of baseline sound monitoring including a weekend at NSR.

Note 3: Column 6 is calculated by the logarithmic addition of columns 3 (-3dB) and column 4 **Leq** level in the bracket [] and subtraction of the background **Leq** noise level (i.e. column 4 in []).

7.6.22 The fifth column in **Table 7.17** shows the difference between the predicted rating noise level and the baseline sound level at the receptor positions. The rating level in column five is therefore in accordance with the methodology found within BS 4142: 2014+A1:2019⁵, which is the most relevant applicable noise assessment guidance.

7.6.23 According to BS4142: 2014+A1:2019⁵, the rating level (which includes a +3dB noise character allowance) relative to the assessment baseline noise would indicate **negligible** impact magnitude at receptors (refer to **Table 7.9**), where the impact significance would be **neutral** level of effect. The effects would be **not significant**.

7.6.24 In relation to the IEMA guidelines¹³ (which considers the increase in existing residual noise and therefore the context of the impact, refer to **Table 7.10**), it can be seen that the magnitude of the impact during daytime periods (final column of table) shows that there is a change of up to +0.3dB in noise level, which indicates a **negligible** impact. The predicted level of effect that would be experienced by residential receptors would therefore be a **neutral** level of effect in relation to this guidance.

Night-time Operations

7.6.25 **Table 7.18** below provides information on the predicted noise levels during the night-time (i.e. 23.00 to 07.00 hours according to BS4142: 2014+A1:2019⁵ section 7.2 Note 1).

Table 7.18: Predicted Noise Contribution from the Proposed Development during Night-time (with Embedded Noise Mitigation Measures)

Receptor Position (Refer to Figure 6.1)	Time Period (2300-0700 hours)	Predicted Rating ¹ Noise Level from Site LAeq _{1hr} dB	Assessment ² Baseline Sound Level LA90 _{1hr} dB [LAeq]	Rating ¹ compared to Baseline Sound LAeq _{1hr} dB	Noise Change ³ LAeq dB
Residential Receptors					
R1: Weeland Road (SE)	Night-time	39 ¹	51 [55]	-12	+0.1
R2: Common Lane (SW)	Night-time	34 ¹	38 [44]	-4	+0.2
R3: Weeland Road (W)	Night-time	33 ¹	39 [51]	-6	0
R4: Marsh Lane (NW)	Night-time	33 ¹	45 [49]	-12	+0.1
Note 1: Whilst noise characteristics at receptor locations is not expected, to comply with EA guidelines a +3dB penalty is included in the assessment for robustness. Note 2: Based on a 5-day & 5-night period of baseline sound monitoring including a weekend at NSR. Note 3: Column 6 is calculated by the logarithmic addition of columns 3 (-3dB) and column 4 Leq level in [] and subtraction of the background Leq noise level (i.e. column 4 in []).					

7.6.26 According to BS4142: 2014+A1:2019⁵, the rating level relative to the assessment baseline noise indicates a **negligible** impact magnitude (refer to **Table 7.9**). The operational noise impacts from the facility are therefore considered to represent a **neutral** level of effect and **not significant**. As the result does not show a low impact according to BS4142, additional noise mitigation measures are therefore not required.

7.6.27 In relation to the IEMA guidelines¹³ and making reference to **Table 7.10**, it can be seen that the magnitude of the impact during night-time periods (final column of table) shows that the change in noise level ranges between +0.1dB and +0.2dB LAeq which indicates **negligible** impact. The predicted level of effect would therefore be **neutral** for all NSRs in relation to this guidance.

Operational Road Traffic Noise

7.6.28 The Transport Assessment considers the assessment year 2030 for the traffic demand from the Proposed Development for these periods compared to a 'Do-nothing' scenario. **Table 7.19** provide details of the noise impact due to the increased traffic flow along the local road network based on a daytime and evening/night-time period maximum demand for Site as provided within the Transport Assessment.

Table 7.19: Predicted Change in Road Traffic Noise on Local Road Network based on Daytime (12hr) Site Vehicle Demand

Road	Assessment Year	'Do nothing' LA10 _{1hr} (dB)	'Do something' Core Scenario LA10 _{12hr} (dB)	Change (with development) LA10 _{12hr} (dB)
Daytime 0700-1900 hours				
Weeland Road (West of J2)	2030	65.5	65.6	0.1
Weeland Road (Between J1 & J2)	2030	65.5	65.5	0
Weeland Road (East of J1)	2030	65.5	66.0	+0.5
Weeland Road (West of J3)	2030	67.4	67.8	+0.4
Weeland Road (Between J3 & J4)	2030	68.1	68.3	+0.2
Weeland Road (East of J4)	2030	67.7	67.7	0
Selby Road (North)	2030	66.0	66.0	0
Selby Road (South)	2030	64.0	64.0	0
A19 (North)	2030	71.0	71.0	0
A19 (South)	2030	71.4	71.6	+0.2

Note: Distance from receptor to kerbside assumed to be a nominal 10m.

7.6.29 Based on an operational HGV period assessment during the daytime period, the increase in noise level is between +0.2dB L_{A10} to +0.5dB L_{A10,12hrs}. The impact magnitude is shown to be **negligible** and a **neutral** level of effect in respect of traffic movements relative to the nearest local road network and at nearest residential properties. In terms of the DMRB⁸ LA111 guidance, in relation to short-term effects (refer to **Table 7.11**) an increase of <3dB(A) is minor and <1dB(A) is negligible.

7.6.30 There would be minimal HGV movements during the evening and night-time operational period. Between 1900 and 2100 hours there would be 1 two-way HGV movement per hour and 6 two-way HGV movements between 0500 to 0700 hours. The impact of road traffic demand along the route to and from Site (i.e. Weeland Road and the A19 South) is assessed in Table 7.20.

Table 7.20: Predicted Change in Road Traffic Noise on Local Road Network based on Evening and Night-time (12hr) Site Vehicle Demand

Road	Assessment Year	'Do nothing' LA10 _{1hr} (dB)	'Do something' Core Scenario LA10 _{12hr} (dB)	Change (with development) LA10 _{12hr} (dB)
Evening & Night-time 1900-0700 hours				
Weeland Road (East of J1)	2030	58.3	58.5	+0.2
Weeland Road (West of J3)	2030	58.6	58.8	+0.2
Weeland Road (Between J3 & J4)	2030	61.6	61.7	+0.1
A19 (South)	2030	64.6	64.7	+0.1

Note: Distance from receptor to kerbside assumed to be a nominal 10m.

7.6.31 Based on an operational HGV period assessment during the daytime period, the increase in noise level is between +0.1dB $L_{A10,12hrs}$ to +0.2dB $L_{A10,12hrs}$. The impact magnitude is shown to be **negligible** and a **neutral** level of effect in respect of traffic movements relative to the nearest local road network and at nearest residential properties. In terms of the DMRB⁸ LA111 guidance, in relation to short-term effects (refer to **Table 7.11**) an increase of <3dB(A) is minor and <1dB(A) is negligible.

Operational Phase Vibration Effects

7.6.32 In terms of operational vibration, the type of fixed and mobile plant being used on Site would inherently produce vibration levels lower than the movement of HGVs and therefore based on the separation distance to NSR would produce zero vibration. The impact would be **negligible** and a **neutral** level of effect.

7.7 Further Mitigation

Operational Noise

7.7.1 The embedded mitigation measures described previously adequately address the needs to avoid, reduce and compensate for any significant effects of the Proposed Development and therefore no additional mitigation measures are required.

Cumulative and Future Baseline

7.7.2 There is the potential for the effects of the Proposed Development to interact with the effects of other projects or activities in the surrounding area. These cumulative effects would include projects that are under construction, projects that are approved but awaiting implementation, and projects awaiting determination within the planning process with design information in the public domain. Such projects are required to be within a geographical scope where environmental impacts could act together to create a more significant overall effect on a receptor and where sufficient environmental information is available.

7.7.3 As set out in Chapter 2.0 the cumulative noise assessment only considers the effects of the development in terms of its construction and operation. The cumulative traffic is included in the future year traffic figures and is already considered in that assessment.

7.7.4 The projects identified include:

Land between Stocking Lane, Trundles Lane and Weeland Road, Knottingley, WF11 8DZ (Site A)

7.7.5 Big Atom Ltd, the Applicant, submitted a planning application (ref: 23/00929/FUL) for a tyre recycling facility land immediately to the west of the Site. Planning permission was granted for this development in May 2024.

7.7.6 At the time of writing, no pre-commencement planning conditions have been discharged pursuant to the above permission. However, the planning permission is not due to expire until May 2027. Due to the immediate proximity of the tyre recycling facility to the site, where relevant, consideration of potential construction and operational environmental effects are considered.

7.7.7 The planning submission includes a noise assessment for the site, which was produced by Sol Environment Ltd (“Sol”) (report ref: SOL_22_P012_BAT dated December 2022). The report provides noise predictions at NSR during daytime and night-time operating periods. The assessment of cumulative noise based on the Sol report are included in the **Table 7.21** and **Table 7.22**.

7.7.8 In terms of cumulative effect from construction noise on the Proposed Development NSR we would expect noise levels to increase by up to +5dB but would not exceed the BS5228 threshold value of 65dB $L_{Aeq,1hr}$ and therefore would remain at a ***negligible to slight*** impact and ***neutral to minor*** effect.

Stoelzle Flaconnage Limited, Weeland Road, Knottingley WF11 8AQ (Site B)

7.7.9 This site is located circa 700m to the west of the proposed WRP. Full planning permission was granted the Council in August 2024, for alterations to existing manufacturing buildings, and erection of new warehouse building; new decorations building and staff amenity block; creation of new car park and landscaping (ref: 24/00263/FUL).

7.7.10 It is anticipated that the construction of this scheme has the potential to overlap with the construction of the first phase of the WRP. Accordingly, in the early stages of the WRP (main Scheme Element 1) potential cumulative effects could occur. Other main Scheme Elements (2-5) are anticipated to occur once the Stoelzle Flaconnage

development is operational and, at that point, it would form part of the baseline for assessment. On that basis, it is not proposed that the EIA assesses the cumulative construction effects of this development with main Scheme Elements 2-5.

- 7.7.11 The planning submission includes a noise assessment for the site, which was undertaken by Hepworth Acoustics (report ref: P23-282-R01v4 dated February 2024). The report provides predicted operational noise levels at receptors which are relatively close to the development (i.e. Racca Green & Welland Road). The report provides recommended noise rating limits at Welland Road of 39dB and 38dB L_{Aeq} during daytime and night-time respectively and predicts a noise level of 40dB L_{Aeq} at Racca Green. There is significant residential and industrial development along the propagation path to the NSR relative to the Proposed Development, which will provide significant screening of noise at these locations. An assessment of the likely noise contribution from this development is provided in **Table 7.21** based on distance propagation and potential local screening effects.
- 7.7.12 In respect of any construction noise cumulative effects, the Hepworth Acoustics report does not consider construction noise levels effects and in consideration of the separation distance and screening on intervening ground we would not expect any significant increase in noise levels at NSR if these should coincide with the Proposed Development during the same period.

Land South of Common Lane, Knottingley, WF11 8BN (Site C)

- 7.7.13 Persimmon Homes submitted a planning application for the development of 298 new dwellings with communal public space, associated landscaping, and infrastructure works, on land to the south of Common Lane, near Knottingley (ref: 22/00345/FUL). The northernmost part of the Persimmon Homes site is located circa 290 metres (as the crow flies) to the south the Site.
- 7.7.14 Planning permission was ultimately granted in October 2024, with Persimmon Homes subsequently submitting 15 No. applications for the discharge of planning conditions attached to the planning consent. At the time of preparing this document some of these conditions had yet to be formally discharged.
- 7.7.15 In summary, it is anticipated that the construction of this scheme has the potential to overlap with the construction of the WRP and depending upon the anticipated build

rates there could be cumulative effects throughout operation / construction of the WRP development.

- 7.7.16 The planning submission includes a noise assessment for the site, which was undertaken by Hepworth Acoustics (report ref: P21-390-R01v6 dated July 2023). The report provides an assessment of baseline ambient noise conditions at the development site and an assessment of industrial noise from the Fleetclean activities on proposed nearest dwellings. There is no assessment of construction noise effects at Site C, however when considering the relative separation distance from Site C NSR locations to other NSR relative to the Proposed Development is significant and therefore no significant cumulative effects from construction noise is expected. The closest residential development at Site C is also considered as a NSR in this assessment in case the nearest dwellings are built prior to the Proposed Development commencement date.
- 7.7.17 Once the residential development has been completed the operational noise generation from Site C would not produce any significant noise at other NSR identified in this assessment.

Southmoor Energy Centre (Site D)

- 7.7.18 Planning permission was granted by North Yorkshire County Council, as the minerals and waste authority, for the relocation of colliery activities and construction of an energy centre to recover energy from waste with ancillary development on land at Kellingley Colliery (known as the Southmoor Energy Centre). At the time of preparing this document the Energy Centre has not been built / operational and therefore in line with National Planning Policy for Waste (which only relates to existing operational facilities) it is not considered to form a cumulative scheme and is not proposed to be considered in the ES.

Other Cumulative Sites – Sites E to H

- 7.7.19 Site E Former Kellingley Colliery Mixed Use Scheme: the site is beyond the zone of influence for the application.
- 7.7.20 Site F (solar scheme), Site G (battery storage scheme), Site H (battery storage scheme – these renewables planning applications have not been determined, and therefore do not form cumulative schemes from a noise perspective.

Table 7.21: Predicted Cumulative Noise Contribution from the Proposed Development and Permitted Development in the local area during Daytime & Night-time Operating Periods

Receptor Position (Refer to Figure 7.1)	Time Period	Predicted Noise Level from WRP L _{Aeq1hr} dB	Predicted Noise Level Site A L _{Aeq1hr} dB	Predicted Noise Level Site B L _{Aeq1hr} dB	Predicted Noise Level Site C L _{Aeq1hr} dB	Total Noise Level L _{Aeq1hr} dB
R1: Weeland Road (SE)	Daytime	44	31	0	0	44
	Evening	38	31	0	0	39
	Night-time	36	31	0	0	37
R2: Common Lane (SW)	Daytime	36	30-35 ¹	0-5	0	39
	Evening	34	30-35 ¹	0-5	0	38
	Night-time	31	30-35 ¹	0-5	0	36
R3: Weeland Road (W)	Daytime	36	30-35 ¹	5-10	0	39
	Evening	34	30-35 ¹	5-10	0	38
	Night-time	30	30-35 ¹	5-10	0	36
R4: Marsh Lane (NW)	Daytime	29-39	35	5-10	0	40
	Evening	29-38	35	5-10	0	40
	Night-time	30	35	5-10	0	36

¹Noise predicted from noise mapping contours in the Site A Sol report.

7.7.21 The above analysis of cumulative noise with all permitted and proposed development shows a marginal increase in noise levels at NSR during daytime and evening operating periods. During the night-time period, due to the influence of Site A noise levels at NSR are increased overall by up to 5dB. The cumulative assessment against established baseline sound levels is provided in **Table 7.22**.

Table 7.22: Cumulative Noise Assessment from the Proposed Development and Permitted Development in the area during Daytime , Evening & Night-time Operating Periods

Receptor Position (Refer to Figure 7.1)	Time Period (0700-2300 hours)	Predicted Total Cumulative Rating ¹ Noise Level from WRP L _{Aeq1hr} dB	Assessment Baseline Sound Level L _{A90,T} dB [L _{Aeq}]	Rating ¹ compared to Baseline Sound L _{Aeq1hr} dB	Noise Change ³ L _{Aeq} dB
R1: Weeland Road (SE)	Daytime	47 ¹	51 [59]	-4	+0.1
	Evening	42 ¹	49 [57]	-7	+0.1
	Night-time	40 ¹	51 [55]	-11	+0.1
R2: Common Lane (SW)	Daytime	42 ¹	40 [48]	+2	+0.5
	Evening	41 ¹	39 [46]	+2	+0.6
	Night-time	39 ¹	38 [44]	+1	+0.6
R3: Weeland Road (W)	Daytime	42 ¹	45 [58]	-3	+0.1
	Evening	41 ¹	40 [55]	+1	+0.1
	Night-time	39 ¹	39 [51]	0	+0.1
R4: Marsh Lane (NW)	Daytime	43 ¹	46 [52]	-3	+0.3
	Evening	43 ¹	46 [49]	-3	+0.5
	Night-time	39 ¹	45 [49]	-6	+0.2

Note 1: Whilst noise characteristics at receptor locations is not expected, to comply with EA guidelines a +3dB penalty is included in the assessment for robustness.
 Note 2: Based on a 5-day & 5-night period of baseline sound monitoring including a weekend at NSR.
 Note 3: Column 6 is calculated by the logarithmic addition of columns 3 (-3dB) and column 4 Leq level in [] and subtraction of the background Leq noise level (i.e. column 4 in []).

- 7.7.22 The fifth column in **Table 7.22** shows the difference between the predicted rating noise level and the baseline sound level at the receptor positions. The rating level in column five is therefore in accordance with the methodology found within BS 4142: 2014+A1:2019⁵, which is the most relevant applicable noise assessment guidance.
- 7.7.23 According to BS4142: 2014+A1:2019⁵, the rating level (which includes a +3dB noise character allowance) relative to the assessment baseline noise during daytime or night-time operating periods would indicate a **negligible to slight** impact magnitude at receptors (refer to **Table 7.9**), where the impact significance would be **neutral to minor** level of effect. The effects would be **not significant**.
- 7.7.24 In relation to the IEMA guidelines¹³ (which considers the increase in existing residual noise and therefore the context of the impact, refer to **Table 7.10**), it can be seen that the magnitude of the impact during daytime periods (final column of table) shows that there is a change of up to +0.6dB in noise level, which indicates a **negligible** impact. The predicted level of effect that would be experienced by residential receptors would therefore be a **neutral** level of effect in relation to this guidance.

7.8 Residual Effects and Conclusions

- 7.8.1 During the demolition and construction period there would be a variety of noise sources in use at different stage, and their associated activities would vary from day to day. The highest noise levels relative to nearest receptors are likely to occur during piling and infrastructure activities. The peak noise activities do not normally occur over long periods of time and BPM would be employed to control the noise being generated. It is concluded that the increase in construction noise with the implementation of mitigation measures, using BPM, is likely to result in an impact magnitude classification of **negligible to slight** and a **neutral to minor** level of effect.
- 7.8.2 The assessment of impact on existing residential areas from any increase in road traffic noise during the daytime construction or operational stage of the Proposed Development shows no significant change in noise levels and therefore there is likely to be a **negligible** impact at receptors and **neutral** level of effect and **not significant**.
- 7.8.3 In terms of ground-borne vibration during the demolition/construction or operational period, there would be a **negligible** impact and **neutral** significance at the nearest

residential receptor and well within guidance limits for nuisance and cosmetic damage and **not significant**.

7.8.4 The assessment of cumulative impacts from other permitted or proposed development in the local area is shown to produce a **negligible to slight** impact and a **neutral to minor** level of effect and **not significant**.

7.8.5 In summary, no significant noise effects have been identified by the noise assessment in relation to construction or operation of the Proposed Development noise or plant vibration. **Table 7.23** below summarises the predicted effects of the construction, and operational of the development.

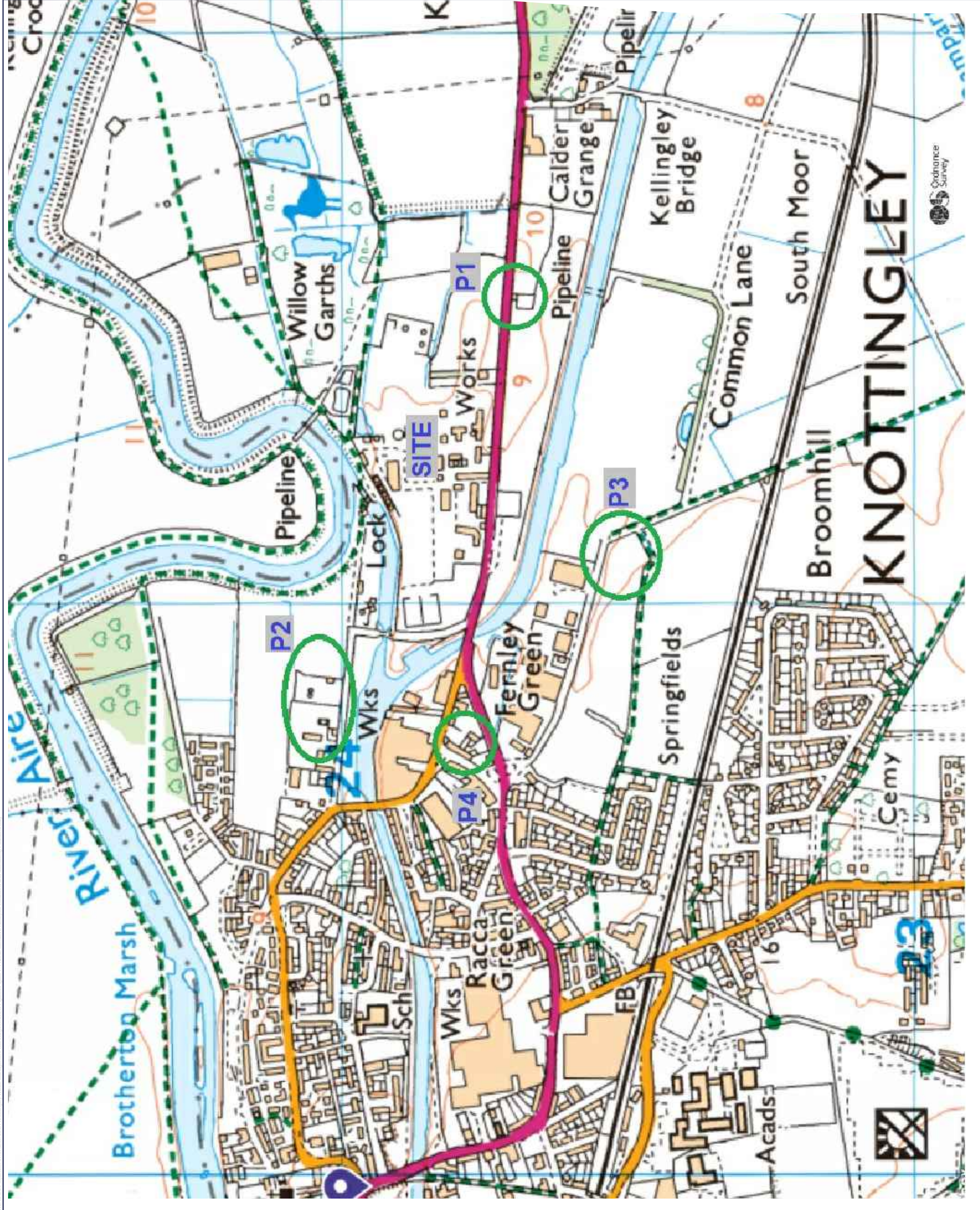
Table 7.23: Residual Impact at Nearest Receptor after Additional Mitigation Measures

Source	Nature of Effect	Time Period	Impact Magnitude	Level of Significance
Demolition/ Construction noise	Temporary	Daytime	Negligible to Slight	Neutral to Minor
Road traffic noise (construction)	Temporary	Daytime	Negligible	Neutral
Road traffic noise (operation)	Permanent	Daytime	Negligible	Neutral
Industrial noise (Site operation)	Permanent	Daytime Night-time	Negligible Negligible	Neutral Neutral
Demolition/Construction Vibration	Temporary	Daytime	Negligible	Neutral
Operational Vibration	Permanent	Daytime Night-time	Negligible Negligible	Neutral Neutral
Cumulative effects	Permanent	Daytime Night-time	Negligible to Slight	Neutral to Minor

Conclusion

7.8.6 Noise and vibration levels have been considered and assessed during the demolition/construction and operational phases of the WRP. Relevant and appropriate noise and vibration guidance and standards have been used to determine the impact. The assessment has been undertaken to inform and guide the design of the WRP, such that any likely noise and vibration impact on existing and potential sensitive receptors is minimised.

- 7.8.7 To establish any likely impact from noise, an assessment of baseline sound levels has been considered by undertaking fixed position noise monitoring at four noise sensitive receptor areas around the Site, over a weekday and weekend period.
- 7.8.8 The noise assessment has benefited from pre-application discussions and submissions relating to the scoping exercise to enable agreement to be made with Wakefield Council on the approach to assessment methodology and noise criteria.
- 7.8.9 In accordance with appropriate standards, BPM would be employed to control the noise generation during the demolition and construction period. Measures may include restriction on operating hours for those activities and careful choice of piling rigs to minimise noise. Such measures would be defined within the Construction and Environmental Management Plan (CEMP).
- 7.8.10 In relation to the operational phase, a number of potential mitigation measures have been proposed to ensure that the resultant operational noise levels are within appropriate guidance and standards. The measures would be based on the employment of 'best available techniques' (BAT) to mitigate any potential peak noise sources.
- 7.8.11 The assessment shows that there would be **no significant impacts** during the demolition, construction and operation of the Proposed Development following the implementation of appropriate mitigation.



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Project

Knottingley Waste to Resource Park

Figure Number

Figure 7.1

Figure Title

Noise Sensitive Receptor Locations
and Monitoring Positions

Scale

Not to Scale

Date

December 2025

APPENDIX 7-1: BASIC ACOUSTIC TERMINOLOGY

NOISE

Sound is produced by mechanical vibration of a surface, which sets up rapid pressure fluctuations in the surrounding air.

Between the quietest audible sound and the loudest tolerable sound there is a million to one ratio in sound pressure level. It is because of this wide range that a noise level scale based on logarithms is used in noise measurement. This is the decibel or dB scale.

Audibility of sound covers a range of about 0 to 140 decibels (dB) corresponding to the intensity of the sound pressure level. The ability to recognise a particular sound is dependent on the pitch or frequencies present in the source. Sound pressure measurements taken with a microphone cannot differentiate in the same way as the ear, consequently a correction is applied by the noise measuring instrument in order to correspond more closely to the frequency response of the ear which responds to sounds from 20 Hz to 20000 Hz. This is known as 'A weighting' and written as dB(A).

The use of this unit is internationally accepted and correlates well with subjective annoyance to noise.

The logarithmic basis of noise measurements means that when considering more than one noise source their addition must be undertaken in terms of logarithmic arithmetic. Thus, two noise sources each of 40 dB(A) acting together would not give rise to $40 + 40 = 80$ dB(A) but rather $40 + 40 = 43$ dB(A). This 3 dB(A) increase represents a doubling in sound energy but would be only just perceptible to a human ear.

The attached chart gives typical noise levels in terms of dB(A) for common situations.

Noise levels can vary with time according to source activity and indices have been developed in order to be able to assign a value to represent a period of noise level variations and to correspond with subjective response.

The definition in layman's terms is given below for terminology used in the measurement and results obtained during the survey work.

A-weighting: Normal hearing covers the frequency (pitch) range from about 20Hz to 20,000 Hz but sensitivity of the ear is greatest between about 500Hz and 5000Hz. The "A-weighting" is an electrical circuit built into noise meters to mimic this characteristic of the human ear.

Ambient noise: The totally encompassing sound in a given situation at a given time usually composed of sound from many sources near and far.

Attenuation: Noise reduction

Background noise: The general quiet periods of ambient noise when the noise source under investigation is not there.

Decibel (dB): The unit of measurement for sound based on a logarithmic scale. 0dB is the threshold of normal hearing; 140dB is the threshold of pain. A change of 1dB is only detectable under controlled laboratory conditions.

dB(A) [decibel A weighted]: Decibels measured on a sound level meter incorporating a frequency weighting (A weighting) serves to distinguish sounds of different frequency (or pitch) in a similar way to how the human ear responds. Measurements in dB(A) broadly agrees with an individual's assessment of loudness. A change of 3dB(A) is the minimum perceptible under normal everyday conditions, and a change of 10dB(A) corresponds roughly to doubling or halving the loudness of sound.

dB(C): [decibel C weighted]: Frequency weighting which does not alter low frequency octave band levels by very much compared to 'A' weighting. Similar to linear reading (i.e. linear does not alter frequency spectra at all)

Frequency (Hz): The number of sound waves to pass a point in one second.

Aeq: This is a noise index used to describe the "average" level of a noise that varies with time (T). It allows for the different sensitivities of the human ear to different frequencies (pitch), and averages fluctuating noise levels in a manner, which correlates well with human perceptions of loudness.

LA10,T: This noise index gives an indication of the upper limit or peak levels of the fluctuating noise. It is the "A weighted" noise level exceeded for 10 per cent of the specified measurement period (T). e.g. If the measurement period was over 10

hours and the L_{A10} reading was say 60dB, then this means that for 1 hour out of 10 the level went above 60dB.

$L_{A90,T}$: This noise index gives an indication of the lower limit or levels of the fluctuating noise. It is the "A weighted" noise level exceeded for 90 per cent of the specified measurement period (T). e.g. If the measurement period was over 10 hours and the L_{A90} reading was say 50dB, then this means that for 9 hours out of 10 the level went above 50dB.

L_{Amax} : This is the highest A weighted noise level recorded during a noise measurement period.

$L_{night,outside}$: This is the A-weighted long-term average sound level measured outside as defined in ISO 1996-2: 1987, determined over all the night periods of a year.

Residual noise: The ambient noise remaining at a given position in a given situation when the noise source under investigation is not there.

Specific noise: The noise source under investigation for assessing the likelihood of complaints

Examples of typical noise levels

Source/Activity	Indicative noise level [dB(A)]
Threshold of hearing	0
Rural night-time background	20-40
Quiet bedroom	35
Wind farm at 350m	35-45
Busy road at 5km	35-45
Car at 65km/h at 100m	55
Busy general office	60
Conversation	60
Truck at 50km/h at 100m	65
City Traffic at 5m	75-85
Pneumatic drill at 7m	95
Jet aircraft at 250m	105
Threshold of pain	140

APPENDIX 7-2: NOISE SURVEY DETAILS

Instrumentation and Fieldwork Details

Noise Survey

The noise measurements were undertaken at the locations detailed in section 7.3 and as indicated on the figure attached the ES chapter

The monitoring was carried out over 5 days and 5 nights under suitable weather conditions.

Instrumentation:

Manufacturer	Description	Type	Calibration Due date	Serial No.
Cirrus	Real Time Sound Analyser	1710	March 2026	G304789
Cirrus	Real Time Sound Analyser	171A	July 2026	G061253
Cirrus	Real Time Sound Analyser	1710	April 2026	G066350
Cirrus	Real Time Sound Analyser	171B	May 2026	G056142
Cirrus	Electronic Calibrator	CR: 513A	May 2026	031523

The noise meters used during the survey were precision grade type 1 meters to IEC 651 standard and accuracy.

Calibration Setting: 94dB

Meter Setting: Fast Response

Fieldwork Details:

Date of test: Friday 11th July to Wednesday July 16th 2025.

Time Period: 15-minute sequential measurements

Calibration: Before and after: 94dB

Background Noise Survey Methodology

Meteorological Conditions

Weather conditions were recorded during the baseline survey are detailed in Appendix 2.

The climatic conditions were for the majority of the time suitable for monitoring environmental noise levels in accordance with BS4142:2014+A1:2019.

APPENDIX 7-3L BASELINE SURVEY RESULTS

July 2025 Baseline Survey

Noise Survey Results

Date: Friday 11th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP1 (Weeland Road) SE**
 Instrumentation: Cirrus 171B Real Time Analyser (G056142)
 Calibration: 94dB

TABLE 1

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	59.3	63.2	52.9	73.5	Local Road Traffic Noise
07:15	15:00	60.7	64.6	53.7	73.8	Local Road Traffic Noise
07:30	15:00	60.4	64.2	53.3	73.0	
07:45	15:00	62.0	65.1	53.2	78.8	
08:00	15:00	60.2	63.6	52.8	72.2	
08:15	15:00	60.9	64.8	52.5	75.7	
08:30	15:00	60.0	63.6	52.4	72.5	
08:45	15:00	60.2	63.7	52.4	74.2	
09:00	15:00	60.3	64.3	51.7	73.4	
09:15	15:00	60.0	63.2	51.3	80.9	
09:30	15:00	59.8	63.5	50.0	73.0	
09:45	15:00	61.2	63.4	50.3	85.4	
10:00	15:00	59.7	63.2	51.3	72.6	
10:15	15:00	58.7	62.0	51.8	74.3	
10:30	15:00	62.5	64.5	51.9	85.5	
10:45	15:00	59.3	62.8	52.0	71.8	
11:00	15:00	60.3	63.5	52.9	74.9	
11:15	15:00	60.0	62.9	52.6	76.4	
11:30	15:00	59.5	63.0	51.8	75.0	
11:45	15:00	58.8	62.4	51.3	73.6	
12:00	15:00	59.4	62.3	52.0	76.8	
12:15	15:00	59.5	62.3	50.6	76.4	
12:30	15:00	60.3	63.0	50.2	77.6	
12:45	15:00	59.8	62.9	50.8	75.6	
13:00	15:00	60.4	63.2	51.8	80.3	
13:15	15:00	59.9	63.2	52.3	72.4	
13:30	15:00	59.8	63.1	51.7	74.2	
13:45	15:00	59.8	62.7	52.4	75.9	
14:00	15:00	59.9	63.2	52.4	74.2	
14:15	15:00	60.0	63.4	51.6	74.1	
14:30	15:00	60.8	63.7	51.8	80.3	
14:45	15:00	60.5	63.8	51.3	75.5	
Average 0700-1500		60.1	63.4	51.9	72-86	

Noise Survey Results

Date: Friday 11th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP1 (Weeland Road SE)**
 Instrumentation: Cirrus 171B Real Time Analyser (G056142)
 Calibration: 94dB

TABLE 2

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	60.1	63.3	51.8	80.8	
15:15	15:00	61.3	64.4	53.1	74.3	
15:30	15:00	59.9	63.4	50.5	72.0	
15:45	15:00	60.2	63.7	52.0	73.4	
16:00	15:00	61.0	63.8	52.7	78.0	
16:15	15:00	59.8	63.0	52.3	71.7	
16:30	15:00	62.1	63.9	52.8	86.6	
16:45	15:00	60.0	63.2	51.7	75.3	
17:00	15:00	61.3	63.0	51.7	83.6	
17:15	15:00	58.5	62.5	50.4	71.0	
17:30	15:00	59.2	62.7	50.9	69.8	
17:45	15:00	59.3	62.8	51.1	74.2	
18:00	15:00	57.9	62.1	49.5	70.3	
18:15	15:00	58.4	62.1	49.9	70.9	
18:30	15:00	58.8	62.5	50.0	71.8	
18:45	15:00	58.8	62.6	49.7	73.7	
19:00	15:00	57.5	61.5	49.4	74.2	
19:15	15:00	57.3	61.5	49.3	68.6	
19:30	15:00	58.4	61.7	48.8	76.1	
19:45	15:00	60.4	61.2	48.7	85.7	
20:00	15:00	57.7	61.7	49.3	71.3	
20:15	15:00	56.6	60.7	50.0	68.2	
20:30	15:00	56.8	60.9	50.4	69.0	
20:45	15:00	58.6	62.2	50.5	75.3	
21:00	15:00	59.0	62.1	50.3	78.6	
21:15	15:00	58.4	61.3	50.5	80.3	
21:30	15:00	55.3	59.1	50.4	67.9	
21:45	15:00	56.3	59.8	50.6	72.3	
22:00	15:00	56.1	59.8	50.3	70.4	
22:15	15:00	62.2	60.7	50.3	89.1	
22:30	15:00	54.6	58.4	50.4	67.4	
22:45	15:00	54.9	57.9	50.1	70.7	
Average 1500-2300		59.0	62.1	50.7	67-89	

Noise Survey Results

Date: Friday 11th - Saturday 12th July 2025

TABLE 3

Location: Weeland Road, Knottingley

Client: Axis

Project: Knottingley Waste to Resource Park

Data: **Baseline Sound Survey: Position NMP1 (Weeland Road SE)**

Instrumentation: Cirrus 171B Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	54.0	56.9	50.4	68.3	
23:15	15:00	53.2	53.2	50.9	67.4	
23:30	15:00	54.0	55.0	51.7	68.8	
23:45	15:00	57.0	57.3	51.9	74.5	
00:00	15:00	63.9	55.2	52.1	93.0	
00:15	15:00	54.4	55.1	52.0	74.3	
00:30	15:00	54.8	54.5	52.1	74.3	
00:45	15:00	53.7	53.8	52.3	67.8	
01:00	15:00	53.9	54.2	52.4	68.1	
01:15	15:00	53.8	54.0	51.8	66.9	
01:30	15:00	52.4	52.9	51.6	62.0	
01:45	15:00	54.8	53.4	51.6	73.8	
02:00	15:00	53.6	53.0	51.5	74.0	
02:15	15:00	53.6	53.7	52.3	65.8	
02:30	15:00	53.4	53.5	52.0	65.1	
02:45	15:00	53.5	53.6	52.1	67.4	
03:00	15:00	54.4	54.8	52.7	70.6	
03:15	15:00	54.8	54.8	52.7	73.3	
03:30	15:00	54.2	54.7	52.8	67.9	
03:45	15:00	53.8	54.6	52.6	63.9	
04:00	15:00	54.3	54.9	53.1	64.9	
04:15	15:00	54.7	55.1	53.2	66.7	
04:30	15:00	55.4	57.2	52.9	72.5	
04:45	15:00	54.8	54.8	52.7	68.2	
05:00	15:00	55.3	55.7	52.7	68.3	
05:15	15:00	57.4	57.2	52.8	76.9	
05:30	15:00	56.7	59.5	52.7	69.0	
05:45	15:00	57.0	60.2	51.9	70.9	
06:00	15:00	56.0	58.7	51.6	72.1	
06:15	15:00	56.3	57.8	50.3	80.9	
06:30	15:00	55.8	59.2	50.5	69.7	
06:45	15:00	55.3	58.2	50.9	70.5	
Average 2300-0700		55.7	56.0	52.0	68-93	
Average 0700-2300		59.6	62.8	51.4	67-89	

Noise Survey Results

Date: Saturday 12th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP1 (Weeland Road SE)**
 Instrumentation: Cirrus 171B Real Time Analyser (G056142)
 Calibration: 94dB

TABLE 4

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	56.7	60.3	50.6	70.3	
07:15	15:00	57.4	60.7	50.8	74.8	
07:30	15:00	56.7	60.8	50.6	68.9	
07:45	15:00	57.9	62.2	49.7	71.3	
08:00	15:00	58.6	62.2	50.3	77.5	
08:15	15:00	58.8	62.3	50.0	73.3	
08:30	15:00	60.0	63.1	49.7	77.8	
08:45	15:00	58.5	62.9	49.5	72.4	
09:00	15:00	58.8	62.5	50.3	73.5	
09:15	15:00	60.1	63.7	51.8	77.0	
09:30	15:00	59.0	63.3	49.8	69.9	
09:45	15:00	59.0	62.4	49.1	78.1	
10:00	15:00	60.0	63.5	50.0	76.6	
10:15	15:00	61.4	64.1	51.7	80.4	
10:30	15:00	59.2	62.8	49.7	77.0	
10:45	15:00	65.1	64.1	50.6	91.0	
11:00	15:00	58.4	62.0	50.7	73.9	
11:15	15:00	59.2	63.0	51.7	73.2	
11:30	15:00	60.9	63.0	51.2	82.6	
11:45	15:00	59.1	62.8	49.8	73.1	
12:00	15:00	61.0	63.3	51.7	82.7	
12:15	15:00	61.7	64.2	52.8	83.6	
12:30	15:00	58.4	62.3	50.0	71.2	
12:45	15:00	59.6	62.6	51.6	77.4	
13:00	15:00	59.6	62.5	50.2	76.3	
13:15	15:00	60.1	62.5	49.4	80.5	
13:30	15:00	60.9	62.8	49.9	83.8	
13:45	15:00	62.5	63.3	49.9	88.5	
14:00	15:00	58.7	62.1	49.6	76.0	
14:15	15:00	57.9	61.6	49.1	70.0	
14:30	15:00	58.0	61.9	51.0	71.2	
14:45	15:00	60.3	63.1	50.5	81.3	
Average 0700-1500		59.5	62.6	50.4	69-91	

Noise Survey Results

Date: Saturday 12th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP1 (Weeland Road SE)**
 Instrumentation: Cirrus 171B Real Time Analyser (G056142)
 Calibration: 94dB

TABLE 5

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	59.9	62.7	51.2	77.4	
15:15	15:00	57.7	61.6	49.1	71.0	
15:30	15:00	58.2	61.6	48.9	77.0	
15:45	15:00	58.2	61.7	48.2	72.5	
16:00	15:00	56.5	60.9	48.2	69.5	
16:15	15:00	58.3	62.4	48.9	74.8	
16:30	15:00	57.2	61.4	49.1	69.6	
16:45	15:00	58.8	62.3	49.7	75.7	
17:00	15:00	58.8	62.4	49.1	74.4	
17:15	15:00	58.6	62.4	48.9	71.8	
17:30	15:00	60.4	62.2	49.0	80.7	
17:45	15:00	57.1	60.9	49.3	74.5	
18:00	15:00	58.1	62.3	48.8	70.0	
18:15	15:00	59.0	62.4	48.1	78.1	
18:30	15:00	57.4	61.7	47.9	70.9	
18:45	15:00	57.8	61.8	48.2	74.5	
19:00	15:00	60.4	61.4	48.8	82.9	
19:15	15:00	58.0	61.0	47.9	81.3	
19:30	15:00	58.4	62.3	48.9	76.0	
19:45	15:00	58.3	60.1	49.1	80.9	
20:00	15:00	58.1	59.9	49.4	82.4	
20:15	15:00	58.2	62.5	49.2	73.5	
20:30	15:00	56.8	61.2	48.7	70.5	
20:45	15:00	58.3	61.9	48.9	81.2	
21:00	15:00	56.7	60.7	49.6	71.8	
21:15	15:00	55.4	59.5	49.4	68.0	
21:30	15:00	58.2	62.6	50.2	71.3	
21:45	15:00	56.2	60.3	49.7	68.0	
22:00	15:00	55.5	59.4	49.3	69.9	
22:15	15:00	54.5	58.2	49.2	70.2	
22:30	15:00	55.0	59.0	49.2	70.5	
22:45	15:00	52.8	55.4	49.2	66.2	
Average 1500-2300		57.8	61.3	49.0	66-83	

Noise Survey Results

Date: Saturday 12th - Sunday 13th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP1 (Weeland Road SE)**
 Instrumentation: Cirrus 171B Real Time Analyser (G056142)
 Calibration: 94dB

TABLE 6

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	56.0	59.8	50.3	71.9	
23:15	15:00	54.0	56.5	50.1	68.3	
23:30	15:00	53.9	55.3	50.3	68.8	
23:45	15:00	54.4	54.3	50.7	74.2	
00:00	15:00	52.7	52.1	50.1	67.1	
00:15	15:00	56.4	53.4	50.3	76.6	
00:30	15:00	53.9	54.5	51.9	65.8	
00:45	15:00	54.4	55.5	52.6	65.7	
01:00	15:00	56.3	56.2	53.8	76.1	
01:15	15:00	54.8	55.7	53.3	63.8	
01:30	15:00	55.3	56.4	53.1	67.0	
01:45	15:00	54.0	54.7	52.1	66.8	
02:00	15:00	53.2	53.7	51.4	68.0	
02:15	15:00	53.6	54.0	51.6	69.1	
02:30	15:00	54.4	55.1	52.6	65.5	
02:45	15:00	53.8	55.3	51.7	64.3	
03:00	15:00	55.8	56.5	53.5	69.3	
03:15	15:00	54.3	55.0	52.8	69.8	
03:30	15:00	54.2	55.3	52.3	67.3	
03:45	15:00	53.9	54.9	52.5	66.2	
04:00	15:00	55.7	56.4	53.5	70.7	
04:15	15:00	55.5	55.9	53.0	69.1	
04:30	15:00	55.3	56.4	52.8	68.7	
04:45	15:00	55.1	56.0	53.5	67.7	
05:00	15:00	55.2	56.3	53.1	66.2	
05:15	15:00	54.7	55.3	52.2	67.6	
05:30	15:00	55.5	57.7	52.5	68.9	
05:45	15:00	56.7	59.0	52.9	68.4	
06:00	15:00	58.1	59.5	53.3	80.9	
06:15	15:00	55.5	56.3	52.8	69.1	
06:30	15:00	57.2	58.6	54.0	70.6	
06:45	15:00	56.0	57.2	53.3	68.4	
Average 2300-0700		55.1	56.2	52.4	64-81	
Average 0700-2300		58.9	62.0	49.8	66-91	

Noise Survey Results

Date: Sunday 13th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP1 (Weeland Road SE)**
 Instrumentation: Cirrus 171B Real Time Analyser (G056142)
 Calibration: 94dB

TABLE 7

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
07:00	15:00	56.6	58.8	53.0	75.7	
07:15	15:00	57.4	59.9	54.0	72.4	
07:30	15:00	57.7	60.6	53.9	69.7	
07:45	15:00	57.3	60.1	53.3	69.7	
08:00	15:00	58.6	62.1	53.5	74.7	
08:15	15:00	57.6	61.2	52.5	68.4	
08:30	15:00	57.6	61.3	52.5	70.6	
08:45	15:00	59.1	61.2	51.9	80.7	
09:00	15:00	57.6	61.5	51.2	71.2	
09:15	15:00	59.1	62.2	52.7	75.7	
09:30	15:00	57.8	61.6	51.6	71.8	
09:45	15:00	58.8	62.1	51.3	74.9	
10:00	15:00	60.2	63.9	52.0	73.1	
10:15	15:00	58.8	62.6	51.8	70.7	
10:30	15:00	60.1	63.4	52.0	79.7	
10:45	15:00	59.0	62.4	51.3	74.9	
11:00	15:00	58.1	61.8	50.9	72.0	
11:15	15:00	58.2	62.0	50.7	74.4	
11:30	15:00	58.7	62.3	51.5	71.4	
11:45	15:00	59.9	63.1	52.1	75.6	
12:00	15:00	58.8	62.6	51.3	67.5	
12:15	15:00	59.2	62.8	51.7	71.6	
12:30	15:00	58.3	62.2	50.1	71.5	
12:45	15:00	58.7	62.6	50.3	69.3	
13:00	15:00	58.9	62.5	50.0	76.8	
13:15	15:00	59.0	62.9	50.8	72.2	
13:30	15:00	58.9	62.4	51.5	71.0	
13:45	15:00	59.6	63.3	52.6	73.7	
14:00	15:00	60.2	63.5	52.5	75.9	
14:15	15:00	60.0	63.0	51.8	73.7	
14:30	15:00	56.9	61.0	49.9	69.1	
14:45	15:00	58.1	61.9	50.5	70.8	
Average 0700-1500		58.6	62.1	51.9	68-81	

Noise Survey Results

Date: Sunday 13th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP1 (Weeland Road SE)**
 Instrumentation: Cirrus 171B Real Time Analyser (G056142)
 Calibration: 94dB

TABLE 8

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	58.8	62.6	50.1	75.4	
15:15	15:00	57.9	61.7	49.7	71.8	
15:30	15:00	58.0	62.1	50.3	70.0	
15:45	15:00	58.1	61.9	50.3	72.5	
16:00	15:00	58.3	62.0	51.1	70.6	
16:15	15:00	57.6	62.0	49.3	72.6	
16:30	15:00	57.6	62.0	48.0	71.0	
16:45	15:00	56.4	60.7	47.8	69.2	
17:00	15:00	57.6	61.7	49.3	75.9	
17:15	15:00	57.8	61.7	49.0	77.0	
17:30	15:00	62.3	62.5	49.2	84.4	
17:45	15:00	59.2	62.0	48.8	83.9	
18:00	15:00	58.8	62.9	49.9	70.4	
18:15	15:00	57.8	62.1	48.6	72.3	
18:30	15:00	58.4	62.4	48.7	72.2	
18:45	15:00	56.1	60.6	47.9	68.2	
19:00	15:00	57.6	61.8	48.2	76.4	
19:15	15:00	55.8	60.1	48.1	73.3	
19:30	15:00	56.9	61.3	48.3	69.9	
19:45	15:00	56.9	60.5	48.3	75.7	
20:00	15:00	56.1	60.7	48.0	68.5	
20:15	15:00	55.8	59.9	47.8	71.5	
20:30	15:00	56.2	60.6	47.8	70.2	
20:45	15:00	55.9	60.6	47.8	68.6	
21:00	15:00	61.6	60.2	48.0	85.6	
21:15	15:00	54.8	58.3	47.9	70.6	
21:30	15:00	54.4	57.2	47.6	74.3	
21:45	15:00	54.0	57.3	47.8	72.4	
22:00	15:00	53.7	57.1	47.7	68.7	
22:15	15:00	52.5	54.9	47.7	67.1	
22:30	15:00	54.7	56.6	48.0	75.3	
22:45	15:00	52.0	51.7	47.9	68.7	
Average 1500-2300		57.4	60.8	48.6	67-86	

Noise Survey Results

Date: Sunday 13th - Monday 14th July 2025

TABLE 9

Location: Weeland Road, Knottingley

Client: Axis

Project: Knottingley Waste to Resource Park

Data: **Baseline Sound Survey: Position NMP1 (Weeland Road SE)**

Instrumentation: Cirrus 171B Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	52.8	53.8	47.8	69.3	
23:15	15:00	50.4	50.0	47.7	64.6	
23:30	15:00	50.5	49.4	47.0	69.3	
23:45	15:00	52.0	52.0	47.6	68.4	
00:00	15:00	48.7	49.1	47.1	63.4	
00:15	15:00	56.6	53.6	47.4	80.7	
00:30	15:00	50.4	49.6	47.5	67.4	
00:45	15:00	49.2	49.2	47.3	64.5	
01:00	15:00	50.2	49.8	48.4	65.9	
01:15	15:00	50.3	50.2	48.8	66.0	
01:30	15:00	49.1	49.3	48.1	64.2	
01:45	15:00	50.0	49.5	48.3	67.0	
02:00	15:00	49.0	49.2	48.2	62.7	
02:15	15:00	50.0	49.4	48.0	64.4	
02:30	15:00	49.6	49.2	47.8	67.2	
02:45	15:00	49.7	49.4	48.1	67.1	
03:00	15:00	52.1	50.1	48.4	68.5	
03:15	15:00	51.8	52.0	48.5	67.0	
03:30	15:00	50.4	49.6	48.2	66.3	
03:45	15:00	52.0	51.1	48.4	68.8	
04:00	15:00	54.6	55.5	48.3	71.3	
04:15	15:00	53.3	56.0	48.7	70.6	
04:30	15:00	53.1	54.1	48.4	67.6	
04:45	15:00	54.1	56.4	48.5	71.9	
05:00	15:00	53.9	56.6	48.5	68.2	
05:15	15:00	55.6	59.8	48.5	69.8	
05:30	15:00	57.4	61.4	48.8	74.3	
05:45	15:00	59.3	63.5	48.7	78.5	
06:00	15:00	57.3	61.4	49.3	73.6	
06:15	15:00	58.0	62.1	49.6	74.0	
06:30	15:00	57.9	62.4	50.2	70.7	
06:45	15:00	57.3	61.4	49.6	72.9	
Average 2300-0700		53.9	56.6	48.3	69-81	
Average 0700-2300		58.1	61.5	50.5	67-86	

Noise Survey Results

Date: Monday 14th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP1 (Weeland Road SE)**
 Instrumentation: Cirrus 171B Real Time Analyser (G056142)
 Calibration: 94dB

TABLE 10

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	58.8	62.6	49.5	75.1	
07:15	15:00	58.9	63.1	49.2	73.0	
07:30	15:00	60.2	64.1	50.7	72.2	
07:45	15:00	59.7	63.3	50.8	73.0	
08:00	15:00	60.1	63.6	49.7	79.3	
08:15	15:00	59.1	63.0	49.2	74.0	
08:30	15:00	59.3	63.3	48.8	71.7	
08:45	15:00	59.4	62.9	49.0	76.2	
09:00	15:00	59.5	62.8	50.7	78.3	
09:15	15:00	59.0	63.0	49.3	71.3	
09:30	15:00	58.9	62.4	49.1	73.7	
09:45	15:00	59.2	62.8	50.1	71.3	
10:00	15:00	60.4	63.0	50.2	83.8	
10:15	15:00	58.6	62.5	49.8	69.7	
10:30	15:00	59.5	62.8	49.5	78.9	
10:45	15:00	60.4	62.8	50.7	85.4	
11:00	15:00	58.5	62.2	49.7	74.8	
11:15	15:00	59.7	63.5	49.9	74.4	
11:30	15:00	59.4	63.1	51.0	72.0	
11:45	15:00	59.0	62.4	50.9	74.0	
12:00	15:00	59.0	62.6	50.5	76.1	
12:15	15:00	59.5	63.0	51.1	74.0	
12:30	15:00	58.0	61.8	50.6	77.4	
12:45	15:00	58.3	62.0	50.1	72.4	
13:00	15:00	59.1	62.4	51.3	71.2	
13:15	15:00	58.8	62.2	50.6	71.7	
13:30	15:00	58.2	61.9	51.3	70.1	
13:45	15:00	59.4	62.7	51.2	75.3	
14:00	15:00	59.5	62.6	52.2	76.1	
14:15	15:00	59.3	62.4	52.0	73.7	
14:30	15:00	59.4	63.1	51.3	72.7	
14:45	15:00	59.0	62.2	51.8	78.2	
Average 0700-1500		59.2	62.7	50.4	70-85	

Noise Survey Results

Date: Monday 14th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP1 (Weeland Road SE)**
 Instrumentation: Cirrus 171B Real Time Analyser (G056142)
 Calibration: 94dB

TABLE 11

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	60.2	63.8	51.4	78.8	
15:15	15:00	60.4	63.8	51.5	75.9	
15:30	15:00	58.9	62.6	50.9	70.4	
15:45	15:00	61.9	64.5	51.6	81.7	
16:00	15:00	60.6	63.9	52.5	79.9	
16:15	15:00	61.3	64.2	52.6	85.2	
16:30	15:00	60.6	64.0	53.0	75.1	
16:45	15:00	60.6	63.8	53.3	78.9	
17:00	15:00	62.1	64.2	55.7	80.8	
17:15	15:00	60.6	63.5	52.7	76.4	
17:30	15:00	59.8	63.3	53.2	70.6	
17:45	15:00	60.7	63.5	54.6	79.2	
18:00	15:00	61.1	64.1	54.0	79.4	
18:15	15:00	60.2	63.2	53.7	73.4	
18:30	15:00	58.7	62.4	51.3	72.9	
18:45	15:00	57.7	61.7	50.0	70.2	
19:00	15:00	57.7	61.9	50.2	68.6	
19:15	15:00	58.7	62.4	51.7	73.2	
19:30	15:00	59.8	61.6	50.6	82.1	
19:45	15:00	58.2	61.5	51.3	75.8	
20:00	15:00	58.3	61.9	52.3	69.8	
20:15	15:00	57.4	60.4	53.2	70.2	
20:30	15:00	58.0	61.0	53.0	73.5	
20:45	15:00	57.3	60.7	52.5	67.7	
21:00	15:00	56.2	59.2	51.7	68.9	
21:15	15:00	64.1	62.4	50.8	93.2	
21:30	15:00	55.9	59.0	50.8	70.1	
21:45	15:00	55.0	58.2	50.6	66.6	
22:00	15:00	56.0	58.0	50.7	72.9	
22:15	15:00	54.9	56.8	50.2	72.3	
22:30	15:00	53.7	55.0	49.6	71.5	
22:45	15:00	52.9	55.1	49.4	68.5	
Average 1500-2300		59.4	62.2	52.1	67-93	

Noise Survey Results

Date: Monday 14th - Tuesday 15th July 2025

TABLE 12

Location: Weeland Road, Knottingley

Client: Axis

Project: Knottingley Waste to Resource Park

Data: **Baseline Sound Survey: Position NMP1 (Weeland Road SE)**

Instrumentation: Cirrus 171B Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	52.7	52.7	49.6	67.5	
23:15	15:00	52.1	51.1	49.7	67.7	
23:30	15:00	52.8	51.9	49.9	68.9	
23:45	15:00	52.4	51.2	49.9	69.9	
00:00	15:00	51.6	50.7	49.0	68.2	
00:15	15:00	53.4	53.2	48.8	72.2	
00:30	15:00	50.5	50.4	48.9	67.4	
00:45	15:00	53.4	51.1	49.0	75.5	
01:00	15:00	50.8	51.2	49.3	63.5	
01:15	15:00	50.8	51.0	49.9	63.3	
01:30	15:00	51.5	50.8	49.3	68.4	
01:45	15:00	50.0	50.3	48.7	65.6	
02:00	15:00	50.3	50.2	48.3	64.2	
02:15	15:00	49.6	50.1	48.2	65.7	
02:30	15:00	50.2	50.8	49.3	53.8	
02:45	15:00	51.6	51.0	49.4	70.5	
03:00	15:00	53.2	51.9	49.8	69.4	
03:15	15:00	51.0	50.8	49.4	64.5	
03:30	15:00	50.9	51.1	49.3	66.1	
03:45	15:00	53.1	54.2	49.9	67.7	
04:00	15:00	53.9	54.3	50.1	69.5	
04:15	15:00	53.4	54.7	49.9	68.1	
04:30	15:00	54.7	58.0	49.8	70.1	
04:45	15:00	62.3	64.4	50.2	81.9	
05:00	15:00	56.5	60.3	50.0	73.0	
05:15	15:00	56.0	59.6	50.5	68.9	
05:30	15:00	59.1	62.9	51.1	76.7	
05:45	15:00	57.4	61.2	50.7	72.7	
06:00	15:00	58.6	62.5	51.1	73.4	
06:15	15:00	58.8	62.9	52.0	74.4	
06:30	15:00	58.8	62.5	52.2	73.4	
06:45	15:00	59.4	63.4	51.6	75.7	
Average 2300-0700		55.2	57.8	49.9	54-82	
Average 0700-2300		59.3	62.5	51.3	67-93	

Noise Survey Results

Date: Tuesday 15th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP1 (Weeland Road SE)**
 Instrumentation: Cirrus 171B Real Time Analyser (G056142)
 Calibration: 94dB

TABLE 13

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	58.0	61.8	50.9	76.5	
07:15	15:00	59.5	63.5	50.5	74.6	
07:30	15:00	59.4	63.3	51.2	73.0	
07:45	15:00	59.5	63.4	52.1	72.1	
08:00	15:00	61.0	64.1	52.7	81.1	
08:15	15:00	60.0	63.4	53.1	73.3	
08:30	15:00	59.1	62.7	52.0	72.9	
08:45	15:00	60.4	63.4	52.8	76.2	
09:00	15:00	59.7	63.2	52.3	75.6	
09:15	15:00	58.9	62.4	50.9	73.0	
09:30	15:00	58.4	62.0	51.8	73.5	
09:45	15:00	59.1	62.7	51.7	75.1	
10:00	15:00	59.5	62.8	52.7	79.6	
10:15	15:00	59.9	63.4	52.1	74.5	
10:30	15:00	59.5	63.2	52.0	75.4	
10:45	15:00	59.5	63.0	51.9	80.8	
11:00	15:00	59.7	63.2	52.8	76.8	
11:15	15:00	59.7	62.9	52.9	73.2	
11:30	15:00	60.2	63.5	53.2	71.2	
11:45	15:00	59.4	63.3	51.1	70.5	
12:00	15:00	61.1	64.5	54.3	74.3	
12:15	15:00	62.4	65.4	52.9	82.0	
12:30	15:00	61.1	64.6	53.8	73.4	
12:45	15:00	60.5	64.6	51.8	72.2	
13:00	15:00	61.1	64.7	52.6	76.5	
13:15	15:00	61.7	65.5	53.8	72.4	
13:30	15:00	62.5	66.0	54.5	73.6	
13:45	15:00	62.1	66.2	54.0	72.7	
14:00	15:00	62.4	65.9	55.7	72.9	
14:15	15:00	62.4	66.3	53.7	72.6	
14:30	15:00	65.7	67.3	55.7	88.1	
14:45	15:00	62.0	65.7	53.2	74.6	
Average 0700-1500		60.8	64.2	52.9	62-77	

Noise Survey Results

Date: Tuesday 15th July 2025

TABLE 14

Location: Weeland Road, Knottingley

Client: Axis

Project: Knottingley Waste to Resource Park

Data: **Baseline Sound Survey: Position NMP1 (Weeland Road SE)**

Instrumentation: Cirrus 171B Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	62.2	65.4	53.1	77.3	
15:15	15:00	61.5	65.0	52.5	79.7	
15:30	15:00	62.0	65.5	52.6	76.1	
15:45	15:00	61.7	65.0	54.2	72.5	
16:00	15:00	60.7	64.3	52.6	72.1	
16:15	15:00	60.2	64.0	52.0	72.7	
16:30	15:00	60.7	64.3	51.9	78.1	
16:45	15:00	60.7	64.4	52.5	72.4	
17:00	15:00	61.0	64.2	53.4	72.8	
17:15	15:00	61.4	64.6	52.7	75.6	
17:30	15:00	60.7	64.4	52.3	71.8	
17:45	15:00	60.4	64.0	52.6	69.2	
18:00	15:00	60.1	63.9	52.6	80.6	
18:15	15:00	59.7	63.7	51.9	71.1	
18:30	15:00	61.0	64.4	54.2	72.7	
18:45	15:00	61.6	65.4	54.4	70.8	
19:00	15:00	61.5	65.7	52.3	71.8	Rain
19:15	15:00	59.8	64.3	50.4	72.1	Rain
19:30	15:00	59.5	62.8	49.8	84.6	Rain
19:45	15:00	58.7	63.2	49.7	72.0	Rain
20:00	15:00	59.1	63.4	50.4	73.1	Rain
20:15	15:00	58.7	62.7	51.5	72.9	Rain
20:30	15:00	58.0	62.2	51.8	70.5	Rain
20:45	15:00	58.9	62.3	54.1	70.4	Rain
21:00	15:00	58.3	61.6	52.2	70.4	Rain
21:15	15:00	58.2	62.3	51.1	71.8	Rain
21:30	15:00	59.1	62.1	50.5	72.4	Rain
21:45	15:00	57.8	61.8	50.7	71.7	Rain
22:00	15:00	55.9	59.2	50.4	72.0	Rain
22:15	15:00	56.7	59.8	50.8	71.9	Rain
22:30	15:00	54.9	55.4	49.7	72.1	Rain
22:45	15:00	54.4	55.7	49.7	69.7	Rain
Average 1500-2300		61.0	64.5	52.9	69-81	Excluding Rain

Noise Survey Results

Date: Tuesday 15th - Wednesday 16th July 2025

TABLE 15

Location: Weeland Road, Knottingley

Client: Axis

Project: Knottingley Waste to Resource Park

Data: **Baseline Sound Survey: Position NMP1 (Weeland Road SE)**

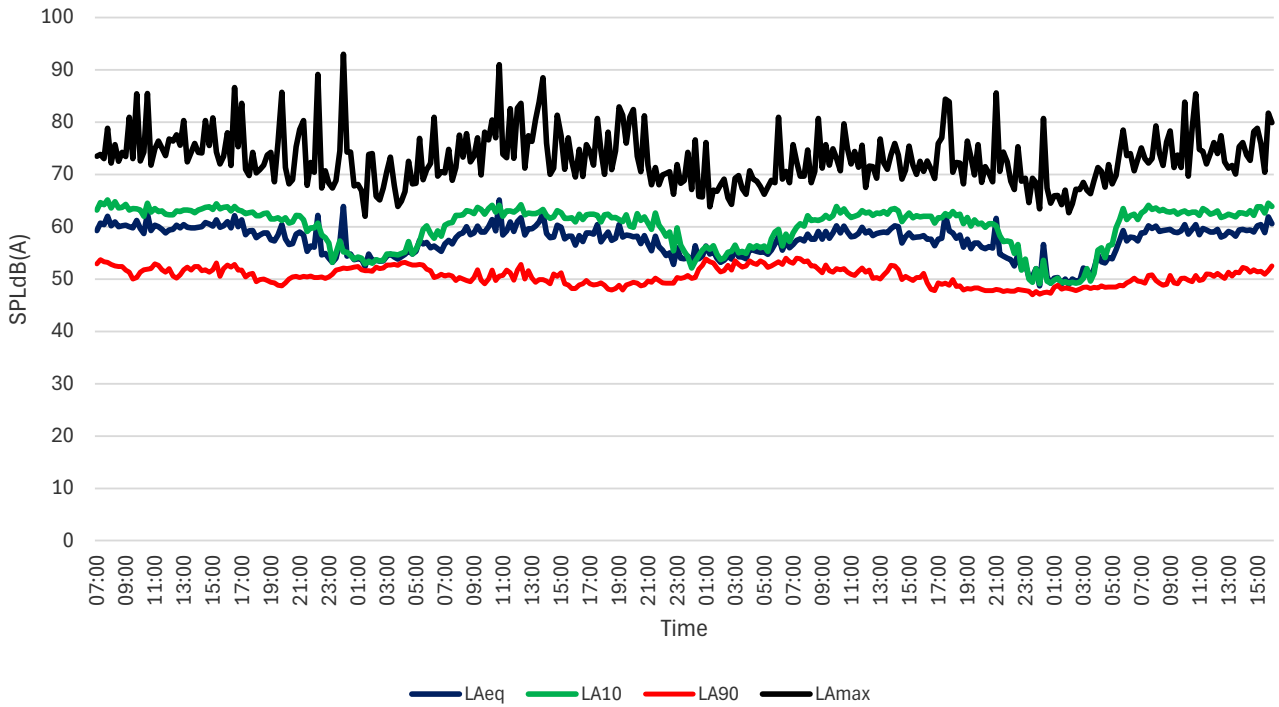
Instrumentation: Cirrus 171B Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	57.3	60.2	51.9	69.8	Rain
23:15	15:00	53.1	53.0	50.4	67.9	Rain
23:30	15:00	53.3	51.5	49.6	72.2	Rain
23:45	15:00	55.3	55.8	49.9	72.9	Rain
00:00	15:00	53.1	51.9	49.7	69.3	
00:15	15:00	52.6	52.4	50.4	67.9	
00:30	15:00	51.4	52.3	50.4	57.2	
00:45	15:00	51.4	52.1	50.4	62.6	
01:00	15:00	52.5	52.8	50.8	66.5	
01:15	15:00	52.4	53.1	51.5	55.1	
01:30	15:00	53.8	53.1	50.6	70.2	
01:45	15:00	52.9	53.1	51.1	69.4	
02:00	15:00	53.9	54.4	51.7	70.9	
02:15	15:00	54.8	55.0	52.1	70.2	
02:30	15:00	53.8	54.2	51.7	69.6	
02:45	15:00	53.9	54.4	51.6	69.3	
03:00	15:00	55.2	55.5	52.2	70.6	
03:15	15:00	55.4	55.6	52.4	71.2	
03:30	15:00	53.8	54.6	51.7	66.0	
03:45	15:00	55.1	55.6	52.3	70.1	
04:00	15:00	55.8	57.2	52.8	67.6	
04:15	15:00	55.8	56.8	52.5	70.3	
04:30	15:00	56.5	58.2	52.7	69.9	
04:45	15:00	59.2	62.7	53.3	74.8	
05:00	15:00	57.2	60.1	53.0	70.4	
05:15	15:00	57.9	60.0	52.8	88.4	
05:30	15:00	60.0	63.6	52.5	70.5	
05:45	15:00	59.4	63.2	52.6	73.8	
06:00	15:00	57.4	61.2	50.7	73.1	
06:15	15:00	58.6	62.2	51.1	72.2	
06:30	15:00	58.8	62.5	52.0	74.1	
06:45	15:00	58.8	62.3	52.2	73.9	
Average 2300-0700		56.1	58.6	51.8	55-74	Excluding Rain
Average 0700-2300		60.9	64.4	52.9	62-81	

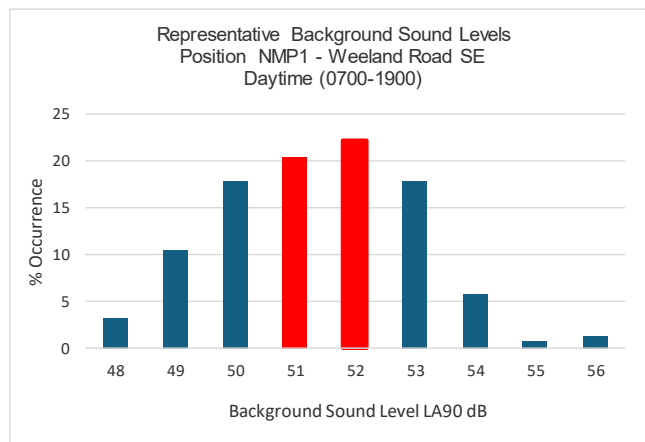
Overall Average	55.2	57.1	51.1	54-93	Excluding Rain
Overall Average	59.4	62.6	51.2	66-93	Excluding Rain
Overall Average 0700-1900	59.8	63.1	51.5	62-91	
Overall Average 1900-2300	57.4	60.3	49.7	66-93	

Background Sound Survey: Position NMP1 - Weeland Road (SE) Friday 11th - Wednesday 16th July 2025

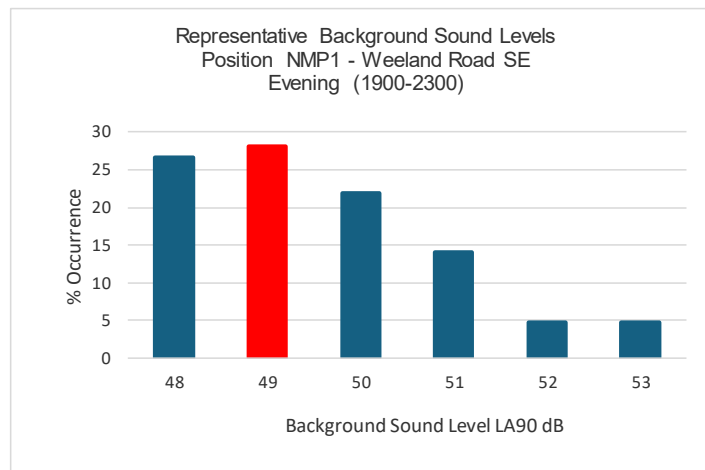


LA90	% Occurrence
48	3.3
49	10.4
50	17.9
51	20.4
52	22.1
53	17.9
54	5.8
55	0.8
56	1.3

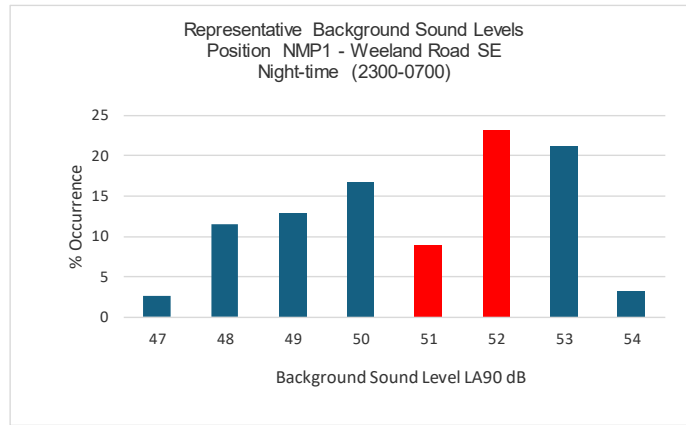
Mode/Median/Av.



LA90	% Occurrence
48	26.6
49	28.1
50	21.9
51	14.1
52	4.7
53	4.7



LA90	% Occurrence	
47	2.6	
48	11.5	
49	12.8	
50	16.7	
51	9.0	Median/Av.
52	23.1	Mode
53	21.2	
54	3.2	



Noise Survey Results

Date: Friday 11th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP2 (Common Lane) SW**
 Instrumentation: Cirrus 171A Real Time Analyser (G304789)
 Calibration: 94dB

TABLE 16

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
07:00	15:00	43.4	45.3	40.5	54.8	Distant road traffic noise
07:15	15:00	46.7	50.0	41.8	66.0	
07:30	15:00	43.2	44.6	40.6	56.7	
07:45	15:00	43.4	45.6	39.7	59.6	
08:00	15:00	43.0	44.9	39.7	55.3	
08:15	15:00	45.5	46.9	41.6	64.8	
08:30	15:00	47.4	48.6	42.1	66.9	
08:45	15:00	46.0	46.9	41.8	64.1	
09:00	15:00	44.3	45.4	39.8	62.8	
09:15	15:00	44.5	45.3	39.4	68.7	
09:30	15:00	41.6	43.5	37.8	56.0	
09:45	15:00	43.0	44.3	37.7	62.0	
10:00	15:00	42.3	43.9	38.0	61.4	
10:15	15:00	44.1	45.1	39.5	65.9	
10:30	15:00	46.0	48.1	42.0	62.9	
10:45	15:00	45.8	48.3	41.0	63.2	
11:00	15:00	47.3	49.5	42.5	63.7	
11:15	15:00	45.9	48.3	40.3	65.4	
11:30	15:00	48.0	51.1	42.3	63.3	
11:45	15:00	47.1	48.5	42.0	65.4	
12:00	15:00	45.6	48.8	40.1	63.4	
12:15	15:00	43.8	45.8	38.5	63.9	
12:30	15:00	42.4	44.7	37.5	58.1	
12:45	15:00	42.8	42.4	36.4	62.6	
13:00	15:00	45.7	45.1	36.7	65.3	
13:15	15:00	46.9	49.6	40.1	64.9	
13:30	15:00	43.5	45.1	37.9	62.4	
13:45	15:00	41.9	42.4	37.0	58.7	
14:00	15:00	45.8	47.1	41.5	63.6	
14:15	15:00	43.6	43.5	37.5	60.7	
14:30	15:00	42.8	44.6	37.9	58.8	
14:45	15:00	43.2	45.4	38.3	62.7	
Average 0700-1500		44.6	46.2	39.7	55-69	

Noise Survey Results

Date: Friday 11th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP2 (Common Lane) SW**
 Instrumentation: Cirrus 171A Real Time Analyser (G304789)
 Calibration: 94dB

TABLE 17

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
15:00	15:00	42.8	45.3	37.5	54.9	
15:15	15:00	42.7	45.3	37.4	52.2	
15:30	15:00	46.7	50.3	38.2	69.2	
15:45	15:00	47.5	49.5	42.3	67.6	
16:00	15:00	46.7	48.3	41.8	64.5	
16:15	15:00	49.2	51.7	42.3	66.1	
16:30	15:00	46.2	48.4	40.9	62.6	
16:45	15:00	41.8	44.1	36.9	52.2	
17:00	15:00	43.2	45.9	37.6	53.6	
17:15	15:00	45.7	47.3	37.7	68.2	
17:30	15:00	44.8	46.3	40.9	62.5	
17:45	15:00	46.8	49.6	41.2	60.5	
18:00	15:00	46.4	48.5	42.4	65.1	
18:15	15:00	47.6	50.0	43.8	57.8	
18:30	15:00	47.5	49.7	44.1	59.4	
18:45	15:00	46.3	48.5	42.4	56.6	
19:00	15:00	47.0	49.4	41.9	58.4	
19:15	15:00	44.9	47.2	41.1	55.8	
19:30	15:00	44.2	46.6	40.9	53.2	
19:45	15:00	43.7	46.0	39.2	58.8	
20:00	15:00	45.2	47.5	40.6	58.6	
20:15	15:00	45.3	48.1	40.1	61.3	
20:30	15:00	46.1	48.4	40.6	60.8	
20:45	15:00	46.6	48.5	40.0	65.1	
21:00	15:00	44.6	47.9	38.7	59.8	
21:15	15:00	46.3	47.5	38.5	65.6	
21:30	15:00	42.1	45.0	37.6	52.2	
21:45	15:00	45.6	48.1	37.7	63.3	
22:00	15:00	43.5	46.7	38.4	57.1	
22:15	15:00	45.7	47.7	37.3	62.8	
22:30	15:00	43.2	45.0	38.0	60.5	
22:45	15:00	41.4	44.4	36.4	53.5	
Average 1500-2300		45.6	47.9	40.3	52-69	

Noise Survey Results

Date: Friday 11th - Saturday 12th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP2 (Common Lane) SW**
 Instrumentation: Cirrus 171A Real Time Analyser (G304789)
 Calibration: 94dB

TABLE 18

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	41.5	44.4	36.9	60.7	
23:15	15:00	41.9	44.9	37.9	54.8	
23:30	15:00	41.7	44.2	37.8	51.1	
23:45	15:00	43.8	46.7	39.1	53.8	
00:00	15:00	49.1	44.4	37.1	70.8	
00:15	15:00	41.2	43.6	36.9	55.1	
00:30	15:00	44.0	48.2	37.4	57.4	
00:45	15:00	42.4	44.7	37.3	62.2	
01:00	15:00	39.4	41.9	36.0	55.0	
01:15	15:00	39.6	42.4	35.1	51.6	
01:30	15:00	37.4	39.8	33.9	46.6	
01:45	15:00	42.6	45.9	34.5	55.2	
02:00	15:00	39.0	41.5	34.4	49.9	
02:15	15:00	39.4	41.6	35.5	49.1	
02:30	15:00	37.8	40.3	34.6	45.4	
02:45	15:00	45.2	46.1	36.0	61.5	
03:00	15:00	41.9	44.4	37.7	53.6	
03:15	15:00	40.5	42.4	37.5	48.2	
03:30	15:00	39.3	42.0	35.7	45.8	
03:45	15:00	38.5	40.6	35.0	49.6	
04:00	15:00	41.8	44.3	37.6	55.0	
04:15	15:00	42.4	43.9	37.9	58.0	
04:30	15:00	41.5	43.5	37.6	52.9	
04:45	15:00	41.6	43.9	38.4	52.5	
05:00	15:00	42.0	44.3	38.9	53.9	
05:15	15:00	42.9	45.3	37.5	55.7	
05:30	15:00	42.1	44.1	38.4	57.5	
05:45	15:00	43.6	45.0	37.4	59.5	
06:00	15:00	41.9	44.0	35.5	61.8	
06:15	15:00	39.2	41.2	35.1	50.3	
06:30	15:00	38.2	40.5	34.7	51.6	
06:45	15:00	55.3	58.2	50.9	70.5	
Average 2300-0700		44.2	46.5	39.3	45-71	
Average 0700-2300		45.2	47.4	40.2	52-69	

Noise Survey Results

Date: Saturday 12th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP2 (Common Lane) SW**
 Instrumentation: Cirrus 171A Real Time Analyser (G304789)
 Calibration: 94dB

TABLE 19

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	42.1	45.2	33.8	61.6	
07:15	15:00	40.4	42.4	34.5	56.2	
07:30	15:00	40.5	43.3	35.4	56.5	
07:45	15:00	40.2	43.1	34.7	51.8	
08:00	15:00	40.8	43.0	34.7	62.0	
08:15	15:00	40.5	43.5	34.5	52.7	
08:30	15:00	39.7	42.0	36.0	53.2	
08:45	15:00	40.1	42.1	36.8	60.1	
09:00	15:00	42.5	45.3	37.9	54.0	
09:15	15:00	41.6	43.7	37.6	54.2	
09:30	15:00	42.3	44.3	39.1	51.5	
09:45	15:00	44.9	46.8	39.1	59.7	
10:00	15:00	43.3	46.0	38.8	55.7	
10:15	15:00	44.7	47.8	39.7	55.5	
10:30	15:00	40.7	43.2	37.2	52.8	
10:45	15:00	45.3	48.7	38.4	61.9	
11:00	15:00	43.6	46.4	38.2	57.0	
11:15	15:00	41.8	43.7	38.4	56.1	
11:30	15:00	44.2	46.8	40.1	54.5	
11:45	15:00	45.8	49.0	41.0	56.2	
12:00	15:00	44.0	46.5	40.2	52.2	
12:15	15:00	48.3	50.2	40.2	69.5	
12:30	15:00	43.6	46.3	39.5	56.2	
12:45	15:00	46.5	48.6	40.1	62.2	
13:00	15:00	44.2	46.5	40.2	60.2	
13:15	15:00	46.2	47.8	40.6	62.2	
13:30	15:00	46.3	49.2	40.8	58.8	
13:45	15:00	45.3	48.3	40.3	57.4	
14:00	15:00	46.0	48.3	40.5	60.5	
14:15	15:00	46.5	50.0	40.4	60.0	
14:30	15:00	46.4	49.2	41.8	59.4	
14:45	15:00	47.1	49.7	40.5	65.8	
Average 0700-1500		43.6	46.2	38.5	52-70	

Noise Survey Results

Date: Saturday 12th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP2 (Common Lane) SW**
 Instrumentation: Cirrus 171A Real Time Analyser (G304789)
 Calibration: 94dB

TABLE 20

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmaz (dB)	Observations
15:00	15:00	45.6	47.8	41.2	59.9	
15:15	15:00	44.5	47.0	41.3	53.8	
15:30	15:00	47.8	51.1	39.3	62.3	
15:45	15:00	45.2	47.7	40.4	60.8	
16:00	15:00	44.3	46.8	40.2	54.4	
16:15	15:00	46.9	48.2	41.5	67.3	
16:30	15:00	46.8	48.9	41.6	63.3	
16:45	15:00	46.0	48.2	42.1	56.8	
17:00	15:00	47.5	50.2	42.4	57.2	
17:15	15:00	48.2	50.5	43.6	61.6	
17:30	15:00	47.2	49.3	42.3	61.7	
17:45	15:00	47.9	49.2	41.1	65.2	
18:00	15:00	45.1	47.3	41.0	59.9	
18:15	15:00	44.8	47.2	40.9	55.0	
18:30	15:00	46.5	47.6	40.1	63.7	
18:45	15:00	43.5	45.9	39.8	55.4	
19:00	15:00	46.6	49.4	40.5	63.3	
19:15	15:00	44.7	47.4	39.5	62.8	
19:30	15:00	44.9	47.5	39.5	58.4	
19:45	15:00	59.2	46.6	37.8	87.4	
20:00	15:00	43.1	45.7	38.3	57.8	
20:15	15:00	42.3	45.0	37.5	61.2	
20:30	15:00	43.2	45.9	37.9	55.8	
20:45	15:00	44.3	46.7	36.8	60.3	
21:00	15:00	45.0	47.5	38.5	59.7	
21:15	15:00	44.5	46.9	37.8	63.1	
21:30	15:00	45.7	48.7	40.2	58.8	
21:45	15:00	43.3	46.4	37.5	53.5	
22:00	15:00	43.6	46.4	37.7	60.6	
22:15	15:00	41.9	44.6	36.9	56.5	
22:30	15:00	42.8	46.3	35.9	59.0	
22:45	15:00	38.9	41.5	35.2	47.9	
Average 1500-2300		47.7	47.7	40.0	48-87	

Noise Survey Results

Date: Saturday 12th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP2 (Common Lane) SW**
 Instrumentation: Cirrus 171A Real Time Analyser (G304789)
 Calibration: 94dB

TABLE 20

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
15:00	15:00	45.6	47.8	41.2	59.9	
15:15	15:00	44.5	47.0	41.3	53.8	
15:30	15:00	47.8	51.1	39.3	62.3	
15:45	15:00	45.2	47.7	40.4	60.8	
16:00	15:00	44.3	46.8	40.2	54.4	
16:15	15:00	46.9	48.2	41.5	67.3	
16:30	15:00	46.8	48.9	41.6	63.3	
16:45	15:00	46.0	48.2	42.1	56.8	
17:00	15:00	47.5	50.2	42.4	57.2	
17:15	15:00	48.2	50.5	43.6	61.6	
17:30	15:00	47.2	49.3	42.3	61.7	
17:45	15:00	47.9	49.2	41.1	65.2	
18:00	15:00	45.1	47.3	41.0	59.9	
18:15	15:00	44.8	47.2	40.9	55.0	
18:30	15:00	46.5	47.6	40.1	63.7	
18:45	15:00	43.5	45.9	39.8	55.4	
19:00	15:00	46.6	49.4	40.5	63.3	
19:15	15:00	44.7	47.4	39.5	62.8	
19:30	15:00	44.9	47.5	39.5	58.4	
19:45	15:00	59.2	46.6	37.8	87.4	
20:00	15:00	43.1	45.7	38.3	57.8	
20:15	15:00	42.3	45.0	37.5	61.2	
20:30	15:00	43.2	45.9	37.9	55.8	
20:45	15:00	44.3	46.7	36.8	60.3	
21:00	15:00	45.0	47.5	38.5	59.7	
21:15	15:00	44.5	46.9	37.8	63.1	
21:30	15:00	45.7	48.7	40.2	58.8	
21:45	15:00	43.3	46.4	37.5	53.5	
22:00	15:00	43.6	46.4	37.7	60.6	
22:15	15:00	41.9	44.6	36.9	56.5	
22:30	15:00	42.8	46.3	35.9	59.0	
22:45	15:00	38.9	41.5	35.2	47.9	
Average 1500-2300		47.7	47.7	40.0	48-87	

Noise Survey Results

Date: Saturday 12th - Sunday 13th July 2025

TABLE 21

Location: Weeland Road, Knottingley

Client: Axis

Project: Knottingley Waste to Resource Park

Data: **Baseline Sound Survey: Position NMP2 (Common Lane) SW**

Instrumentation: Cirrus 171A Real Time Analyser (G304789)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	43.5	46.4	36.7	61.1	
23:15	15:00	40.5	44.7	34.6	52.0	
23:30	15:00	38.8	41.8	33.5	51.7	
23:45	15:00	39.8	43.0	34.0	52.3	
00:00	15:00	38.1	39.5	35.9	53.8	
00:15	15:00	40.7	41.4	35.4	56.2	
00:30	15:00	41.6	43.4	39.8	47.0	
00:45	15:00	42.7	43.9	40.8	49.7	
01:00	15:00	42.4	44.2	40.4	47.2	
01:15	15:00	42.1	43.4	40.4	46.4	
01:30	15:00	42.3	44.1	40.2	48.4	
01:45	15:00	40.9	42.8	38.1	57.9	
02:00	15:00	37.3	38.7	35.7	44.0	
02:15	15:00	40.5	42.6	37.5	59.7	
02:30	15:00	41.0	42.5	39.0	45.8	
02:45	15:00	42.0	44.0	39.6	46.9	
03:00	15:00	42.8	44.7	40.1	48.2	
03:15	15:00	41.8	43.5	39.3	51.8	
03:30	15:00	39.8	41.6	37.4	51.0	
03:45	15:00	40.4	41.9	38.3	49.6	
04:00	15:00	41.4	43.1	39.0	49.9	
04:15	15:00	42.1	44.4	38.6	53.1	
04:30	15:00	41.8	44.1	38.2	54.4	
04:45	15:00	42.3	43.9	39.1	56.1	
05:00	15:00	42.5	44.6	39.4	59.3	
05:15	15:00	41.2	43.3	37.9	54.5	
05:30	15:00	41.2	43.3	38.3	53.0	
05:45	15:00	43.2	44.4	38.2	66.4	
06:00	15:00	42.3	44.4	38.0	57.9	
06:15	15:00	39.7	42.2	36.3	53.2	
06:30	15:00	39.8	41.9	36.7	49.4	
06:45	15:00	40.8	42.0	37.1	60.6	
Average 2300-0700		41.3	43.3	38.2	44-66	
Average 0700-2300		46.3	47.3	39.5	48-87	

Noise Survey Results

Date: Sunday 13th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP2 (Common Lane) SW**
 Instrumentation: Cirrus 171A Real Time Analyser (G304789)
 Calibration: 94dB

TABLE 22

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	41.3	43.4	36.9	58.7	
07:15	15:00	41.5	43.6	38.6	50.1	
07:30	15:00	41.8	43.7	39.3	51.0	
07:45	15:00	42.1	44.7	38.1	52.0	
08:00	15:00	42.5	44.7	38.3	56.5	
08:15	15:00	42.6	45.6	37.3	53.5	
08:30	15:00	44.3	45.4	37.2	61.8	
08:45	15:00	42.7	45.4	36.9	55.4	
09:00	15:00	42.3	44.7	37.3	53.1	
09:15	15:00	43.8	46.4	38.4	53.4	
09:30	15:00	45.3	47.7	40.2	59.2	
09:45	15:00	44.7	46.2	39.2	67.0	
10:00	15:00	45.5	47.9	41.3	53.8	
10:15	15:00	45.2	47.7	40.7	53.3	
10:30	15:00	45.2	48.2	40.0	60.5	
10:45	15:00	48.3	50.3	41.5	63.6	
11:00	15:00	47.8	48.0	41.0	67.2	
11:15	15:00	43.3	45.9	38.7	57.2	
11:30	15:00	45.1	47.0	40.9	60.4	
11:45	15:00	47.6	49.0	42.2	67.8	
12:00	15:00	46.0	48.5	42.3	56.7	
12:15	15:00	46.7	48.5	41.3	67.9	
12:30	15:00	45.1	47.6	41.6	53.9	
12:45	15:00	45.2	47.5	41.0	57.3	
13:00	15:00	45.8	48.2	40.2	59.7	
13:15	15:00	46.0	48.5	40.9	57.9	
13:30	15:00	46.6	49.4	41.7	55.1	
13:45	15:00	47.3	49.9	42.5	56.3	
14:00	15:00	48.9	51.2	44.0	64.1	
14:15	15:00	51.9	54.3	41.1	71.0	
14:30	15:00	44.5	47.4	39.2	59.8	
14:45	15:00	43.5	46.1	38.8	59.1	
Average 0700-1500		45.7	47.9	40.3	50-71	

Noise Survey Results

Date: Sunday 13th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP2 (Common Lane) SW**
 Instrumentation: Cirrus 171A Real Time Analyser (G304789)
 Calibration: 94dB

TABLE 23

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
15:00	15:00	48.5	47.7	39.8	68.4	
15:15	15:00	45.2	48.1	39.6	56.3	
15:30	15:00	45.2	47.8	40.4	55.4	
15:45	15:00	44.7	47.3	39.9	57.0	
16:00	15:00	49.4	47.3	41.5	71.9	
16:15	15:00	44.0	46.5	40.1	52.4	
16:30	15:00	43.6	45.9	39.9	54.8	
16:45	15:00	43.2	45.2	39.8	57.0	
17:00	15:00	51.3	47.5	40.7	77.7	
17:15	15:00	49.7	46.6	40.4	73.2	
17:30	15:00	50.4	50.0	41.3	72.8	
17:45	15:00	44.7	46.9	40.7	63.3	
18:00	15:00	46.2	48.5	41.4	61.1	
18:15	15:00	44.0	45.9	41.1	60.2	
18:30	15:00	48.8	46.4	40.1	73.0	
18:45	15:00	44.1	46.1	38.9	61.5	
19:00	15:00	44.8	47.3	40.7	57.5	
19:15	15:00	43.1	45.2	39.5	63.6	
19:30	15:00	44.3	46.8	40.2	57.9	
19:45	15:00	46.6	48.9	40.7	62.6	
20:00	15:00	44.5	47.2	39.6	56.9	
20:15	15:00	46.5	47.4	40.4	64.6	
20:30	15:00	42.9	45.2	39.2	52.9	
20:45	15:00	43.3	46.0	39.2	56.4	
21:00	15:00	44.9	44.6	37.9	63.2	
21:15	15:00	41.9	44.5	37.2	55.7	
21:30	15:00	41.8	44.0	37.1	59.9	
21:45	15:00	40.0	43.0	34.5	58.5	
22:00	15:00	39.3	42.0	35.3	51.9	
22:15	15:00	38.2	40.5	34.7	48.0	
22:30	15:00	42.5	42.2	33.2	65.4	
22:45	15:00	36.6	38.9	32.6	48.8	
Average 1500-2300		45.7	46.4	39.4	48-78	

Noise Survey Results

Date: Sunday 13th - Monday 14th July 2025

TABLE 24

Location: Weeland Road, Knottingley

Client: Axis

Project: Knottingley Waste to Resource Park

Data: **Baseline Sound Survey: Position NMP2 (Common Lane) SW**

Instrumentation: Cirrus 171A Real Time Analyser (G304789)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	38.3	41.3	33.0	52.1	
23:15	15:00	38.5	42.5	31.7	51.3	
23:30	15:00	36.4	39.0	31.8	45.5	
23:45	15:00	36.0	38.3	32.2	44.4	
00:00	15:00	34.9	36.9	31.7	44.1	
00:15	15:00	36.0	38.5	31.2	48.8	
00:30	15:00	35.2	37.5	31.8	44.0	
00:45	15:00	33.9	36.4	29.5	43.6	
01:00	15:00	33.8	35.7	29.9	46.4	
01:15	15:00	32.7	35.4	28.4	41.3	
01:30	15:00	33.7	37.0	29.1	43.6	
01:45	15:00	38.3	39.5	30.9	58.4	
02:00	15:00	34.2	37.2	29.8	42.1	
02:15	15:00	34.8	36.8	31.5	47.8	
02:30	15:00	34.5	36.6	30.9	42.6	
02:45	15:00	36.3	38.2	33.2	43.7	
03:00	15:00	35.3	37.3	32.2	41.5	
03:15	15:00	38.5	42.7	31.3	51.0	
03:30	15:00	36.3	38.2	33.5	47.9	
03:45	15:00	36.4	38.8	32.5	45.0	
04:00	15:00	38.2	40.6	33.2	57.7	
04:15	15:00	39.7	42.4	35.6	52.2	
04:30	15:00	40.2	42.6	36.3	50.7	
04:45	15:00	41.0	43.5	37.5	51.2	
05:00	15:00	42.8	44.7	39.8	55.1	
05:15	15:00	43.0	44.9	39.9	53.4	
05:30	15:00	43.9	46.0	40.6	54.1	
05:45	15:00	45.2	47.7	41.8	61.4	
06:00	15:00	44.6	46.7	41.6	52.6	
06:15	15:00	44.9	46.8	42.2	54.2	
06:30	15:00	46.0	47.3	43.6	59.7	
06:45	15:00	47.8	48.2	44.3	60.3	
Average 2300-0700		40.6	42.6	37.2	41-61	
Average 0700-2300		45.7	47.2	39.9	48-78	

Noise Survey Results

Date: Monday 14th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP2 (Common Lane) SW**
 Instrumentation: Cirrus 171A Real Time Analyser (G304789)
 Calibration: 94dB

TABLE 25

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	46.2	47.3	44.9	51.2	
07:15	15:00	46.9	47.8	45.5	62.8	
07:30	15:00	47.0	47.9	45.7	62.6	
07:45	15:00	45.7	46.9	43.9	55.0	
08:00	15:00	45.8	46.4	43.8	59.4	
08:15	15:00	45.3	46.4	44.0	59.4	
08:30	15:00	46.1	47.4	43.4	62.8	
08:45	15:00	45.2	46.4	43.3	59.1	
09:00	15:00	44.8	46.1	43.1	54.9	
09:15	15:00	45.0	46.3	43.3	53.5	
09:30	15:00	44.6	45.9	42.3	60.8	
09:45	15:00	45.6	46.6	43.4	62.4	
10:00	15:00	48.5	47.6	43.3	71.2	
10:15	15:00	48.2	47.4	43.8	71.5	
10:30	15:00	47.9	48.2	44.4	70.7	
10:45	15:00	46.1	47.7	43.5	62.3	
11:00	15:00	45.7	47.0	42.8	66.4	
11:15	15:00	49.6	51.7	44.4	76.2	
11:30	15:00	44.9	46.0	43.0	55.3	
11:45	15:00	46.0	47.9	43.2	59.6	
12:00	15:00	47.3	48.4	42.9	65.3	
12:15	15:00	45.3	46.6	43.0	60.4	
12:30	15:00	43.8	46.2	41.1	50.8	
12:45	15:00	45.5	46.9	42.0	62.3	
13:00	15:00	47.3	48.8	45.3	60.7	
13:15	15:00	46.6	48.1	44.6	63.9	
13:30	15:00	48.7	50.3	46.1	67.0	
13:45	15:00	49.2	50.5	45.6	70.9	
14:00	15:00	50.5	52.4	45.7	73.2	
14:15	15:00	51.5	53.3	48.0	67.0	
14:30	15:00	49.9	51.1	47.2	67.6	
14:45	15:00	50.2	52.2	46.6	65.8	
Average 0700-1500		47.3	48.6	44.4	51-76	

Noise Survey Results

Date: Monday 14th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP2 (Common Lane) SW**
 Instrumentation: Cirrus 171A Real Time Analyser (G304789)
 Calibration: 94dB

TABLE 26

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	50.5	52.6	45.8	66.2	
15:15	15:00	52.0	54.3	46.6	68.7	
15:30	15:00	49.4	51.7	45.2	67.2	
15:45	15:00	51.1	52.7	46.5	70.1	
16:00	15:00	47.1	48.8	44.6	55.7	
16:15	15:00	47.3	48.8	44.4	64.2	
16:30	15:00	49.3	51.4	46.3	67.5	
16:45	15:00	48.0	50.0	45.5	55.2	
17:00	15:00	49.3	51.2	46.8	60.0	
17:15	15:00	47.5	50.0	44.4	57.8	
17:30	15:00	46.9	48.7	44.7	57.9	
17:45	15:00	49.8	51.1	45.3	65.4	
18:00	15:00	47.1	48.7	44.4	59.2	
18:15	15:00	47.0	48.7	44.5	58.3	
18:30	15:00	45.9	48.0	43.3	52.1	
18:45	15:00	44.0	45.4	39.9	70.4	
19:00	15:00	42.0	42.4	38.3	58.4	
19:15	15:00	40.8	42.5	38.5	50.3	
19:30	15:00	45.7	49.4	41.1	59.5	
19:45	15:00	44.7	46.7	42.3	57.8	
20:00	15:00	48.7	51.9	43.0	60.7	
20:15	15:00	45.4	47.3	42.7	61.0	
20:30	15:00	45.2	47.0	42.8	53.9	
20:45	15:00	49.6	49.6	42.1	74.0	
21:00	15:00	43.4	45.2	40.8	57.0	
21:15	15:00	43.8	45.9	40.4	60.9	
21:30	15:00	43.2	45.0	39.9	61.2	
21:45	15:00	42.3	43.6	39.7	65.8	
22:00	15:00	43.1	44.6	41.1	53.7	
22:15	15:00	42.4	43.8	40.0	59.2	
22:30	15:00	40.6	42.0	38.5	56.9	
22:45	15:00	39.1	40.6	37.3	54.7	
Average 1500-2300		47.1	49.0	43.5	50-74	

Noise Survey Results

Date: Monday 14th - Tuesday 15th July 2025

TABLE 27

Location: Weeland Road, Knottingley

Client: Axis

Project: Knottingley Waste to Resource Park

Data: **Baseline Sound Survey: Position NMP2 (Common Lane) SW**

Instrumentation: Cirrus 171A Real Time Analyser (G304789)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	39.9	41.5	37.6	51.0	
23:15	15:00	39.0	40.6	36.7	53.7	
23:30	15:00	40.2	41.8	37.3	61.1	
23:45	15:00	39.7	41.0	37.9	47.6	
00:00	15:00	38.7	40.8	35.8	46.1	
00:15	15:00	39.9	41.6	37.8	49.0	
00:30	15:00	39.5	40.9	37.6	50.2	
00:45	15:00	39.9	41.3	37.8	58.6	
01:00	15:00	40.6	42.7	37.7	50.0	
01:15	15:00	40.8	42.0	39.3	48.8	
01:30	15:00	41.2	42.8	39.3	46.5	
01:45	15:00	41.6	43.4	38.9	48.7	
02:00	15:00	41.0	42.6	38.8	49.6	
02:15	15:00	40.6	42.2	38.0	51.4	
02:30	15:00	43.2	44.5	37.0	56.6	
02:45	15:00	40.3	42.0	37.8	51.2	
03:00	15:00	41.3	42.8	39.4	48.3	
03:15	15:00	41.5	43.0	39.6	48.4	
03:30	15:00	42.0	43.5	40.1	46.9	
03:45	15:00	43.6	45.2	41.6	53.2	
04:00	15:00	44.8	47.2	41.7	52.8	
04:15	15:00	47.5	47.0	42.3	64.6	
04:30	15:00	44.8	46.3	42.8	54.4	
04:45	15:00	45.4	46.9	43.5	52.2	
05:00	15:00	49.8	50.8	45.0	64.6	
05:15	15:00	50.5	49.6	46.4	66.8	
05:30	15:00	48.8	49.7	47.7	59.9	
05:45	15:00	49.2	50.2	47.3	62.9	
06:00	15:00	49.9	50.9	48.6	65.6	
06:15	15:00	52.3	52.8	49.8	63.3	
06:30	15:00	51.8	52.7	50.1	66.4	
06:45	15:00	50.3	51.3	48.9	58.7	
Average 2300-0700		46.0	46.9	43.7	46-67	
Average 0700-2300		47.2	48.8	43.9	50-76	

Noise Survey Results

Date: Tuesday 15th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP2 (Common Lane) SW**
 Instrumentation: Cirrus 171A Real Time Analyser (G304789)
 Calibration: 94dB

TABLE 28

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	48.2	49.1	46.9	59.7	
07:15	15:00	47.8	48.8	46.5	56.3	
07:30	15:00	48.1	49.1	46.9	53.8	
07:45	15:00	48.2	49.2	46.9	53.9	
08:00	15:00	52.9	53.0	47.0	77.6	
08:15	15:00	51.2	49.7	46.4	74.7	
08:30	15:00	48.0	49.1	46.7	53.2	
08:45	15:00	49.4	50.7	46.6	63.9	
09:00	15:00	51.0	50.9	46.9	72.6	
09:15	15:00	50.7	50.3	46.7	67.2	
09:30	15:00	48.3	49.9	46.4	54.8	
09:45	15:00	47.4	48.8	45.8	52.9	
10:00	15:00	48.8	49.3	46.5	70.0	
10:15	15:00	48.2	49.2	46.5	64.7	
10:30	15:00	48.7	49.8	46.9	60.9	
10:45	15:00	52.0	53.5	47.5	75.4	
11:00	15:00	52.6	53.7	50.1	72.4	
11:15	15:00	52.6	53.6	49.6	71.1	
11:30	15:00	52.8	53.7	49.6	75.8	
11:45	15:00	50.3	52.6	47.2	65.8	
12:00	15:00	50.3	51.6	47.8	67.4	
12:15	15:00	50.2	51.4	48.2	62.6	
12:30	15:00	49.9	51.5	47.8	66.1	
12:45	15:00	49.1	50.2	47.6	59.8	
13:00	15:00	51.2	52.9	48.2	71.3	
13:15	15:00	52.7	54.0	50.0	71.3	
13:30	15:00	52.0	53.6	49.9	68.1	
13:45	15:00	53.4	54.7	49.5	72.3	
14:00	15:00	53.2	54.3	50.6	72.3	
14:15	15:00	51.0	52.4	49.0	67.1	
14:30	15:00	51.4	52.8	49.8	70.1	
14:45	15:00	50.6	51.4	48.9	69.5	
Average 0700-1500		50.7	51.8	48.0	53-78	

Noise Survey Results

Date: Tuesday 15th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP2 (Common Lane) SW**
 Instrumentation: Cirrus 171A Real Time Analyser (G304789)
 Calibration: 94dB

TABLE 29

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmaz (dB)	Observations
15:00	15:00	49.9	51.0	48.5	61.9	
15:15	15:00	50.3	50.9	48.3	63.8	
15:30	15:00	50.2	51.0	48.7	64.6	
15:45	15:00	51.0	52.5	49.0	62.1	
16:00	15:00	51.2	52.8	49.2	60.8	
16:15	15:00	53.2	55.6	49.1	67.9	
16:30	15:00	52.9	54.7	49.4	67.6	
16:45	15:00	53.7	52.4	48.5	76.4	
17:00	15:00	50.4	51.4	48.5	70.5	
17:15	15:00	49.4	50.8	47.7	57.7	
17:30	15:00	49.1	50.6	47.0	60.2	
17:45	15:00	48.4	49.6	47.0	62.1	
18:00	15:00	51.6	52.2	47.7	66.1	
18:15	15:00	48.9	49.3	46.1	74.1	
18:30	15:00	48.1	49.4	46.4	60.0	
18:45	15:00	49.0	50.6	46.7	58.2	
19:00	15:00	49.8	51.3	46.5	68.8	Rain
19:15	15:00	47.2	48.3	45.9	56.4	Rain
19:30	15:00	46.7	47.9	45.1	55.0	Rain
19:45	15:00	45.6	46.7	44.2	51.7	Rain
20:00	15:00	46.7	47.8	43.9	67.5	Rain
20:15	15:00	49.5	49.5	44.6	70.3	Rain
20:30	15:00	46.8	48.2	44.9	61.2	Rain
20:45	15:00	48.1	49.6	45.6	65.1	Rain
21:00	15:00	47.2	48.6	44.5	67.2	Rain
21:15	15:00	46.1	47.4	43.7	62.8	Rain
21:30	15:00	47.8	50.4	42.5	63.5	Rain
21:45	15:00	45.6	47.1	43.0	63.4	Rain
22:00	15:00	43.0	44.2	40.6	61.7	Rain
22:15	15:00	44.9	46.5	42.7	60.3	Rain
22:30	15:00	46.4	48.0	41.8	64.2	Rain
22:45	15:00	43.9	45.2	41.9	61.0	Rain
Average 1500-2300		50.7	51.9	48.1	58-76	Excluding Rain

Noise Survey Results

Date: Tuesday 15th - Wednesday 16th July 2025

TABLE 30

Location: Weeland Road, Knottingley

Client: Axis

Project: Knottingley Waste to Resource Park

Data: **Baseline Sound Survey: Position NMP2 (Common Lane) SW**

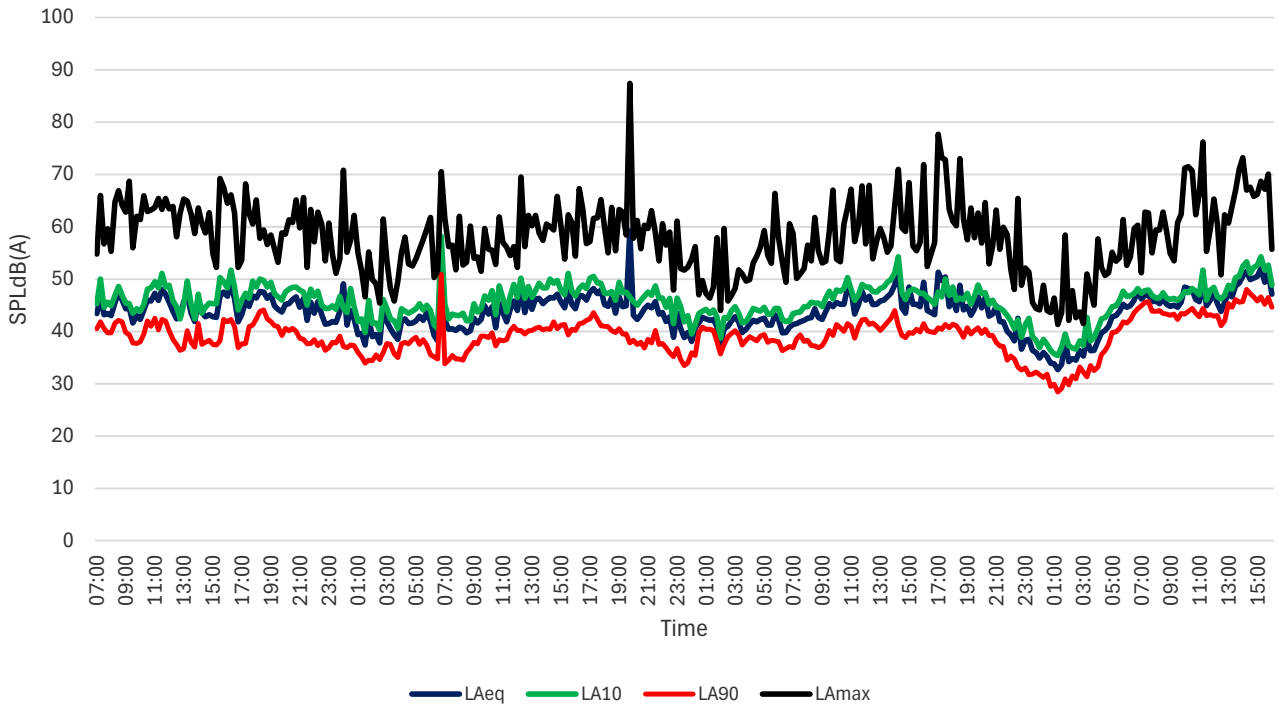
Instrumentation: Cirrus 171A Real Time Analyser (G304789)

Calibration: 94dB

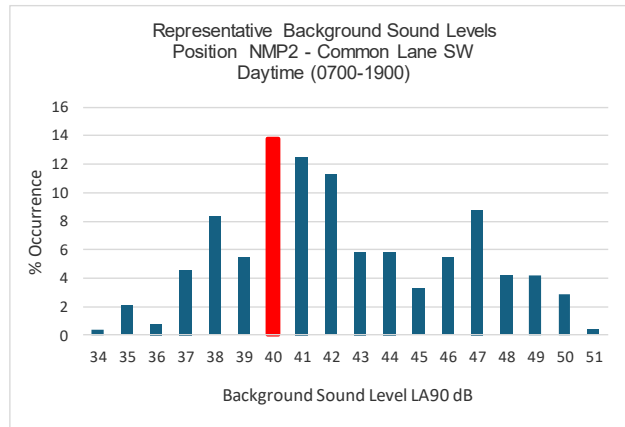
Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	47.4	48.6	43.9	68.8	Rain
23:15	15:00	43.9	45.4	41.8	62.1	Rain
23:30	15:00	41.9	42.8	40.1	64.8	Rain
23:45	15:00	41.9	43.1	40.1	58.1	Rain
00:00	15:00	41.4	42.8	39.6	57.3	
00:15	15:00	41.1	42.6	39.0	56.2	
00:30	15:00	46.7	51.0	39.5	61.9	
00:45	15:00	41.4	43.3	38.6	54.4	
01:00	15:00	41.6	42.5	39.3	68.3	
01:15	15:00	42.4	44.1	40.2	52.4	
01:30	15:00	41.0	42.3	39.2	52.7	
01:45	15:00	41.6	43.1	39.6	56.2	
02:00	15:00	42.7	44.1	40.8	59.1	
02:15	15:00	42.7	44.1	40.6	56.7	
02:30	15:00	42.1	43.5	40.3	50.9	
02:45	15:00	43.1	45.0	40.2	50.9	
03:00	15:00	47.5	47.0	40.6	66.6	
03:15	15:00	46.0	45.5	41.1	64.3	
03:30	15:00	42.8	44.2	41.0	48.5	
03:45	15:00	43.1	44.6	41.3	49.9	
04:00	15:00	43.5	44.9	41.6	54.4	
04:15	15:00	43.7	45.2	41.6	51.4	
04:30	15:00	44.5	45.5	42.5	61.1	
04:45	15:00	45.3	47.1	43.1	58.3	
05:00	15:00	45.4	46.7	43.2	65.4	
05:15	15:00	46.6	47.7	43.6	59.0	
05:30	15:00	46.0	47.6	44.0	53.1	
05:45	15:00	47.2	48.2	45.1	56.7	
06:00	15:00	48.6	49.4	47.3	58.9	
06:15	15:00	51.2	52.4	48.2	61.1	
06:30	15:00	51.4	53.1	46.7	63.4	
06:45	15:00	50.8	52.1	47.7	61.1	
Average 2300-0700		45.9	47.3	42.9	49-68	Excluding Rain
Average 0700-2300		50.7	51.8	48.0	53-78	

Overall Average	44.1	45.7	41	41-71	Excluding Rain
Overall Average	47.3	48.7	43.3	48-87	Excluding Rain
Overall Average 0700-1900	47.6	49.1	43.9	50-78	
Overall Average 1900-2300	45.9	46.5	39.3	48-87	

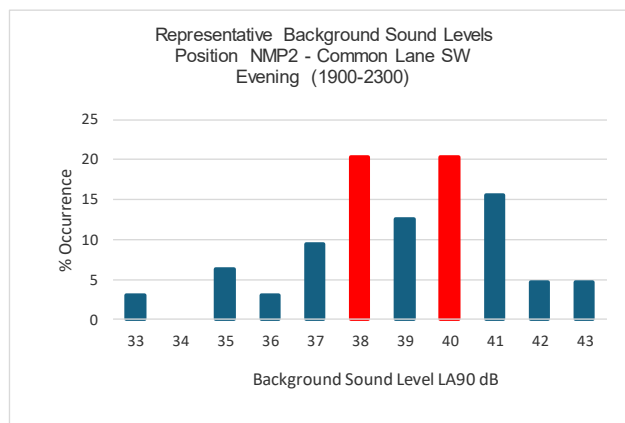
Background Sound Survey: Position NMP2 - Common Lane SW Friday 11th - Wednesday 16th July 2025



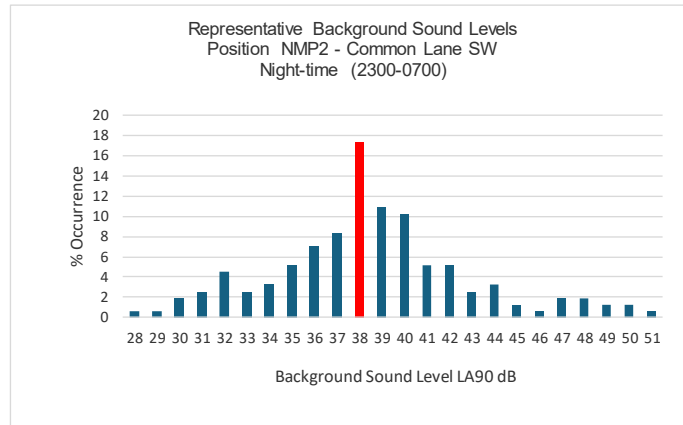
LA90	% Occurrence	
34	0.4	
35	2.1	
36	0.8	
37	4.6	
38	8.3	
39	5.4	
40	13.8	Mode
41	12.5	
42	11.3	Median
43	5.8	
44	5.8	Average
45	3.3	
46	5.4	
47	8.8	
48	4.2	
49	4.2	
50	2.9	
51	0.4	



LA90	% Occurrence	
33	3.1	
34	0.0	
35	6.3	
36	3.1	
37	9.4	
38	20.3	Mode
39	12.5	Median/Ave.
40	20.3	Mode
41	15.6	
42	4.7	
43	4.7	



LA90	% Occurrence	
28	0.6	
29	0.6	
30	1.9	
31	2.6	
32	4.5	
33	2.6	
34	3.2	
35	5.1	
36	7.1	
37	8.3	
38	17.3	Median
39	10.9	Mode
40	10.3	
41	5.1	Average
42	5.1	
43	2.6	
44	3.2	
45	1.3	
46	0.6	
47	1.9	
48	1.9	
49	1.3	
50	1.3	
51	0.6	



Noise Survey Results

Date: Friday 11th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP3 (Weeland Road) W**
 Instrumentation: Cirrus 171A Real Time Analyser (G061253)
 Calibration: 94dB

TABLE 31

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	56.7	60.6	44.7	69.1	Local road traffic noise
07:15	15:00	58.0	62.0	45.6	69.4	
07:30	15:00	58.0	61.9	44.7	69.5	
07:45	15:00	58.6	62.5	44.7	71.2	
08:00	15:00	64.4	61.9	44.4	86.5	
08:15	15:00	57.0	61.4	41.2	70.2	
08:30	15:00	57.7	61.6	42.4	73.5	
08:45	15:00	57.5	61.5	44.1	70.0	
09:00	15:00	59.8	61.5	42.9	81.6	
09:15	15:00	55.9	60.3	42.2	68.1	
09:30	15:00	56.3	59.8	43.0	70.6	
09:45	15:00	57.7	61.5	44.3	71.6	
10:00	15:00	56.6	60.5	44.9	69.4	
10:15	15:00	59.1	60.8	44.1	84.4	
10:30	15:00	56.7	60.6	44.8	66.8	
10:45	15:00	57.0	60.9	45.0	69.9	
11:00	15:00	58.0	61.3	44.5	71.9	
11:15	15:00	55.9	59.8	43.2	69.4	
11:30	15:00	55.8	59.8	43.6	69.5	
11:45	15:00	59.0	59.8	44.9	84.1	
12:00	15:00	57.7	61.4	44.7	70.7	
12:15	15:00	56.8	60.4	44.8	70.2	
12:30	15:00	57.3	60.6	43.6	74.7	
12:45	15:00	56.7	60.1	43.8	70.6	
13:00	15:00	56.7	59.9	44.9	71.7	
13:15	15:00	57.5	60.6	45.5	76.9	
13:30	15:00	57.1	60.5	44.7	72.0	
13:45	15:00	56.7	60.1	45.7	69.6	
14:00	15:00	57.4	60.8	45.4	69.9	
14:15	15:00	57.9	61.3	45.4	71.9	
14:30	15:00	58.7	61.9	45.9	70.5	
14:45	15:00	57.0	60.8	44.6	73.7	
Average 0700-1500		57.6	60.9	44.3	67-87	

Noise Survey Results

Date: Friday 11th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP3 (Weeland Road) W**
 Instrumentation: Cirrus 171A Real Time Analyser (G061253)
 Calibration: 94dB

TABLE 32

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	58.3	61.7	44.9	72.3	
15:15	15:00	56.8	60.9	42.7	70.1	
15:30	15:00	56.9	60.2	42.8	69.3	
15:45	15:00	57.3	61.4	43.1	71.5	
16:00	15:00	57.2	60.7	43.8	68.3	
16:15	15:00	57.7	61.5	44.2	71.5	
16:30	15:00	57.6	60.8	43.2	77.9	
16:45	15:00	58.3	61.1	43.0	77.2	
17:00	15:00	57.5	61.6	41.9	69.3	
17:15	15:00	58.1	60.9	42.5	79.6	
17:30	15:00	56.6	60.3	42.7	68.8	
17:45	15:00	59.8	61.1	44.1	85.7	
18:00	15:00	59.1	61.8	43.0	76.6	
18:15	15:00	57.1	61.1	43.2	71.9	
18:30	15:00	57.5	61.0	43.3	74.1	
18:45	15:00	56.9	60.1	41.8	78.2	
19:00	15:00	57.2	61.5	42.8	72.5	
19:15	15:00	55.8	60.1	41.2	68.0	
19:30	15:00	58.9	61.3	41.6	80.6	
19:45	15:00	56.0	60.5	40.6	70.2	
20:00	15:00	60.8	61.2	40.9	88.3	
20:15	15:00	55.8	59.4	39.6	76.4	
20:30	15:00	54.2	58.6	39.6	68.4	
20:45	15:00	56.3	60.1	40.7	72.5	
21:00	15:00	55.5	59.5	39.4	74.4	
21:15	15:00	54.3	59.0	40.0	68.3	
21:30	15:00	52.9	56.4	39.0	69.4	
21:45	15:00	52.2	55.7	39.0	69.0	
22:00	15:00	53.6	58.2	39.5	69.1	
22:15	15:00	52.5	56.3	38.7	65.8	
22:30	15:00	51.9	55.4	38.7	68.5	
22:45	15:00	53.4	57.4	38.7	68.9	
Average 1500-2300		56.8	60.2	41.9	66-88	

Noise Survey Results

Date: Friday 11th - Saturday 12th July 2025

TABLE 33

Location: Weeland Road, Knottingley

Client: Axis

Project: Knottingley Waste to Resource Park

Data: **Baseline Sound Survey: Position NMP3 (Weeland Road) W**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	54.8	58.4	39.4	74.2	
23:15	15:00	48.8	51.7	38.9	63.9	
23:30	15:00	49.7	51.4	38.8	69.1	
23:45	15:00	49.9	52.5	39.4	66.8	
00:00	15:00	48.6	49.7	39.3	66.4	
00:15	15:00	45.3	45.8	39.2	63.9	
00:30	15:00	49.6	48.9	39.0	69.8	
00:45	15:00	46.1	47.2	38.8	64.7	
01:00	15:00	50.7	43.7	38.8	79.8	
01:15	15:00	48.9	49.0	38.7	68.5	
01:30	15:00	47.9	49.8	38.8	63.7	
01:45	15:00	41.4	42.2	38.7	44.0	
02:00	15:00	45.9	43.9	38.7	65.2	
02:15	15:00	44.8	43.0	38.8	66.6	
02:30	15:00	41.2	41.7	38.6	44.2	
02:45	15:00	41.6	42.2	38.9	47.1	
03:00	15:00	46.2	44.5	38.9	67.3	
03:15	15:00	47.7	44.7	39.2	68.7	
03:30	15:00	47.4	43.9	39.1	68.1	
03:45	15:00	48.7	47.9	39.2	69.5	
04:00	15:00	45.9	44.2	39.3	63.8	
04:15	15:00	48.5	48.4	39.6	68.1	
04:30	15:00	48.3	48.5	39.4	64.9	
04:45	15:00	51.0	53.0	39.9	67.2	
05:00	15:00	52.3	56.0	39.1	70.0	
05:15	15:00	50.8	53.4	38.6	68.3	
05:30	15:00	53.9	57.8	39.0	69.9	
05:45	15:00	54.1	58.3	40.2	69.0	
06:00	15:00	52.5	55.4	39.4	69.3	
06:15	15:00	52.4	52.5	39.5	80.2	
06:30	15:00	52.3	56.1	40.0	71.6	
06:45	15:00	52.7	56.0	39.6	70.7	
Average 2300-0700		50.0	52.3	39.1	44-80	
Average 0700-2300		57.4	60.6	43.3	66-88	

Noise Survey Results

Date: Saturday 12th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP3 (Weeland Road) W**
 Instrumentation: Cirrus 171A Real Time Analyser (G061253)
 Calibration: 94dB

TABLE 34

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	52.5	57.0	38.8	68.2	
07:15	15:00	54.5	59.0	38.7	69.3	
07:30	15:00	53.9	58.4	38.5	67.9	
07:45	15:00	54.1	58.7	38.1	66.5	
08:00	15:00	55.5	59.6	37.8	71.5	
08:15	15:00	58.8	61.1	39.8	82.3	
08:30	15:00	56.4	60.8	38.9	71.8	
08:45	15:00	56.4	60.8	38.9	68.4	
09:00	15:00	57.2	61.3	41.6	68.6	
09:15	15:00	57.2	61.0	43.1	69.4	
09:30	15:00	59.9	62.4	44.8	81.5	
09:45	15:00	58.6	62.5	44.9	70.9	
10:00	15:00	58.2	62.4	44.6	70.6	
10:15	15:00	58.9	62.9	46.7	72.1	
10:30	15:00	60.1	63.8	47.7	68.6	
10:45	15:00	58.6	63.0	45.9	70.8	
11:00	15:00	59.7	63.1	45.0	74.9	
11:15	15:00	58.1	62.1	45.3	67.0	
11:30	15:00	59.2	63.1	44.3	72.8	
11:45	15:00	59.2	63.2	44.9	70.6	
12:00	15:00	58.8	62.5	47.2	69.9	
12:15	15:00	59.6	63.6	47.5	69.2	
12:30	15:00	58.3	62.2	45.6	69.8	
12:45	15:00	58.9	62.6	48.0	71.8	
13:00	15:00	58.7	62.8	47.9	71.1	
13:15	15:00	63.4	64.1	49.5	85.9	
13:30	15:00	59.1	62.7	47.9	71.6	
13:45	15:00	59.5	63.1	48.4	72.3	
14:00	15:00	63.7	63.6	46.6	88.7	
14:15	15:00	59.0	63.0	48.0	67.6	
14:30	15:00	57.4	61.5	46.4	69.1	
14:45	15:00	58.3	62.2	44.5	80.1	
Average 0700-1500		58.2	61.9	44.2	67-89	

Noise Survey Results

Date: Saturday 12th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP3 (Weeland Road) W**
 Instrumentation: Cirrus 171A Real Time Analyser (G061253)
 Calibration: 94dB

TABLE 35

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	59.4	63.5	47.2	72.4	
15:15	15:00	59.0	63.3	45.7	68.6	
15:30	15:00	58.8	63.0	45.9	69.7	
15:45	15:00	59.6	63.9	47.3	74.1	
16:00	15:00	59.0	63.1	46.1	75.6	
16:15	15:00	58.5	62.7	41.4	71.9	
16:30	15:00	57.9	62.3	41.9	68.4	
16:45	15:00	58.8	62.9	43.3	74.2	
17:00	15:00	67.7	64.0	41.9	93.0	
17:15	15:00	59.3	63.6	44.1	70.4	
17:30	15:00	58.5	62.8	42.2	72.3	
17:45	15:00	58.1	62.1	44.3	68.8	
18:00	15:00	58.1	62.6	41.3	69.5	
18:15	15:00	57.1	61.9	41.2	69.1	
18:30	15:00	57.9	61.7	43.7	71.3	
18:45	15:00	55.9	60.2	41.8	70.7	
19:00	15:00	56.2	60.2	40.3	72.0	
19:15	15:00	57.1	61.3	41.7	73.1	
19:30	15:00	55.5	59.8	40.4	70.1	
19:45	15:00	56.5	61.3	40.7	67.8	
20:00	15:00	55.4	60.0	40.8	68.9	
20:15	15:00	57.1	60.1	39.8	79.4	
20:30	15:00	56.1	61.0	40.4	69.1	
20:45	15:00	54.7	59.1	39.8	71.9	
21:00	15:00	56.3	60.9	39.9	71.7	
21:15	15:00	55.1	59.6	39.5	70.6	
21:30	15:00	54.5	58.8	40.4	67.5	
21:45	15:00	52.4	56.8	40.6	67.9	
22:00	15:00	53.1	55.6	41.1	68.6	
22:15	15:00	53.4	57.6	41.0	69.5	
22:30	15:00	52.1	55.8	40.1	68.7	
22:45	15:00	57.8	57.3	39.1	86.1	
Average 1500-2300		58.4	61.4	42.7	68-93	

Noise Survey Results

Date: Saturday 12th - Sunday 13th July 2025

TABLE 36

Location: Weeland Road, Knottingley

Client: Axis

Project: Knottingley Waste to Resource Park

Data: **Baseline Sound Survey: Position NMP3 (Weeland Road) W**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	51.9	56.1	42.0	67.9	
23:15	15:00	51.2	53.2	42.0	72.4	
23:30	15:00	51.8	54.7	42.6	69.4	
23:45	15:00	49.5	50.0	40.4	65.9	
00:00	15:00	45.7	45.7	39.5	61.3	
00:15	15:00	48.8	49.6	38.9	66.5	
00:30	15:00	46.4	46.2	39.5	65.3	
00:45	15:00	49.1	47.7	39.9	71.8	
01:00	15:00	44.8	45.0	39.1	62.7	
01:15	15:00	43.5	45.4	39.4	49.2	
01:30	15:00	45.5	45.6	39.0	60.4	
01:45	15:00	44.8	44.7	38.9	62.3	
02:00	15:00	45.3	44.9	38.8	61.9	
02:15	15:00	46.8	46.1	38.2	64.3	
02:30	15:00	48.7	47.4	38.1	68.9	
02:45	15:00	47.3	46.6	38.6	64.9	
03:00	15:00	46.5	45.0	38.6	66.4	
03:15	15:00	41.7	41.9	38.0	57.2	
03:30	15:00	41.7	42.7	38.5	48.0	
03:45	15:00	42.3	43.6	38.9	48.8	
04:00	15:00	44.3	43.8	38.7	62.6	
04:15	15:00	44.8	44.6	39.2	64.4	
04:30	15:00	47.2	47.3	39.5	63.7	
04:45	15:00	46.5	46.4	39.7	63.4	
05:00	15:00	50.4	50.8	39.6	70.3	
05:15	15:00	51.0	53.5	39.7	71.0	
05:30	15:00	52.5	56.6	39.9	67.6	
05:45	15:00	53.3	57.6	39.9	69.0	
06:00	15:00	52.8	57.5	40.5	67.9	
06:15	15:00	61.1	60.0	40.4	83.3	
06:30	15:00	51.6	54.7	41.0	67.4	
06:45	15:00	50.6	54.3	40.6	70.5	
Average 2300-0700		50.6	52.1	39.7	48-83	
Average 0700-2300		58.6	61.8	44.2	67-93	

Noise Survey Results

Date: Sunday 13th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP3 (Weeland Road) W**
 Instrumentation: Cirrus 171A Real Time Analyser (G061253)
 Calibration: 94dB

TABLE 37

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	50.2	53.3	40.3	64.0	
07:15	15:00	53.7	56.9	40.4	71.3	
07:30	15:00	51.5	54.6	40.6	68.2	
07:45	15:00	50.5	52.5	40.2	66.3	
08:00	15:00	54.0	56.8	39.5	72.3	
08:15	15:00	53.2	57.0	40.1	68.8	
08:30	15:00	55.4	59.4	41.3	69.1	
08:45	15:00	53.7	57.4	41.4	73.4	
09:00	15:00	55.2	59.3	42.8	70.4	
09:15	15:00	55.4	58.4	42.1	75.2	
09:30	15:00	57.6	60.5	43.6	79.1	
09:45	15:00	58.2	62.1	45.6	72.7	
10:00	15:00	57.3	61.2	44.6	70.1	
10:15	15:00	59.0	61.8	45.6	73.8	
10:30	15:00	58.9	61.8	46.9	77.3	
10:45	15:00	58.2	61.5	45.5	75.6	
11:00	15:00	57.9	61.4	46.7	70.6	
11:15	15:00	57.7	61.4	46.1	71.8	
11:30	15:00	57.8	61.6	46.2	69.8	
11:45	15:00	58.4	62.1	45.1	70.1	
12:00	15:00	64.6	61.9	47.8	94.3	
12:15	15:00	57.9	61.6	45.9	70.8	
12:30	15:00	58.8	62.5	46.1	69.1	
12:45	15:00	58.3	62.3	45.3	70.1	
13:00	15:00	58.6	62.5	45.2	73.2	
13:15	15:00	58.6	62.1	45.7	77.1	
13:30	15:00	57.8	61.4	46.0	73.2	
13:45	15:00	59.7	63.0	50.1	69.2	
14:00	15:00	60.3	63.7	50.0	78.5	
14:15	15:00	58.0	62.1	46.8	71.0	
14:30	15:00	58.5	62.4	47.8	72.9	
14:45	15:00	60.5	63.1	46.8	83.2	
Average 0700-1500		58.0	61.0	45.5	64-94	

Noise Survey Results

Date: Sunday 13th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP3 (Weeland Road) W**
 Instrumentation: Cirrus 171A Real Time Analyser (G061253)
 Calibration: 94dB

TABLE 38

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	58.8	62.7	45.2	74.1	
15:15	15:00	57.7	62.3	44.1	69.7	
15:30	15:00	57.9	62.3	44.7	69.0	
15:45	15:00	59.4	63.6	45.9	70.4	
16:00	15:00	58.5	62.6	45.3	69.5	
16:15	15:00	58.8	62.8	44.5	75.0	
16:30	15:00	57.5	61.9	45.4	69.1	
16:45	15:00	57.6	62.1	45.8	67.3	
17:00	15:00	57.6	61.8	45.4	73.4	
17:15	15:00	58.1	62.8	44.5	71.7	
17:30	15:00	58.6	62.9	44.8	69.7	
17:45	15:00	59.1	63.5	45.2	69.4	
18:00	15:00	59.2	63.6	45.0	69.0	
18:15	15:00	57.1	61.6	44.5	70.1	
18:30	15:00	57.7	61.6	44.3	72.1	
18:45	15:00	56.4	60.8	44.3	68.8	
19:00	15:00	56.9	61.2	44.3	71.5	
19:15	15:00	56.3	60.6	43.7	70.9	
19:30	15:00	55.8	60.0	43.5	68.3	
19:45	15:00	55.1	59.2	43.1	69.5	
20:00	15:00	57.0	61.4	42.8	71.1	
20:15	15:00	55.6	59.8	44.4	71.9	
20:30	15:00	55.5	60.2	41.6	73.0	
20:45	15:00	59.8	61.5	42.1	81.4	
21:00	15:00	54.1	58.5	41.7	69.7	
21:15	15:00	55.7	60.2	42.5	68.8	
21:30	15:00	52.3	55.6	40.3	68.8	
21:45	15:00	52.7	56.1	40.4	68.5	
22:00	15:00	52.7	56.8	40.7	67.5	
22:15	15:00	53.7	57.5	41.9	69.5	
22:30	15:00	53.9	56.8	42.1	72.4	
22:45	15:00	53.5	57.0	42.6	70.0	
Average 1500-2300		57.0	61.1	43.9	67-81	

Noise Survey Results

Date: Sunday 13th - Monday 14th July 2025

TABLE 39

Location: Weeland Road, Knottingley

Client: Axis

Project: Knottingley Waste to Resource Park

Data: **Baseline Sound Survey: Position NMP3 (Weeland Road) W**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	53.7	57.0	43.6	73.6	
23:15	15:00	50.8	51.7	43.2	67.0	
23:30	15:00	49.1	49.4	41.7	65.9	
23:45	15:00	48.0	48.9	42.3	64.6	
00:00	15:00	48.7	49.5	43.4	64.3	
00:15	15:00	49.3	52.9	41.9	63.1	
00:30	15:00	47.7	48.6	42.9	58.9	
00:45	15:00	51.0	51.2	42.8	67.4	
01:00	15:00	47.9	47.6	41.7	67.8	
01:15	15:00	47.8	51.5	41.1	64.9	
01:30	15:00	45.9	48.0	40.1	61.2	
01:45	15:00	47.3	44.8	40.0	66.7	
02:00	15:00	44.3	45.5	40.8	49.0	
02:15	15:00	46.5	46.9	41.4	65.1	
02:30	15:00	47.6	51.8	40.6	60.5	
02:45	15:00	47.8	49.5	41.0	65.8	
03:00	15:00	48.6	47.9	40.4	65.3	
03:15	15:00	49.1	48.6	42.3	69.5	
03:30	15:00	47.7	47.8	42.2	63.7	
03:45	15:00	48.1	47.8	41.2	67.1	
04:00	15:00	51.0	50.3	42.6	69.4	
04:15	15:00	52.6	53.3	44.2	72.9	
04:30	15:00	53.6	54.9	44.8	70.1	
04:45	15:00	54.8	57.8	45.2	71.1	
05:00	15:00	55.1	59.4	43.6	68.1	
05:15	15:00	56.7	61.4	44.3	69.0	
05:30	15:00	57.6	61.8	46.7	71.6	
05:45	15:00	58.5	62.8	47.3	72.0	
06:00	15:00	57.7	61.6	48.9	72.1	
06:15	15:00	57.4	61.1	48.4	69.4	
06:30	15:00	57.0	61.4	47.2	71.6	
06:45	15:00	57.5	61.9	44.6	70.4	
Average 2300-0700		53.1	56.6	43.9	49-74	
Average 0700-2300		57.5	61.1	44.7	64-94	

Noise Survey Results

Date: Monday 14th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP3 (Weeland Road) W**
 Instrumentation: Cirrus 171A Real Time Analyser (G061253)
 Calibration: 94dB

TABLE 40

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	57.3	61.7	43.6	74.4	
07:15	15:00	58.0	62.2	45.0	69.3	
07:30	15:00	58.9	62.8	44.9	71.0	
07:45	15:00	58.1	62.3	46.6	68.8	
08:00	15:00	57.9	62.1	45.4	70.1	
08:15	15:00	58.1	62.2	44.2	71.4	
08:30	15:00	57.2	61.5	42.8	70.4	
08:45	15:00	57.6	61.2	44.3	77.8	
09:00	15:00	57.4	61.1	46.1	66.8	
09:15	15:00	57.5	61.3	45.4	69.3	
09:30	15:00	57.0	60.8	44.9	70.2	
09:45	15:00	56.1	60.1	44.1	69.8	
10:00	15:00	56.8	60.9	44.7	69.1	
10:15	15:00	55.1	59.2	43.9	67.2	
10:30	15:00	56.6	60.6	44.7	70.5	
10:45	15:00	57.1	60.5	46.7	70.7	
11:00	15:00	57.4	60.6	43.7	76.3	
11:15	15:00	59.2	61.1	41.2	82.4	
11:30	15:00	59.9	60.3	41.5	84.5	
11:45	15:00	56.0	59.0	41.8	72.1	
12:00	15:00	54.9	58.2	40.3	73.6	
12:15	15:00	54.9	58.6	40.1	70.7	
12:30	15:00	53.5	57.4	42.0	66.4	
12:45	15:00	61.1	59.5	41.5	86.6	
13:00	15:00	57.3	59.7	42.5	79.7	
13:15	15:00	54.7	58.3	43.7	65.6	
13:30	15:00	55.6	59.3	41.3	71.7	
13:45	15:00	53.7	57.8	40.0	66.0	
14:00	15:00	53.9	57.9	42.0	66.4	
14:15	15:00	56.9	60.4	45.3	74.0	
14:30	15:00	55.1	59.0	43.6	74.1	
14:45	15:00	55.4	59.4	44.3	70.0	
Average 0700-1500		57.1	60.4	43.8	66-87	

Noise Survey Results

Date: Monday 14th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP3 (Weeland Road) W**
 Instrumentation: Cirrus 171A Real Time Analyser (G061253)
 Calibration: 94dB

TABLE 41

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	56.6	58.7	44.2	80.0	
15:15	15:00	56.4	59.0	45.7	75.1	
15:30	15:00	55.9	59.5	45.3	72.8	
15:45	15:00	54.5	58.5	45.4	67.7	
16:00	15:00	56.0	59.7	47.2	70.8	
16:15	15:00	55.7	59.5	46.8	67.6	
16:30	15:00	56.0	59.6	46.8	68.3	
16:45	15:00	56.2	59.5	47.1	73.6	
17:00	15:00	55.1	58.8	45.4	65.1	
17:15	15:00	56.3	60.1	43.8	71.5	
17:30	15:00	54.9	59.3	41.4	68.8	
17:45	15:00	55.8	59.3	43.0	71.4	
18:00	15:00	55.8	60.1	44.0	69.7	
18:15	15:00	55.3	59.1	44.0	67.4	
18:30	15:00	54.1	57.7	41.7	66.6	
18:45	15:00	53.0	57.6	40.8	67.9	
19:00	15:00	53.3	57.8	40.8	65.2	
19:15	15:00	55.8	57.3	41.7	76.9	
19:30	15:00	56.8	56.9	41.4	78.5	
19:45	15:00	53.5	57.8	41.1	65.8	
20:00	15:00	52.4	56.4	41.4	67.4	
20:15	15:00	53.9	57.4	41.6	75.9	
20:30	15:00	53.0	56.6	41.4	68.1	
20:45	15:00	51.9	55.1	41.7	66.9	
21:00	15:00	52.1	56.4	42.3	65.8	
21:15	15:00	50.8	54.4	41.1	64.8	
21:30	15:00	53.2	56.7	41.4	68.6	
21:45	15:00	52.5	56.1	41.6	68.3	
22:00	15:00	50.5	54.3	41.5	63.8	
22:15	15:00	50.2	53.6	40.1	65.7	
22:30	15:00	49.3	51.5	39.1	68.9	
22:45	15:00	50.5	52.3	39.5	71.2	
Average 1500-2300		54.4	57.8	43.4	64-80	

Noise Survey Results

Date: Monday 14th - Tuesday 15th July 2025

TABLE 42

Location: Weeland Road, Knottingley

Client: Axis

Project: Knottingley Waste to Resource Park

Data: **Baseline Sound Survey: Position NMP3 (Weeland Road) W**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	50.3	52.2	40.5	68.2	
23:15	15:00	49.2	52.4	40.7	62.6	
23:30	15:00	55.2	46.7	40.2	84.2	
23:45	15:00	45.2	44.8	39.9	63.7	
00:00	15:00	45.7	46.2	40.2	62.3	
00:15	15:00	43.6	44.2	39.8	58.6	
00:30	15:00	47.6	50.2	39.9	67.6	
00:45	15:00	45.3	44.8	40.1	64.2	
01:00	15:00	46.7	45.3	40.3	65.1	
01:15	15:00	47.7	48.6	40.0	68.1	
01:30	15:00	46.2	45.8	40.1	67.7	
01:45	15:00	48.0	45.6	39.5	64.3	
02:00	15:00	46.3	46.1	40.3	64.5	
02:15	15:00	43.4	44.4	40.2	48.1	
02:30	15:00	45.8	45.3	40.2	61.9	
02:45	15:00	44.4	44.3	39.9	60.4	
03:00	15:00	46.3	47.0	40.1	61.9	
03:15	15:00	46.0	48.3	39.8	63.7	
03:30	15:00	47.8	45.3	40.0	69.4	
03:45	15:00	46.8	46.8	40.0	66.7	
04:00	15:00	45.4	45.3	40.3	62.6	
04:15	15:00	49.9	51.7	41.9	64.3	
04:30	15:00	50.1	51.8	41.8	67.0	
04:45	15:00	49.3	52.4	41.8	63.9	
05:00	15:00	54.1	57.9	42.7	69.0	
05:15	15:00	54.5	58.2	44.3	72.5	
05:30	15:00	55.5	58.7	45.6	78.9	
05:45	15:00	54.7	58.8	44.8	71.4	
06:00	15:00	54.8	57.4	45.7	74.6	
06:15	15:00	54.5	57.6	45.5	77.4	
06:30	15:00	54.4	58.3	45.9	67.5	
06:45	15:00	53.6	57.9	45.7	64.9	
Average 2300-0700		50.7	53.2	42.1	48-84	
Average 0700-2300		55.9	59.3	43.6	64-87	

Noise Survey Results

Date: Tuesday 15th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP3 (Weeland Road) W**
 Instrumentation: Cirrus 171A Real Time Analyser (G061253)
 Calibration: 94dB

TABLE 43

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	55.5	58.8	44.5	72.5	
07:15	15:00	55.4	59.9	44.0	68.8	
07:30	15:00	55.2	59.5	44.1	67.9	
07:45	15:00	54.7	58.8	44.0	66.6	
08:00	15:00	54.7	59.4	43.6	65.7	
08:15	15:00	54.8	58.5	45.0	66.4	
08:30	15:00	60.5	59.0	45.0	85.9	
08:45	15:00	55.9	59.3	44.8	75.7	
09:00	15:00	54.4	58.1	44.6	67.2	
09:15	15:00	55.3	58.8	45.0	69.3	
09:30	15:00	54.2	58.1	43.9	66.5	
09:45	15:00	55.1	59.0	44.3	71.6	
10:00	15:00	55.1	58.6	44.1	67.5	
10:15	15:00	56.4	59.8	43.9	72.9	
10:30	15:00	57.1	60.0	45.3	73.1	
10:45	15:00	56.1	59.9	45.2	70.4	
11:00	15:00	54.7	58.3	43.9	72.4	
11:15	15:00	55.4	59.1	44.4	70.5	
11:30	15:00	56.6	60.0	44.4	72.9	
11:45	15:00	55.0	58.7	43.1	71.8	
12:00	15:00	56.8	59.3	43.5	82.9	
12:15	15:00	54.8	59.2	43.4	67.1	
12:30	15:00	55.6	58.9	44.0	72.4	
12:45	15:00	54.5	58.4	44.0	68.9	
13:00	15:00	55.9	59.2	44.1	73.0	
13:15	15:00	54.6	58.7	43.7	66.3	
13:30	15:00	53.9	58.0	43.3	68.5	
13:45	15:00	54.4	58.7	43.3	67.1	
14:00	15:00	56.2	60.1	45.6	70.3	
14:15	15:00	55.8	59.9	45.3	68.7	
14:30	15:00	54.7	58.6	44.5	66.5	
14:45	15:00	54.6	58.5	44.3	66.9	
Average 0700-1500		55.6	59.0	44.3	66-86	

Noise Survey Results

Date: Tuesday 15th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP3 (Weeland Road) W**
 Instrumentation: Cirrus 171A Real Time Analyser (G061253)
 Calibration: 94dB

TABLE 44

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	54.9	58.7	44.6	67.1	
15:15	15:00	55.0	59.1	44.2	66.2	
15:30	15:00	54.9	58.9	44.5	67.2	
15:45	15:00	55.8	59.4	45.0	70.2	
16:00	15:00	56.6	60.2	45.9	71.0	
16:15	15:00	58.4	59.8	45.0	81.7	
16:30	15:00	55.9	59.8	44.8	75.7	
16:45	15:00	56.3	60.4	45.0	68.3	
17:00	15:00	56.3	60.0	45.3	79.1	
17:15	15:00	56.8	60.3	46.0	71.6	
17:30	15:00	55.4	59.3	45.7	66.9	
17:45	15:00	54.8	58.2	44.5	73.9	
18:00	15:00	57.0	59.3	45.2	80.8	
18:15	15:00	54.5	58.1	44.4	68.3	
18:30	15:00	54.1	58.6	43.5	68.9	
18:45	15:00	55.9	58.6	43.4	77.9	
19:00	15:00	53.4	57.4	43.6	65.8	Rain
19:15	15:00	53.8	58.1	45.0	71.3	Rain
19:30	15:00	53.5	57.5	45.6	66.2	Rain
19:45	15:00	52.3	55.6	44.6	72.3	Rain
20:00	15:00	57.7	59.3	46.0	78.4	Rain
20:15	15:00	61.2	57.1	44.5	89.2	Rain
20:30	15:00	53.3	56.8	44.8	67.7	Rain
20:45	15:00	63.7	57.5	44.7	90.9	Rain
21:00	15:00	63.2	56.4	44.2	94.0	Rain
21:15	15:00	50.8	54.1	43.1	69.1	Rain
21:30	15:00	50.0	53.0	43.0	67.5	Rain
21:45	15:00	67.0	56.2	42.9	96.8	Rain
22:00	15:00	52.4	54.9	42.7	74.8	Rain
22:15	15:00	50.8	53.7	42.5	69.4	Rain
22:30	15:00	50.4	50.3	41.9	72.5	Rain
22:45	15:00	49.9	52.7	42.4	66.9	Rain
Average 1500-2300		55.9	59.3	44.8	66-82	Excluding Rain

Noise Survey Results

Date: Tuesday 15th - Wednesday 16th July 2025

TABLE 45

Location: Weeland Road, Knottingley

Client: Axis

Project: Knottingley Waste to Resource Park

Data: **Baseline Sound Survey: Position NMP3 (Weeland Road) W**

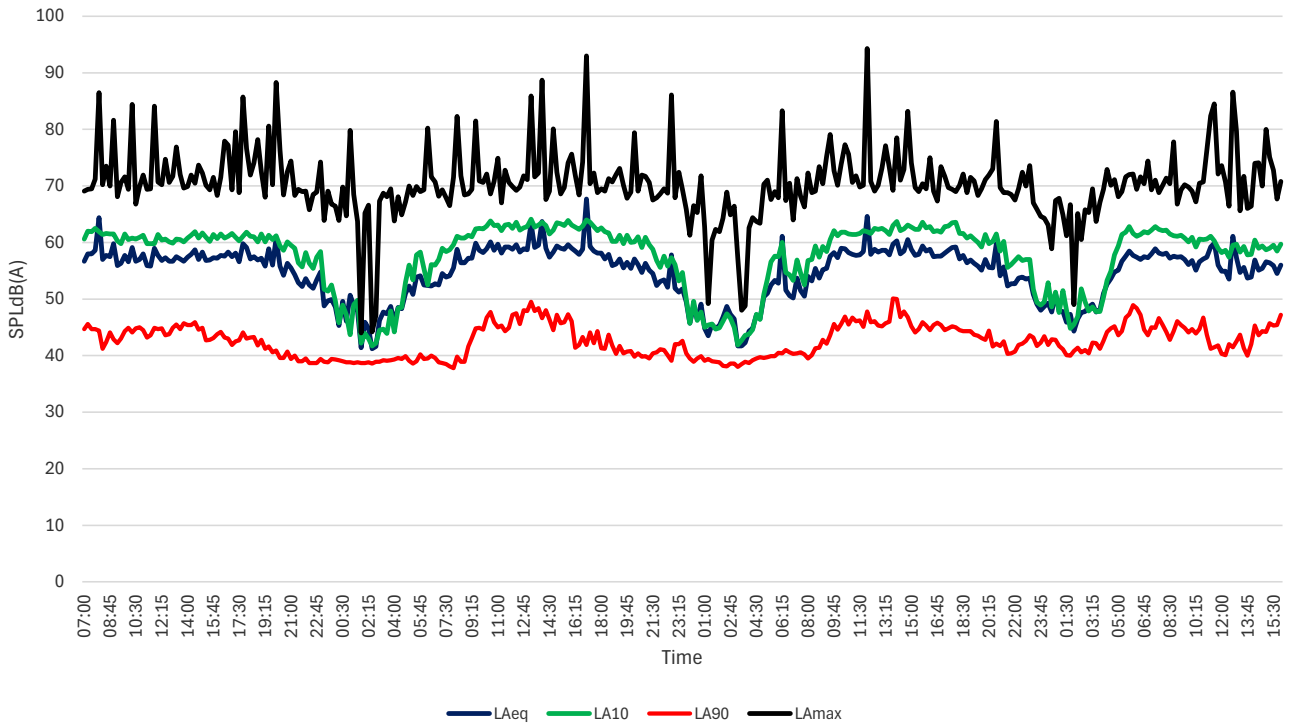
Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

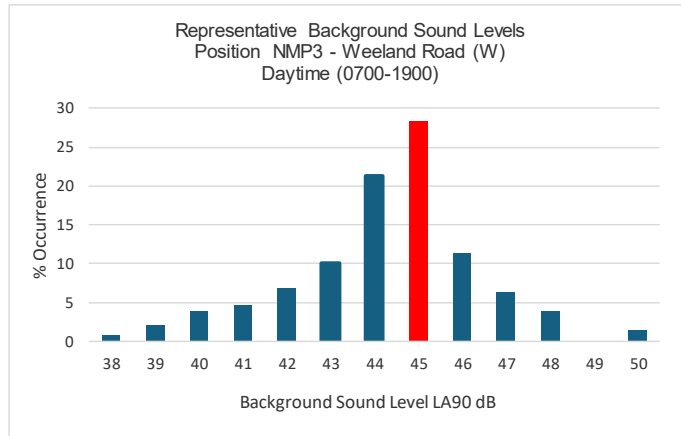
Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	47.2	49.5	39.8	64.4	Rain
23:15	15:00	50.5	52.0	40.1	67.8	Rain
23:30	15:00	43.6	44.0	39.6	61.6	Rain
23:45	15:00	46.5	45.3	39.7	67.5	Rain
00:00	15:00	48.2	45.6	39.4	70.4	
00:15	15:00	46.2	46.0	39.1	69.7	
00:30	15:00	45.7	46.0	39.5	64.3	
00:45	15:00	46.2	45.7	39.1	65.1	
01:00	15:00	42.3	43.2	39.3	50.6	
01:15	15:00	45.5	46.1	39.6	61.5	
01:30	15:00	43.3	44.0	39.2	58.4	
01:45	15:00	43.6	43.6	39.1	60.0	
02:00	15:00	44.4	43.8	38.9	62.2	
02:15	15:00	45.3	44.3	38.9	66.0	
02:30	15:00	43.2	44.4	39.0	56.3	
02:45	15:00	44.6	44.0	39.1	63.9	
03:00	15:00	45.6	43.9	39.0	63.4	
03:15	15:00	44.9	45.0	39.5	64.4	
03:30	15:00	43.7	44.0	39.8	56.7	
03:45	15:00	46.4	47.2	40.2	64.0	
04:00	15:00	48.0	49.0	40.1	67.0	
04:15	15:00	48.9	48.3	40.3	67.4	
04:30	15:00	51.3	53.3	41.0	73.4	
04:45	15:00	50.5	53.1	41.4	66.0	
05:00	15:00	52.5	56.1	42.6	66.8	
05:15	15:00	53.1	57.3	43.4	67.8	
05:30	15:00	55.0	58.8	43.7	69.7	
05:45	15:00	56.6	60.5	43.4	74.7	
06:00	15:00	53.6	57.6	44.1	68.3	
06:15	15:00	54.2	57.7	44.3	74.5	
06:30	15:00	53.1	57.0	44.2	66.4	
06:45	15:00	53.2	57.5	45.4	67.8	
Average 2300-0700		50.2	53.3	41.3	51-75	Excluding Rain
Average 0700-2300		55.7	59.2	44.5	66-86	

Overall Average	51.1	53.9	41.6	44-84	Excluding Rain
Overall Average	57.2	60.5	44.1	64-94	Excluding Rain
Overall Average 0700-1900	57.7	60.9	44.6	64-94	
Overall Average 1900-2300	55	58.6	41.1	64-88	

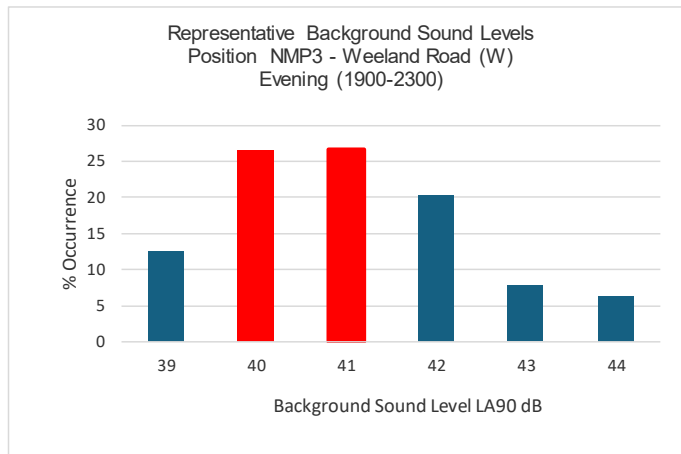
Background Sound Survey: Position NMP3 - Weeland Road (W)
Friday 11th - Wednesday 16th July 2025



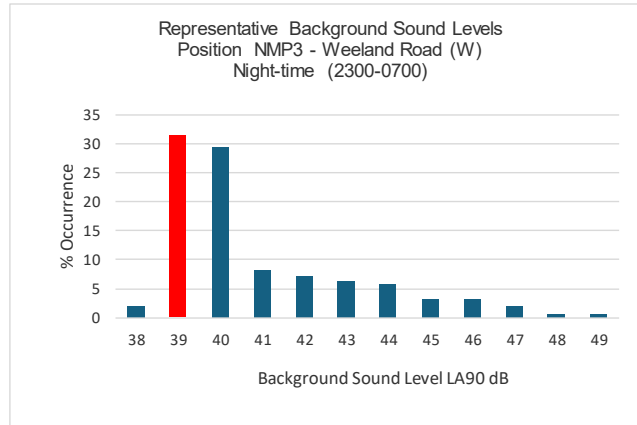
LA90	% Occurrence	
38	0.8	
39	2.1	
40	3.8	
41	4.6	
42	6.7	
43	10	
44	21.3	
45	28.3	Mode/Median/Av.
46	11.3	
47	6.3	
48	3.8	
49	0.0	
50	1.3	



LA90	% Occurrence	
39	12.5	
40	26.6	Mode
41	26.6	Mode/Median
42	20.3	
43	7.8	
44	6.3	



LA90	% Occurrence	
38	1.9	
39	31.4	Mode
40	29.5	Median
41	8.3	
42	7.1	Average
43	6.4	
44	5.8	
45	3.2	
46	3.2	
47	1.9	
48	0.6	
49	0.6	



Noise Survey Results

Date: Friday 11th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP4 (Marsh Lane) NW**
 Instrumentation: Cirrus 171A Real Time Analyser (G066350)
 Calibration: 94dB

TABLE 46

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
07:00	15:00	47.5	48.1	46.6	58.0	Industrial noise on the opposite side of the canal
07:15	15:00	49.2	49.9	46.4	73.6	
07:30	15:00	50.3	50.5	46.1	66.6	
07:45	15:00	48.4	48.3	46.0	65.6	
08:00	15:00	49.9	49.1	46.1	73.6	
08:15	15:00	52.9	48.3	45.7	72.1	
08:30	15:00	47.1	47.9	45.8	58.8	
08:45	15:00	47.0	47.1	45.3	65.8	
09:00	15:00	47.7	47.8	45.8	66.3	
09:15	15:00	50.1	48.1	46.1	78.7	
09:30	15:00	46.9	47.8	45.2	59.8	
09:45	15:00	46.4	47.0	45.2	61.9	
10:00	15:00	49.5	50.1	45.9	69.8	
10:15	15:00	46.9	47.9	45.2	62.1	
10:30	15:00	48.3	48.9	46.5	67.7	
10:45	15:00	48.8	49.8	45.7	67.7	
11:00	15:00	48.0	48.4	45.0	66.8	
11:15	15:00	48.8	49.7	45.8	67.6	
11:30	15:00	49.8	51.2	47.5	72.3	
11:45	15:00	48.9	49.3	45.7	69.2	
12:00	15:00	47.9	48.7	46.0	57.8	
12:15	15:00	54.2	49.6	46.2	79.3	
12:30	15:00	47.1	48.3	45.4	59.6	
12:45	15:00	48.0	48.1	45.0	63.8	
13:00	15:00	49.1	48.9	44.8	68.9	
13:15	15:00	48.1	48.8	45.8	64.1	
13:30	15:00	46.5	47.0	44.1	62.1	
13:45	15:00	47.0	48.0	45.3	61.9	
14:00	15:00	48.1	50.4	43.9	66.1	
14:15	15:00	47.6	47.6	45.3	64.7	
14:30	15:00	47.8	47.5	45.6	67.5	
14:45	15:00	47.9	48.4	45.1	66.6	
Average 0700-1500		48.5	48.6	45.6	58-79	

Noise Survey Results

Date: Friday 11th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP4 (Marsh Lane) NW**
 Instrumentation: Cirrus 171A Real Time Analyser (G066350)
 Calibration: 94dB

TABLE 47

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
15:00	15:00	45.7	46.6	44.3	58.2	
15:15	15:00	47.2	47.7	45.1	65.6	
15:30	15:00	46.0	46.6	44.6	62.2	
15:45	15:00	46.4	46.7	44.4	64.8	
16:00	15:00	48.1	48.8	45.2	68.5	
16:15	15:00	47.0	48.2	44.2	63.1	
16:30	15:00	46.1	46.7	44.2	63.0	
16:45	15:00	46.2	47.3	43.8	62.2	
17:00	15:00	46.8	48.8	43.9	63.5	
17:15	15:00	48.2	49.6	44.6	76.0	
17:30	15:00	52.9	47.5	43.7	80.6	
17:45	15:00	47.1	49.7	44.2	60.2	
18:00	15:00	48.4	50.2	46.0	63.6	
18:15	15:00	52.8	50.9	46.3	75.0	
18:30	15:00	47.9	49.3	46.0	60.0	
18:45	15:00	50.8	50.2	46.2	72.8	
19:00	15:00	48.7	49.9	45.9	71.7	
19:15	15:00	48.0	48.9	45.9	67.7	
19:30	15:00	47.6	48.7	46.3	58.5	
19:45	15:00	47.8	49.0	46.3	58.6	
20:00	15:00	49.1	50.3	46.5	67.1	
20:15	15:00	46.9	48.0	45.6	62.3	
20:30	15:00	47.7	48.8	45.6	63.0	
20:45	15:00	49.0	51.0	45.7	65.2	
21:00	15:00	50.9	49.7	45.9	74.8	
21:15	15:00	50.3	48.4	46.1	75.8	
21:30	15:00	47.3	47.5	46.1	67.0	
21:45	15:00	47.7	48.2	46.4	59.9	
22:00	15:00	46.9	47.4	46.3	53.6	
22:15	15:00	49.0	49.2	47.0	63.8	
22:30	15:00	47.3	47.6	46.8	51.7	
22:45	15:00	48.1	47.6	46.5	72.2	
Average 1500-2300		48.5	48.7	45.5	52-81	

Noise Survey Results

Date: Friday 11th - Saturday 12th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP4 (Marsh Lane) NW**
 Instrumentation: Cirrus 171A Real Time Analyser (G066350)
 Calibration: 94dB

TABLE 48

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	47.2	47.6	44.6	54.3	
23:15	15:00	47.1	47.5	44.5	53.3	
23:30	15:00	46.7	47.1	44.1	49.9	
23:45	15:00	47.0	47.4	44.4	51.0	
00:00	15:00	48.4	47.8	44.3	65.0	
00:15	15:00	46.9	47.4	44.3	49.5	
00:30	15:00	47.4	47.9	44.4	55.3	
00:45	15:00	47.2	47.7	44.6	51.9	
01:00	15:00	47.0	47.4	44.3	51.9	
01:15	15:00	47.0	47.4	44.5	52.3	
01:30	15:00	46.8	47.3	44.3	49.7	
01:45	15:00	47.2	47.7	44.6	50.7	
02:00	15:00	48.0	48.5	45.3	52.2	
02:15	15:00	48.0	48.4	45.4	52.8	
02:30	15:00	47.7	48.2	45.1	50.4	
02:45	15:00	48.1	48.6	45.3	52.7	
03:00	15:00	48.3	48.6	45.3	55.9	
03:15	15:00	47.7	48.1	45.2	55.0	
03:30	15:00	47.6	48.0	45.0	53.8	
03:45	15:00	47.6	48.1	45.0	54.1	
04:00	15:00	48.0	48.4	45.3	59.3	
04:15	15:00	48.1	48.6	45.3	59.4	
04:30	15:00	48.6	49.2	45.8	53.5	
04:45	15:00	49.2	49.4	45.7	64.5	
05:00	15:00	49.5	49.6	45.9	68.5	
05:15	15:00	49.3	49.7	45.7	67.0	
05:30	15:00	49.1	49.2	45.2	68.7	
05:45	15:00	49.9	52.1	44.8	66.6	
06:00	15:00	48.3	49.1	44.2	64.8	
06:15	15:00	47.6	48.2	44.6	55.7	
06:30	15:00	47.7	48.1	44.7	58.8	
06:45	15:00	47.0	47.4	44.3	59.8	
Average 2300-0700		47.9	48.4	44.9	50-69	
Average 0700-2300		48.7	48.7	45.6	52-81	

Noise Survey Results

Date: Saturday 12th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP4 (Marsh Lane) NW**
 Instrumentation: Cirrus 171A Real Time Analyser (G066350)
 Calibration: 94dB

TABLE 49

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
07:00	15:00	49.3	52.3	46.4	63.7	
07:15	15:00	49.4	49.4	46.3	76.6	
07:30	15:00	47.8	48.7	46.2	63.3	
07:45	15:00	49.1	50.5	46.7	67.0	
08:00	15:00	49.0	49.4	46.5	69.7	
08:15	15:00	50.5	48.8	46.5	80.6	
08:30	15:00	46.8	47.5	45.8	53.7	
08:45	15:00	47.8	49.3	46.4	58.8	
09:00	15:00	48.3	49.7	46.1	63.3	
09:15	15:00	46.9	47.8	45.9	53.1	
09:30	15:00	47.2	47.7	45.7	64.4	
09:45	15:00	48.5	49.4	46.0	62.2	
10:00	15:00	48.8	49.7	45.4	67.8	
10:15	15:00	48.8	51.0	45.6	63.1	
10:30	15:00	50.7	52.1	46.8	72.3	
10:45	15:00	48.2	49.6	45.8	60.5	
11:00	15:00	47.1	48.6	44.6	60.6	
11:15	15:00	46.3	47.4	44.8	55.9	
11:30	15:00	47.3	48.3	45.8	60.9	
11:45	15:00	48.7	51.0	45.4	61.1	
12:00	15:00	46.5	47.9	44.6	59.1	
12:15	15:00	47.7	49.7	44.1	61.9	
12:30	15:00	45.9	47.4	43.5	64.1	
12:45	15:00	48.0	49.7	44.4	65.7	
13:00	15:00	47.3	48.0	44.6	68.4	
13:15	15:00	47.5	49.3	44.4	64.0	
13:30	15:00	48.8	51.5	44.0	63.8	
13:45	15:00	48.6	50.2	43.7	68.4	
14:00	15:00	46.2	47.7	43.8	60.6	
14:15	15:00	48.2	50.9	44.2	60.7	
14:30	15:00	47.0	49.2	44.0	59.5	
14:45	15:00	46.9	48.5	44.1	66.2	
Average 0700-1500		48.0	49.3	45.3	53-81	

Noise Survey Results

Date: Saturday 12th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP4 (Marsh Lane) NW**
 Instrumentation: Cirrus 171A Real Time Analyser (G066350)
 Calibration: 94dB

TABLE 50

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
15:00	15:00	48.2	49.6	44.4	70.0	
15:15	15:00	46.9	48.2	44.5	59.4	
15:30	15:00	49.7	51.4	44.4	63.6	
15:45	15:00	47.9	49.7	45.4	63.0	
16:00	15:00	49.2	50.8	45.2	72.3	
16:15	15:00	49.7	50.8	45.2	66.6	
16:30	15:00	48.9	51.9	44.9	63.1	
16:45	15:00	48.4	50.5	45.9	56.2	
17:00	15:00	49.8	52.5	46.2	66.0	
17:15	15:00	48.9	50.6	46.3	62.4	
17:30	15:00	48.3	50.1	45.8	61.0	
17:45	15:00	52.9	54.9	46.7	76.1	
18:00	15:00	51.4	53.1	46.0	72.8	
18:15	15:00	46.8	47.7	45.3	58.8	
18:30	15:00	48.6	48.5	46.3	67.2	
18:45	15:00	47.5	48.1	45.8	59.5	
19:00	15:00	48.2	49.6	45.8	64.0	
19:15	15:00	47.5	48.3	45.9	61.1	
19:30	15:00	48.4	49.6	46.1	66.4	
19:45	15:00	54.6	50.7	46.1	81.2	
20:00	15:00	47.0	47.9	45.8	55.2	
20:15	15:00	47.7	48.6	46.2	64.5	
20:30	15:00	47.5	47.8	45.8	71.2	
20:45	15:00	46.4	47.5	45.4	53.8	
21:00	15:00	46.5	47.4	45.5	55.0	
21:15	15:00	46.4	47.0	45.6	51.3	
21:30	15:00	47.8	49.3	45.9	61.7	
21:45	15:00	47.2	48.8	45.8	60.1	
22:00	15:00	46.5	47.0	45.6	59.6	
22:15	15:00	46.4	47.0	45.7	53.6	
22:30	15:00	46.7	47.3	45.9	59.0	
22:45	15:00	47.0	47.6	46.4	54.7	
Average 1500-2300		48.7	49.8	45.7	51-81	

Noise Survey Results

Date: Saturday 12th - Sunday 13th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP4 (Marsh Lane) NW**
 Instrumentation: Cirrus 171A Real Time Analyser (G066350)
 Calibration: 94dB

TABLE 51

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
23:00	15:00	47.8	48.6	44.7	58.8	
23:15	15:00	47.5	48.1	44.7	55.8	
23:30	15:00	47.6	48.1	44.9	56.8	
23:45	15:00	48.1	48.5	45.5	52.0	
00:00	15:00	48.1	48.5	45.5	58.4	
00:15	15:00	48.2	48.6	45.7	52.6	
00:30	15:00	48.3	48.7	45.5	58.2	
00:45	15:00	48.0	49.0	45.1	53.0	
01:00	15:00	47.9	48.7	45.1	51.6	
01:15	15:00	47.9	48.6	45.2	52.2	
01:30	15:00	48.2	49.5	45.1	52.2	
01:45	15:00	47.9	49.1	44.9	52.5	
02:00	15:00	47.3	48.4	44.3	52.7	
02:15	15:00	47.1	47.6	44.4	56.6	
02:30	15:00	47.4	47.8	44.8	50.9	
02:45	15:00	48.1	49.5	45.2	52.3	
03:00	15:00	47.2	47.6	44.6	50.8	
03:15	15:00	46.9	47.3	44.3	50.6	
03:30	15:00	47.4	47.9	44.8	53.8	
03:45	15:00	47.8	48.1	45.2	53.6	
04:00	15:00	47.0	47.5	44.4	49.9	
04:15	15:00	47.7	49.1	44.5	52.1	
04:30	15:00	47.8	48.8	44.8	56.6	
04:45	15:00	48.1	48.9	44.8	61.9	
05:00	15:00	58.4	51.6	44.6	77.8	
05:15	15:00	48.8	48.4	44.6	67.2	
05:30	15:00	47.9	49.4	44.6	58.4	
05:45	15:00	48.4	48.7	44.5	64.2	
06:00	15:00	47.2	48.0	44.2	54.9	
06:15	15:00	48.5	48.1	44.2	67.1	
06:30	15:00	47.5	47.6	43.8	65.1	
06:45	15:00	48.7	48.9	43.9	67.0	
Average 2300-0700		49.0	48.6	44.7	50-78	
Average 0700-2300		48.4	49.6	45.5	51-81	

Noise Survey Results

Date: Sunday 13th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP4 (Marsh Lane) NW**
 Instrumentation: Cirrus 171A Real Time Analyser (G066350)
 Calibration: 94dB

TABLE 52

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	46.9	47.7	45.8	63.9	
07:15	15:00	47.5	47.7	45.8	63.1	
07:30	15:00	47.7	48.0	45.5	65.2	
07:45	15:00	46.8	47.3	45.5	57.0	
08:00	15:00	53.8	51.8	45.6	74.3	
08:15	15:00	46.7	47.5	44.4	65.9	
08:30	15:00	47.7	47.7	44.6	63.2	
08:45	15:00	45.4	46.4	44.1	55.9	
09:00	15:00	45.5	46.4	44.1	60.2	
09:15	15:00	46.2	47.4	43.9	62.8	
09:30	15:00	46.5	47.9	43.8	60.8	
09:45	15:00	46.7	47.4	44.0	62.2	
10:00	15:00	51.5	48.3	44.2	75.5	
10:15	15:00	45.2	46.2	43.7	60.0	
10:30	15:00	45.8	47.1	43.7	59.7	
10:45	15:00	48.8	50.6	43.7	63.2	
11:00	15:00	47.9	48.5	44.0	64.6	
11:15	15:00	48.3	50.3	43.7	64.1	
11:30	15:00	52.2	49.5	43.9	73.9	
11:45	15:00	47.2	49.1	44.6	64.2	
12:00	15:00	48.2	50.7	44.6	61.9	
12:15	15:00	48.1	48.9	44.0	65.9	
12:30	15:00	46.8	48.9	44.2	55.4	
12:45	15:00	48.7	48.6	44.7	72.2	
13:00	15:00	47.1	47.7	44.6	66.5	
13:15	15:00	46.3	47.6	44.7	54.3	
13:30	15:00	48.1	49.9	44.3	67.0	
13:45	15:00	47.7	49.8	44.4	67.6	
14:00	15:00	48.0	50.2	44.8	60.8	
14:15	15:00	50.7	52.2	43.7	67.2	
14:30	15:00	45.1	46.4	43.4	55.5	
14:45	15:00	45.7	46.8	43.2	61.0	
Average 0700-1500		48.2	48.7	44.4	54-76	

Noise Survey Results

Date: Sunday 13th July 2025

TABLE 53

Location: Weeland Road, Knottingley

Client: Axis

Project: Knottingley Waste to Resource Park

Data: **Baseline Sound Survey: Position NMP4 (Marsh Lane) NW**

Instrumentation: Cirrus 171A Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	49.8	47.7	43.9	68.8	
15:15	15:00	47.4	48.1	44.8	62.1	
15:30	15:00	46.6	48.4	44.2	57.0	
15:45	15:00	47.1	48.4	44.3	60.8	
16:00	15:00	46.3	46.4	43.7	66.9	
16:15	15:00	47.5	49.3	45.4	54.3	
16:30	15:00	47.3	48.3	45.9	62.6	
16:45	15:00	47.3	47.9	46.1	64.5	
17:00	15:00	47.3	48.2	45.9	57.2	
17:15	15:00	47.9	48.5	46.4	71.1	
17:30	15:00	49.8	49.8	46.1	67.8	
17:45	15:00	48.0	48.9	46.3	66.5	
18:00	15:00	47.6	48.7	45.9	57.0	
18:15	15:00	49.2	49.0	46.8	72.2	
18:30	15:00	47.9	48.9	46.5	55.2	
18:45	15:00	47.3	48.4	45.7	61.4	
19:00	15:00	47.8	49.3	46.3	56.5	
19:15	15:00	48.4	49.6	46.3	62.0	
19:30	15:00	48.2	49.8	46.4	57.2	
19:45	15:00	48.2	49.5	46.5	60.9	
20:00	15:00	48.1	49.2	46.7	62.0	
20:15	15:00	48.7	50.0	46.8	63.9	
20:30	15:00	48.8	49.9	46.6	69.2	
20:45	15:00	48.4	49.4	46.8	61.0	
21:00	15:00	48.9	49.9	46.5	64.8	
21:15	15:00	47.3	48.2	46.2	55.7	
21:30	15:00	47.0	47.6	46.1	56.5	
21:45	15:00	46.5	47.1	45.8	53.9	
22:00	15:00	47.0	47.6	46.2	51.3	
22:15	15:00	48.1	47.6	46.1	72.1	
22:30	15:00	46.5	47.2	45.5	53.9	
22:45	15:00	46.5	47.2	45.5	55.1	
Average 1500-2300		47.8	48.6	45.9	51-72	

Noise Survey Results

Date: Sunday 13th - Monday 14th July 2025

TABLE 54

Location: Weeland Road, Knottingley

Client: Axis

Project: Knottingley Waste to Resource Park

Data: **Baseline Sound Survey: Position NMP4 (Marsh Lane) NW**

Instrumentation: Cirrus 171A Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	46.6	47.2	43.6	53.2	
23:15	15:00	47.0	47.8	44.0	52.8	
23:30	15:00	46.9	47.7	44.1	50.3	
23:45	15:00	46.9	47.6	44.1	49.8	
00:00	15:00	47.0	47.6	44.3	49.4	
00:15	15:00	47.8	48.3	44.9	56.5	
00:30	15:00	47.7	48.1	45.0	50.4	
00:45	15:00	47.3	47.8	44.6	55.1	
01:00	15:00	46.7	47.4	43.6	49.4	
01:15	15:00	45.9	46.4	43.3	50.6	
01:30	15:00	46.8	47.3	44.2	50.8	
01:45	15:00	47.3	47.8	44.7	50.3	
02:00	15:00	47.1	47.6	44.4	48.9	
02:15	15:00	47.4	47.9	44.8	50.3	
02:30	15:00	47.5	48.0	45.0	49.8	
02:45	15:00	47.4	47.8	44.9	53.5	
03:00	15:00	47.1	47.6	44.5	50.1	
03:15	15:00	47.0	47.5	44.4	49.2	
03:30	15:00	46.7	47.2	44.1	53.8	
03:45	15:00	46.5	47.0	44.0	48.7	
04:00	15:00	46.3	46.9	43.7	50.6	
04:15	15:00	46.7	47.2	43.7	58.9	
04:30	15:00	47.7	47.8	43.6	67.3	
04:45	15:00	47.0	47.5	44.1	55.5	
05:00	15:00	51.1	49.5	44.6	73.0	
05:15	15:00	48.1	48.8	44.9	57.6	
05:30	15:00	47.5	48.1	44.7	57.2	
05:45	15:00	48.5	48.4	44.5	63.9	
06:00	15:00	47.8	47.9	44.2	64.9	
06:15	15:00	49.7	48.9	44.5	70.4	
06:30	15:00	51.3	52.2	45.3	68.1	
06:45	15:00	49.0	49.9	45.6	67.6	
Average 2300-0700		47.7	48.1	44.4	49-73	
Average 0700-2300		48.0	48.7	45.2	51-76	

Noise Survey Results

Date: Monday 14th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP4 (Marsh Lane) NW**
 Instrumentation: Cirrus 171A Real Time Analyser (G066350)
 Calibration: 94dB

TABLE 55

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
07:00	15:00	48.8	49.5	47.8	60.5	
07:15	15:00	48.9	50.2	47.3	63.2	
07:30	15:00	66.0	69.6	48.8	83.6	
07:45	15:00	63.5	67.3	50.2	79.1	
08:00	15:00	57.8	60.9	48.8	72.1	
08:15	15:00	50.0	51.8	48.1	61.3	
08:30	15:00	50.1	51.5	48.6	67.3	
08:45	15:00	48.8	50.1	47.3	59.7	
09:00	15:00	49.7	50.4	47.8	65.8	
09:15	15:00	49.0	49.6	48.1	55.1	
09:30	15:00	50.2	49.9	48.1	72.8	
09:45	15:00	51.3	50.1	48.1	72.4	
10:00	15:00	51.3	51.8	49.0	71.3	
10:15	15:00	49.2	50.0	48.2	58.6	
10:30	15:00	49.8	51.0	48.5	60.5	
10:45	15:00	51.1	52.3	49.4	61.0	
11:00	15:00	49.9	50.7	48.6	60.3	
11:15	15:00	49.5	50.8	48.2	53.7	
11:30	15:00	50.4	51.2	49.1	60.0	
11:45	15:00	50.7	51.5	48.8	64.7	
12:00	15:00	51.0	51.8	49.1	66.7	
12:15	15:00	51.4	51.5	48.8	70.2	
12:30	15:00	50.2	51.0	48.8	63.6	
12:45	15:00	51.1	52.8	49.2	56.0	
13:00	15:00	52.2	53.5	50.7	63.6	
13:15	15:00	51.5	52.9	49.9	61.9	
13:30	15:00	51.6	52.6	50.5	57.3	
13:45	15:00	56.2	53.1	49.5	82.9	
14:00	15:00	52.8	53.1	50.2	76.2	
14:15	15:00	52.1	53.5	50.4	64.6	
14:30	15:00	52.8	54.5	50.2	60.5	
14:45	15:00	52.2	53.8	49.9	61.3	
Average 0700-1500		55.2	57.9	49.0	54-84	

Noise Survey Results

Date: Monday 14th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP4 (Marsh Lane) NW**
 Instrumentation: Cirrus 171A Real Time Analyser (G066350)
 Calibration: 94dB

TABLE 56

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	52.2	53.5	50.6	65.9	
15:15	15:00	51.2	52.3	50.0	55.6	
15:30	15:00	50.8	52.3	49.1	56.2	
15:45	15:00	50.6	51.7	49.4	56.7	
16:00	15:00	51.0	52.3	49.5	58.3	
16:15	15:00	50.9	52.0	49.4	55.9	
16:30	15:00	53.0	54.5	50.5	68.0	
16:45	15:00	52.5	54.4	50.4	60.7	
17:00	15:00	51.5	52.9	49.7	59.4	
17:15	15:00	50.8	52.1	49.1	59.4	
17:30	15:00	51.0	52.6	49.1	57.7	
17:45	15:00	50.9	52.1	49.3	62.2	
18:00	15:00	50.5	51.5	49.0	68.2	
18:15	15:00	52.3	53.5	50.1	68.6	
18:30	15:00	52.3	53.6	50.2	68.6	
18:45	15:00	51.2	52.7	48.1	66.1	
19:00	15:00	50.9	52.5	47.9	71.2	
19:15	15:00	51.5	52.9	48.4	71.7	
19:30	15:00	50.1	51.7	48.5	63.4	
19:45	15:00	51.8	53.1	49.9	60.1	
20:00	15:00	51.9	53.3	49.9	58.6	
20:15	15:00	50.7	51.9	49.1	61.6	
20:30	15:00	50.1	51.2	48.5	59.2	
20:45	15:00	50.4	50.8	48.7	68.5	
21:00	15:00	49.9	50.8	48.5	58.8	
21:15	15:00	51.2	52.2	49.1	67.7	
21:30	15:00	50.2	51.2	48.9	57.7	
21:45	15:00	49.9	50.8	48.9	53.9	
22:00	15:00	50.0	50.8	49.0	59.0	
22:15	15:00	49.8	50.5	48.8	53.4	
22:30	15:00	50.0	50.7	49.3	56.7	
22:45	15:00	49.9	50.4	49.2	60.6	
Average 1500-2300		51.0	52.2	49.3	53-72	

Noise Survey Results

Date: Monday 14th - Tuesday 15th July 2025

TABLE 57

Location: Weeland Road, Knottingley

Client: Axis

Project: Knottingley Waste to Resource Park

Data: **Baseline Sound Survey: Position NMP4 (Marsh Lane) NW**

Instrumentation: Cirrus 171A Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	49.9	50.4	47.2	55.3	
23:15	15:00	50.6	50.9	47.5	71.5	
23:30	15:00	50.2	50.7	47.5	57.8	
23:45	15:00	50.4	51.1	47.5	60.0	
00:00	15:00	51.5	52.2	48.7	56.4	
00:15	15:00	51.3	52.0	48.5	53.9	
00:30	15:00	50.9	51.6	48.1	57.2	
00:45	15:00	50.8	51.5	47.7	68.1	
01:00	15:00	50.1	50.8	47.2	52.5	
01:15	15:00	50.0	50.5	47.3	52.7	
01:30	15:00	50.6	51.3	47.8	56.1	
01:45	15:00	50.9	51.7	48.0	53.5	
02:00	15:00	51.6	52.5	48.6	55.8	
02:15	15:00	50.9	52.1	47.7	54.0	
02:30	15:00	49.7	50.5	46.7	52.5	
02:45	15:00	49.1	49.7	46.4	51.9	
03:00	15:00	49.3	49.9	46.6	53.3	
03:15	15:00	49.4	50.0	46.8	53.0	
03:30	15:00	49.6	50.2	46.9	52.1	
03:45	15:00	48.1	48.9	45.0	50.8	
04:00	15:00	48.2	48.8	45.4	54.7	
04:15	15:00	49.4	50.0	46.4	56.9	
04:30	15:00	50.1	50.1	46.7	75.7	
04:45	15:00	50.5	51.4	47.3	59.6	
05:00	15:00	50.9	51.9	47.7	60.7	
05:15	15:00	50.7	51.5	47.8	54.8	
05:30	15:00	51.3	52.1	48.4	57.7	
05:45	15:00	51.7	52.5	48.6	64.1	
06:00	15:00	51.7	52.3	48.6	65.8	
06:15	15:00	51.7	52.5	48.8	59.9	
06:30	15:00	52.2	52.8	48.9	69.1	
06:45	15:00	52.8	53.3	49.2	68.1	
Average 2300-0700		50.6	51.3	47.6	55-76	
Average 0700-2300		53.6	56.0	49.1	53-84	

Noise Survey Results

Date: Tuesday 15th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP4 (Marsh Lane) NW**
 Instrumentation: Cirrus 171A Real Time Analyser (G066350)
 Calibration: 94dB

TABLE 58

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	53.0	53.7	51.3	68.7	
07:15	15:00	53.2	54.2	51.6	67.6	
07:30	15:00	53.8	54.8	52.4	64.6	
07:45	15:00	53.4	54.5	52.0	62.4	
08:00	15:00	53.7	54.7	52.2	63.9	
08:15	15:00	53.3	54.5	51.5	66.1	
08:30	15:00	52.9	54.3	51.1	70.0	
08:45	15:00	54.2	54.6	51.7	70.5	
09:00	15:00	53.3	54.4	51.3	65.1	
09:15	15:00	54.0	54.4	51.0	73.8	
09:30	15:00	53.7	54.9	52.3	60.6	
09:45	15:00	53.3	54.6	51.6	68.8	
10:00	15:00	53.4	54.6	51.8	62.8	
10:15	15:00	53.2	54.8	51.3	60.5	
10:30	15:00	53.3	54.6	51.8	57.2	
10:45	15:00	53.8	54.8	52.5	71.3	
11:00	15:00	54.7	56.5	52.4	68.4	
11:15	15:00	54.1	55.3	52.0	68.7	
11:30	15:00	53.7	54.8	52.2	65.2	
11:45	15:00	53.5	54.7	51.9	58.6	
12:00	15:00	54.5	55.6	53.1	67.7	
12:15	15:00	53.6	54.8	52.4	57.7	
12:30	15:00	53.4	54.3	52.4	62.6	
12:45	15:00	53.2	54.4	51.7	64.4	
13:00	15:00	54.4	55.7	52.5	69.9	
13:15	15:00	55.0	56.8	52.7	70.1	
13:30	15:00	55.8	56.6	53.1	77.5	
13:45	15:00	53.7	54.7	52.4	61.2	
14:00	15:00	53.7	54.7	52.5	64.8	
14:15	15:00	54.0	55.4	52.3	66.6	
14:30	15:00	54.0	55.1	52.6	65.4	
14:45	15:00	54.1	55.0	52.5	67.6	
Average 0700-1500		53.8	54.9	52.0	57-76	

Noise Survey Results

Date: Tuesday 15th July 2025
 Location: Weeland Road, Knottingley
 Client: Axis
 Project: Knottingley Waste to Resource Park
 Data: **Baseline Sound Survey: Position NMP4 (Marsh Lane) NW**
 Instrumentation: Cirrus 171A Real Time Analyser (G066350)
 Calibration: 94dB

TABLE 59

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	53.8	54.8	52.3	69.1	
15:15	15:00	53.9	55.2	51.8	66.7	
15:30	15:00	53.3	54.4	52.0	61.7	
15:45	15:00	54.0	55.1	52.3	59.0	
16:00	15:00	53.7	55.0	52.2	58.9	
16:15	15:00	53.9	55.0	52.4	68.7	
16:30	15:00	53.7	55.1	52.0	61.8	
16:45	15:00	55.3	57.0	53.0	68.1	
17:00	15:00	56.0	57.4	53.8	70.0	
17:15	15:00	55.6	56.8	53.5	82.1	
17:30	15:00	54.2	55.7	52.5	65.2	
17:45	15:00	53.9	55.3	52.0	62.1	
18:00	15:00	54.7	56.3	52.3	68.5	
18:15	15:00	53.9	55.3	52.0	72.7	
18:30	15:00	54.6	56.3	52.0	68.5	
18:45	15:00	54.3	55.7	52.4	66.7	
19:00	15:00	53.2	54.5	51.4	68.2	Rain
19:15	15:00	51.9	52.7	50.9	57.0	Rain
19:30	15:00	51.8	52.2	50.4	73.6	Rain
19:45	15:00	51.8	52.7	50.5	59.5	Rain
20:00	15:00	51.8	52.8	50.4	64.4	Rain
20:15	15:00	52.4	53.6	51.1	63.5	Rain
20:30	15:00	53.6	54.3	51.8	73.3	Rain
20:45	15:00	53.8	54.7	52.7	64.7	Rain
21:00	15:00	52.9	53.8	51.9	61.5	Rain
21:15	15:00	52.6	53.4	50.9	57.8	Rain
21:30	15:00	52.4	54.4	50.1	59.1	Rain
21:45	15:00	51.4	52.8	50.2	62.7	Rain
22:00	15:00	51.1	52.6	49.7	53.8	Rain
22:15	15:00	52.3	53.8	50.6	57.3	Rain
22:30	15:00	51.0	51.7	50.2	54.7	Rain
22:45	15:00	51.3	52.4	50.2	60.3	Rain
Average 1500-2300		54.3	55.7	52.4	59-82	Excluding Rain

Noise Survey Results

Date: Tuesday 15th - Wednesday 16th July 2025

TABLE 60

Location: Weeland Road, Knottingley

Client: Axis

Project: Knottingley Waste to Resource Park

Data: **Baseline Sound Survey: Position NMP4 (Marsh Lane) NW**

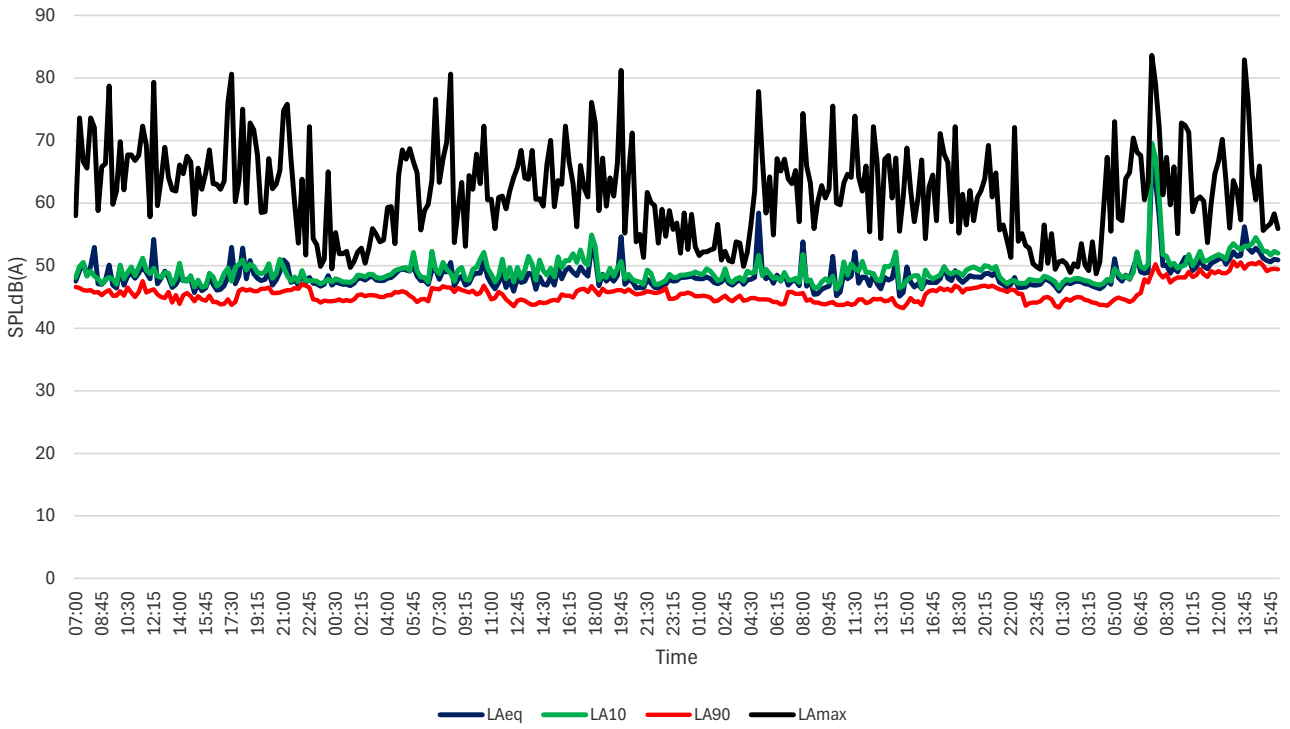
Instrumentation: Cirrus 171A Real Time Analyser (G066350)

Calibration: 94dB

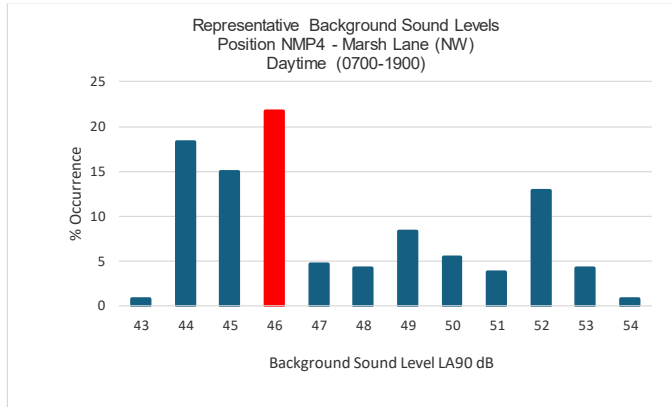
Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	52.0	53.4	50.4	58.0	Rain
23:15	15:00	49.9	50.5	49.2	54.5	Rain
23:30	15:00	50.5	51.2	49.8	54.4	Rain
23:45	15:00	50.8	51.4	50.1	56.4	Rain
00:00	15:00	50.5	51.2	47.7	52.6	
00:15	15:00	50.4	51.1	47.5	56.7	
00:30	15:00	50.3	51.0	47.4	52.9	
00:45	15:00	50.5	51.3	47.7	56.4	
01:00	15:00	50.0	50.5	47.2	58.2	
01:15	15:00	49.8	50.4	47.1	53.2	
01:30	15:00	50.4	51.1	47.4	52.6	
01:45	15:00	50.1	50.8	47.3	55.2	
02:00	15:00	49.7	50.4	46.8	52.5	
02:15	15:00	49.8	50.5	46.8	52.4	
02:30	15:00	49.9	50.5	47.1	51.8	
02:45	15:00	50.2	51.0	47.2	53.4	
03:00	15:00	51.8	51.8	47.0	65.4	
03:15	15:00	49.8	50.4	47.0	52.0	
03:30	15:00	49.8	50.6	46.8	52.9	
03:45	15:00	49.7	50.3	46.8	54.3	
04:00	15:00	49.5	50.2	46.7	52.0	
04:15	15:00	49.8	50.6	46.9	52.3	
04:30	15:00	49.5	50.1	46.7	53.8	
04:45	15:00	49.6	50.2	46.7	61.4	
05:00	15:00	49.3	50.0	46.4	56.2	
05:15	15:00	49.1	49.8	46.3	55.2	
05:30	15:00	50.4	50.3	46.7	66.6	
05:45	15:00	49.2	49.8	46.3	60.4	
06:00	15:00	53.2	54.0	46.2	74.6	
06:15	15:00	51.2	56.7	45.7	66.7	
06:30	15:00	50.7	51.2	46.1	68.2	
06:45	15:00	51.1	51.8	46.4	63.5	
Average 2300-0700		50.2	51.2	46.8	52-75	Excluding Rain
Average 0700-2300		54.1	55.3	52.2	57-82	

Overall Average	49.2	49.7	45.8	49-78	Excluding Rain
Overall Average	51.2	52.7	48.1	51-84	Excluding Rain
Overall Average 0700-1900	51.6	53.2	48.4	53-84	
Overall Average 1900-2300	48.9	49.6	47	51-81	

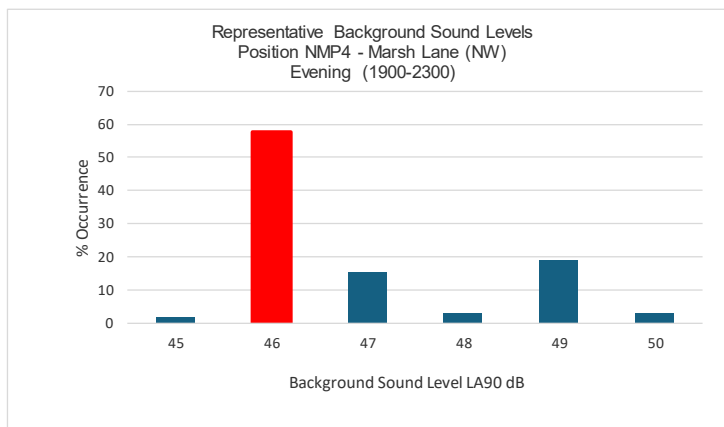
Background Sound Survey: Position NMP4 - Marsh Lane
Friday 11th - Wednesday 16th July 2025



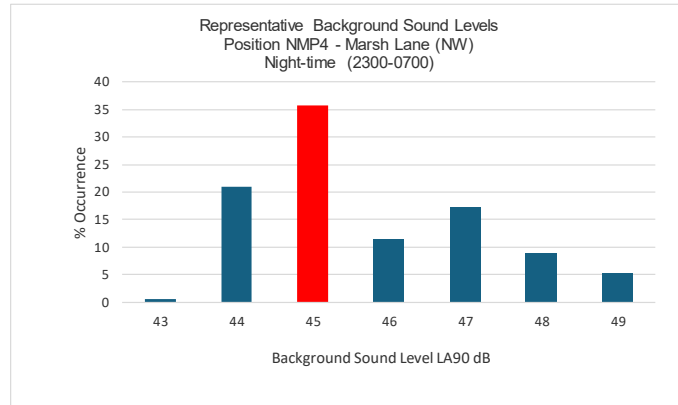
LA90	% Occurrence	
43	0.8	
44	18.3	
45	15	
46	21.7	Mode/Median
47	4.6	
48	4.2	Average
49	8.3	
50	5.4	
51	3.8	
52	12.9	
53	4.2	
54	0.8	



LA90	% Occurrence	
45	1.6	
46	57.8	Mode/Median
47	15.6	Average
48	3.1	
49	18.8	
50	3.1	



LA90	% Occurrence	
43	0.6	
44	21.0	
45	35.7	Mode/Median
46	11.5	Average
47	17.2	
48	8.9	
49	5.1	



Weather Conditions During Baseline Survey

	Date	Time	Temp Out	Wind Dir	Wind Run	Bar	Rain	Rain Rate
Thursday	10/07/2025	19:00	22.6	NNW	0.7	1036.6	0	0
	10/07/2025	19:30	24.3	NNW	0.8	1037.8	0	0
	10/07/2025	20:00	24.5	NW	0.5	1038	0	0
	10/07/2025	20:30	20.6	NW	0.8	1035	0	0
	10/07/2025	21:00	20.8	WNW	1.0	1029.3	0	0
	10/07/2025	21:30	22.3	WNW	1.1	1029.4	0	0
	10/07/2025	22:00	22.7	WNW	0.8	1029.4	0	0
	10/07/2025	22:30	22.8	WNW	0.6	1029.5	0	0
	10/07/2025	23:00	22.8	WNW	0.6	1029.5	0	0
	10/07/2025	23:30	22.7	WNW	0.7	1029.7	0	0
Friday	11/07/2025	00:00	22.4	WNW	0.4	1029.6	0	0
	11/07/2025	00:30	22.2	WNW	0.4	1029.6	0	0
	11/07/2025	01:00	21.9	WNW	0.4	1029.4	0	0
	11/07/2025	01:30	21.7	WNW	0.6	1029.4	0	0
	11/07/2025	02:00	21.4	WNW	0.7	1029.2	0	0
	11/07/2025	02:30	21.1	WNW	0.8	1029.2	0	0
	11/07/2025	03:00	20.7	WNW	0.8	1029.1	0	0
	11/07/2025	03:30	20.4	WNW	0.8	1029	0	0
	11/07/2025	04:00	20.1	WNW	0.9	1028.9	0	0
	11/07/2025	04:30	19.7	WNW	1.2	1028.8	0	0
	11/07/2025	05:00	19.3	WNW	1.2	1028.6	0	0
	11/07/2025	05:30	19	WNW	0.9	1028.5	0	0
	11/07/2025	06:00	17.2	WNW	0.5	1037.8	0	0
	11/07/2025	06:30	17	WNW	0.4	1037.4	0	0
	11/07/2025	07:00	17.8	NE	0.3	1037.6	0	0
	11/07/2025	07:30	18.2	NW	0.3	1036.9	0	0
	11/07/2025	08:00	18.6	NW	0.3	1036.1	0	0
	11/07/2025	08:30	18.9	NW	0.4	1036.1	0	0
	11/07/2025	09:00	19.1	WNW	0.5	1036.2	0	0
	11/07/2025	09:30	19.3	WNW	0.7	1037.3	0	0
	11/07/2025	10:00	24.2	NW	0.8	1037.3	0	0
	11/07/2025	10:30	25.9	NW	0.8	1037.1	0	0
	11/07/2025	11:00	27.1	SE	0.8	1037	0	0
	11/07/2025	11:30	27.5	WNW	1.6	1037	0	0
	11/07/2025	12:00	27.6	W	2.4	1036.7	0	0
	11/07/2025	12:30	28.1	NW	1.6	1036.6	0	0
	11/07/2025	13:00	28.7	WNW	1.6	1036.5	0	0
	11/07/2025	13:30	29.3	NW	1.6	1036.4	0	0
	11/07/2025	14:00	29.4	E	0.8	1036.1	0	0
	11/07/2025	14:30	29.8	NW	1.6	1036.1	0	0
	11/07/2025	15:00	30.1	WNW	1.6	1036.1	0	0
	11/07/2025	15:30	30.2	WNW	2.4	1035.7	0	0
11/07/2025	16:00	30.4	NW	1.6	1035.5	0	0	
11/07/2025	16:30	30.3	NW	1.6	1035.7	0	0	
11/07/2025	17:00	30	ENE	1.6	1035.2	0	0	
11/07/2025	17:30	30.6	NW	1.6	1035.1	0	0	
11/07/2025	18:00	29.3	ENE	2.4	1034.9	0	0	
11/07/2025	18:30	29.1	ESE	3.5	1034.8	0	0	
11/07/2025	19:00	28.6	E	3.4	1035	0	0	
11/07/2025	19:30	27.7	ESE	3.3	1035.2	0	0	
11/07/2025	20:00	27	ESE	3.3	1035.3	0	0	
11/07/2025	20:30	25.8	E	3.2	1035.3	0	0	
11/07/2025	21:00	24.1	ENE	2.4	1035.5	0	0	
11/07/2025	21:30	22.6	ENE	0.8	1035.7	0	0	
11/07/2025	22:00	21.4	ENE	0.8	1035.9	0	0	
11/07/2025	22:30	20.4	E	0.8	1035.9	0	0	
11/07/2025	23:00	19.6	E	0.0	1036.1	0	0	
11/07/2025	23:30	18.4	ENE	0.0	1035.9	0	0	
Saturday	12/07/2025	00:00	17.7	NNE	0.0	1036	0	0

	Date	Time	Temp Out	Wind Dir	Wind Run	Bar	Rain	Rain Rate
Saturday	12/07/2025	00:30	16.6	N	0.0	1036	0	0
	12/07/2025	01:00	15.8	N	0.0	1036.1	0	0
	12/07/2025	01:30	15.9	N	0.0	1035.9	0	0
	12/07/2025	02:00	15.6	N	0.0	1035.7	0	0
	12/07/2025	02:30	15.3	N	0.0	1035.6	0	0
	12/07/2025	03:00	14.9	N	0.0	1035.5	0	0
	12/07/2025	03:30	14.7	N	0.0	1035.3	0	0
	12/07/2025	04:00	14.6	N	0.0	1035.2	0	0
	12/07/2025	04:30	14.3	N	0.0	1035.2	0	0
	12/07/2025	05:00	14.2	N	0.0	1035.2	0	0
	12/07/2025	05:30	14.1	N	0.0	1035.4	0	0
	12/07/2025	06:00	13.7	N	0.0	1035.5	0	0
	12/07/2025	06:30	13.6	E	0.0	1035.6	0	0
	12/07/2025	07:00	14.1	E	0.8	1035.8	0	0
	12/07/2025	07:30	15	N	0.0	1035.7	0	0
	12/07/2025	08:00	15.2	ESE	1.6	1035.6	0	0
	12/07/2025	08:30	15.8	ESE	0.8	1035.6	0	0
	12/07/2025	09:00	16.8	E	0.8	1035.6	0	0
	12/07/2025	09:30	18.3	E	0.8	1035.5	0	0
	12/07/2025	10:00	18.8	ESE	2.4	1035.4	0	0
	12/07/2025	10:30	20.2	ESE	1.6	1035.2	0	0
	12/07/2025	11:00	20.8	ESE	1.6	1035	0	0
	12/07/2025	11:30	22.6	E	1.6	1035	0	0
	12/07/2025	12:00	22.9	ESE	2.4	1034.6	0	0
	12/07/2025	12:30	24.1	E	2.4	1034.4	0	0
	12/07/2025	13:00	25	E	2.4	1034	0	0
	12/07/2025	13:30	25.7	E	3.2	1034.2	0	0
	12/07/2025	14:00	26.4	E	2.4	1034.1	0	0
	12/07/2025	14:30	26.8	ENE	3.2	1033.9	0	0
	12/07/2025	15:00	27.3	ENE	3.3	1034	0	0
12/07/2025	15:30	27.4	ENE	3.3	1033.8	0	0	
12/07/2025	16:00	27.1	ESE	3.2	1033.7	0	0	
12/07/2025	16:30	26.9	ESE	3.3	1033.6	0	0	
12/07/2025	17:00	26.7	E	3.2	1033.5	0	0	
12/07/2025	17:30	25.3	ESE	3.1	1033.2	0	0	
12/07/2025	18:00	24.7	ESE	3.3	1033.1	0	0	
12/07/2025	18:30	24.6	ESE	3.2	1033	0	0	
12/07/2025	19:00	24.5	ESE	3.2	1032.9	0	0	
12/07/2025	19:30	24.2	ESE	3.0	1032.9	0	0	
12/07/2025	20:00	23.7	ESE	3.0	1033	0	0	
12/07/2025	20:30	23.2	ESE	3.2	1033.2	0	0	
12/07/2025	21:00	22.1	ENE	2.4	1033.3	0	0	
12/07/2025	21:30	20.4	ENE	1.6	1033.4	0	0	
12/07/2025	22:00	19.4	ENE	1.6	1033.4	0	0	
12/07/2025	22:30	18.9	ENE	1.6	1033.5	0	0	
12/07/2025	23:00	18.4	ENE	0.8	1033.3	0	0	
12/07/2025	23:30	17.6	ENE	0.0	1033.4	0	0	
Sunday	13/07/2025	00:00	16.9	NNE	0.0	1033.2	0	0

	Date	Time	Temp Out	Wind Dir	Wind Run	Bar	Rain	Rain Rate
Sunday	13/07/2025	00:30	16.6	N	0.0	1033.3	0	0
	13/07/2025	01:00	15.7	N	0.0	1033.1	0	0
	13/07/2025	01:30	15.6	NW	0.0	1032.9	0	0
	13/07/2025	02:00	15.4	WNW	0.0	1032.8	0	0
	13/07/2025	02:30	15.1	---	0.0	1032.5	0	0
	13/07/2025	03:00	15	W	0.0	1032.2	0	0
	13/07/2025	03:30	14.9	WNW	0.0	1032.2	0	0
	13/07/2025	04:00	14.7	NW	0.0	1032	0	0
	13/07/2025	04:30	14.4	NW	0.8	1031.7	0	0
	13/07/2025	05:00	14.1	WNW	0.8	1031.3	0	0
	13/07/2025	05:30	13.9	NW	0.8	1031.6	0	0
	13/07/2025	06:00	14.4	NW	0.8	1031.6	0	0
	13/07/2025	06:30	15.2	NW	1.6	1031.6	0	0
	13/07/2025	07:00	15.9	NW	1.6	1031.5	0	0
	13/07/2025	07:30	17.1	NW	1.6	1031.2	0	0
	13/07/2025	08:00	18.3	WNW	2.4	1031.3	0	0
	13/07/2025	08:30	19.8	NW	0.8	1031.3	0	0
	13/07/2025	09:00	21.1	E	1.6	1031.3	0	0
	13/07/2025	09:30	21.9	N	1.6	1031.3	0	0
	13/07/2025	10:00	22.7	E	1.6	1030.7	0	0
	13/07/2025	10:30	23.4	ENE	2.4	1030.8	0	0
	13/07/2025	11:00	23.3	ENE	2.4	1030.8	0	0
	13/07/2025	11:30	23.8	ENE	2.4	1030.3	0	0
	13/07/2025	12:00	24.6	E	2.4	1030.1	0	0
	13/07/2025	12:30	25.3	E	3.2	1029.8	0	0
	13/07/2025	13:00	24.9	E	4.0	1029.7	0	0
	13/07/2025	13:30	25.4	ESE	4.0	1029.4	0	0
	13/07/2025	14:00	24.4	ENE	2.4	1029.3	0	0
	13/07/2025	14:30	24.7	ENE	2.4	1029.1	0	0
	13/07/2025	15:00	25.4	ENE	2.4	1029.1	0	0
	13/07/2025	15:30	25.6	ESE	3.2	1028.7	0	0
	13/07/2025	16:00	25.1	ENE	3.2	1028.6	0	0
	13/07/2025	16:30	24.8	ESE	3.2	1028.3	0	0
	13/07/2025	17:00	24.3	ESE	3.5	1028.1	0	0
	13/07/2025	17:30	23.8	ESE	3.7	1027.8	0	0
	13/07/2025	18:00	23.3	ESE	3.5	1027.5	0	0
	13/07/2025	18:30	23.3	ESE	3.4	1027.4	0	0
	13/07/2025	19:00	23.8	ESE	3.4	1027.3	0	0
	13/07/2025	19:30	22.9	ESE	3.5	1027.4	0	0
	13/07/2025	20:00	22	ESE	3.8	1027.5	0	0
	13/07/2025	20:30	21.6	ESE	3.8	1027.6	0	0
	13/07/2025	21:00	21.1	ESE	3.2	1027.9	0	0
	13/07/2025	21:30	20.4	ESE	3.2	1028	0	0
	13/07/2025	22:00	19.9	ESE	3.2	1028	0	0
	13/07/2025	22:30	19.3	ESE	3.2	1028	0	0
	13/07/2025	23:00	19.3	ESE	2.4	1028.1	0	0
	13/07/2025	23:30	18.6	ESE	3.2	1028.3	0	0
	Monday	14/07/2025	00:00	18.4	ESE	3.2	1028.2	0

	Date	Time	Temp Out	Wind Dir	Wind Run	Bar	Rain	Rain Rate
Monday	14/07/2025	00:30	18.3	ESE	2.4	1027.9	0	0
	14/07/2025	01:00	18.2	SE	1.6	1027.7	0	0
	14/07/2025	01:30	18.1	ENE	0.8	1027.2	0	0
	14/07/2025	02:00	18.3	ESE	0.8	1027.4	0	0
	14/07/2025	02:30	18.2	ESE	0.8	1027.2	0	0
	14/07/2025	03:00	17.9	SE	0.8	1026.9	0	0
	14/07/2025	03:30	17.9	ESE	0.8	1026.7	0	0
	14/07/2025	04:00	18	ESE	1.6	1026.5	0	0
	14/07/2025	04:30	17.9	ESE	2.4	1026.4	0	0
	14/07/2025	05:00	17.7	ESE	2.4	1026.2	0	0
	14/07/2025	05:30	17.8	ESE	2.4	1026.2	0	0
	14/07/2025	06:00	17.7	ESE	2.4	1026	0	0
	14/07/2025	06:30	17.8	ESE	2.4	1025.9	0	0
	14/07/2025	07:00	17.9	ESE	2.4	1025.7	0	0
	14/07/2025	07:30	18.3	SE	1.6	1025.9	0	0
	14/07/2025	08:00	18.7	SE	1.6	1025.9	0	0
	14/07/2025	08:30	19.7	SE	2.4	1025.8	0	0
	14/07/2025	09:00	20.3	SE	1.6	1025.9	0	0
	14/07/2025	09:30	21.5	SE	2.4	1025.7	0	0
	14/07/2025	10:00	21.6	SE	2.4	1025.6	0	0
	14/07/2025	10:30	22	SE	2.4	1025.9	0	0
	14/07/2025	11:00	22.3	SE	2.4	1026.1	0	0
	14/07/2025	11:30	22.8	SE	2.4	1026	0	0
	14/07/2025	12:00	24.1	SE	2.4	1025.8	0	0
	14/07/2025	12:30	25.4	SE	2.4	1025.6	0	0
	14/07/2025	13:00	25.3	WSW	2.4	1025.5	0	0
	14/07/2025	13:30	25	WSW	3.0	1025.5	0	0
	14/07/2025	14:00	26.1	SW	3.0	1025.6	0	0
	14/07/2025	14:30	25.7	WSW	3.0	1025.7	0	0
	14/07/2025	15:00	26	SE	3.2	1025.5	0	0
	14/07/2025	15:30	26	SW	3.1	1025.4	0	0
	14/07/2025	16:00	25.6	WSW	3.1	1025.4	0	0
	14/07/2025	16:30	25.7	WSW	3.2	1025.5	0	0
	14/07/2025	17:00	24.5	WSW	3.4	1025.5	0	0
	14/07/2025	17:30	23.3	W	3.7	1025.7	0	0
	14/07/2025	18:00	21.7	W	3.8	1026.3	0	0
	14/07/2025	18:30	20.3	W	3.6	1026.7	0	0
	14/07/2025	19:00	19.4	WSW	4.0	1026.8	0	0
	14/07/2025	19:30	20.9	WSW	2.4	1026.8	0	0
	14/07/2025	20:00	20.4	WSW	3.2	1027.1	0	0
14/07/2025	20:30	19.6	W	3.4	1027.4	0	0	
14/07/2025	21:00	19.1	W	3.6	1027.7	0	0	
14/07/2025	21:30	18.2	WSW	3.0	1027.9	0	0	
14/07/2025	22:00	17.8	W	2.4	1028	0	0	
14/07/2025	22:30	17.1	WSW	2.4	1028.2	0	0	
14/07/2025	23:00	15.9	SW	0.8	1028.4	0	0	
14/07/2025	23:30	14.8	SE	0.0	1028.7	0	0	
Tuesday	15/07/2025	00:00	13.8	ESE	0.8	1028.7	0	0

	Date	Time	Temp Out	Wind Dir	Wind Run	Bar	Rain	Rain Rate
Tuesday	15/07/2025	00:30	14.1	SE	0.8	1028.5	0	0
	15/07/2025	01:00	14.2	SE	0.8	1028.6	0	0
	15/07/2025	01:30	14.2	SE	0.0	1028.6	0	0
	15/07/2025	02:00	14.3	SE	0.8	1028.4	0	0
	15/07/2025	02:30	14.8	SE	0.8	1028.3	0	0
	15/07/2025	03:00	14.3	SE	0.8	1028.4	0	0
	15/07/2025	03:30	13.9	SE	0.8	1028.2	0	0
	15/07/2025	04:00	13.4	E	0.8	1028	0	0
	15/07/2025	04:30	13.1	ESE	1.6	1028.1	0	0
	15/07/2025	05:00	13.1	SE	1.6	1027.7	0	0
	15/07/2025	05:30	13.4	SE	1.6	1027.7	0	0
	15/07/2025	06:00	13.8	SE	1.6	1027.5	0	0
	15/07/2025	06:30	14.7	SE	2.4	1027.3	0	0
	15/07/2025	07:00	15.2	SE	2.4	1027.2	0	0
	15/07/2025	07:30	17	SE	3.2	1027.2	0	0
	15/07/2025	08:00	17.4	SE	3.2	1027.1	0	0
	15/07/2025	08:30	17.6	SE	3.2	1026.9	0	0
	15/07/2025	09:00	17.4	SE	3.2	1027	0	0
	15/07/2025	09:30	18.6	SE	3.2	1026.7	0	0
	15/07/2025	10:00	18.5	SE	3.2	1026.8	0	0
	15/07/2025	10:30	18.2	SE	3.2	1026.7	0	0
	15/07/2025	11:00	17.9	SE	3.2	1026.7	0	0
	15/07/2025	11:30	18.2	SW	3.2	1026.5	0	0
	15/07/2025	12:00	17.8	SE	2.4	1026.4	0	0
	15/07/2025	12:30	16.5	SSW	2.4	1026.4	0.2	0
	15/07/2025	13:00	16.1	SE	3.2	1026.3	0	0
	15/07/2025	13:30	16.1	SE	3.2	1026	0	0
	15/07/2025	14:00	15.8	SE	3.2	1025.6	0	0
	15/07/2025	14:30	15.9	SE	4.0	1025.3	0	0
	15/07/2025	15:00	16.2	SE	4.0	1025	0	0
	15/07/2025	15:30	16.9	SE	2.4	1024.7	0	0
	15/07/2025	16:00	17.6	SE	3.2	1024.6	0	0
	15/07/2025	16:30	18	SE	3.2	1024.4	0	0
15/07/2025	17:00	18.9	SSW	3.2	1024.3	0	0	
15/07/2025	17:30	19.4	SSW	4.0	1024.1	0	0	
15/07/2025	18:00	18.7	SSW	3.2	1023.9	0	0	
15/07/2025	18:30	18.2	SSW	3.2	1023.9	0	0	
15/07/2025	19:00	16.4	SSW	2.4	1024	0.6	3	
15/07/2025	19:30	16.1	SE	1.6	1023.8	0.4	3	
15/07/2025	20:00	16.3	SE	1.6	1023.7	0.4	2	
15/07/2025	20:30	16.3	SW	0.8	1023.9	0.4	2	
15/07/2025	21:00	16	SW	1.6	1023.9	1	3.2	
15/07/2025	21:30	15.6	WSW	0.8	1024	0.6	3.2	
15/07/2025	22:00	15.3	SE	0.8	1024.5	1	8.6	
15/07/2025	22:30	15.2	SW	0.8	1024.6	0.4	3	
15/07/2025	23:00	15.1	SE	0.8	1024.8	0.4	2	
15/07/2025	23:30	15.1	SE	0.0	1024.9	0.8	12.4	
Wednesday	16/07/2025	00:00	14.8	SE	0.8	1025.2	0	0

	Date	Time	Temp Out	Wind Dir	Wind Run	Bar	Rain	Rain Rate
Wednesday	16/07/2025	00:30	14.6	SW	0.8	1025.3	0	0
	16/07/2025	01:00	14.8	SW	0.8	1025.5	0	0
	16/07/2025	01:30	14.7	WSW	2.4	1025.4	0	0
	16/07/2025	02:00	14.7	WSW	2.4	1025.7	0	0
	16/07/2025	02:30	14.8	WSW	3.2	1025.7	0	0
	16/07/2025	03:00	14.7	WSW	3.2	1025.8	0	0
	16/07/2025	03:30	14.9	WSW	3.0	1026	0	0
	16/07/2025	04:00	14.8	WSW	3.0	1026	0	0
	16/07/2025	04:30	14.9	W	3.0	1026.2	0	0
	16/07/2025	05:00	15.1	W	3.2	1026.8	0	0
	16/07/2025	05:30	14.9	WNW	2.4	1027.2	0	0
	16/07/2025	06:00	15	WNW	2.4	1027.4	0	0
	16/07/2025	06:30	15.4	WNW	3.2	1027.6	0	0

APPENDIX 7-4: CONSTRUCTION PLANT INVENTORY

Construction Plant Inventory

Soil Movements:

Plant Type	Sound Power Level	% Operating Time	Distance Ratio
Dozer	106	100	1.0
Excavator/Loader	103	100	1.0
8 Wheeled Tipper	107	100	1.0
Dozer	106	100	1.0
Lorry	103	10	1.0

Piling Activities:

Plant Type	Sound Power Level	% Operating Time	Distance Ratio
Piling Rig	116	80	1.0
HGV	103	10	1.0
Concrete Pump	105	100	1.0
Truck Mixer	105	80	1.0
Poker Vibrator	106	80	n/a

General Site Noisy Activities:

Plant Type	Sound Power Level	% Operating Time	Distance Ratio
Excavator	104	100	1.0
HGV	103	10	1.0
Dumper	104	100	1.0
Telehandler	105	100	1.0
Compressor	95	100	n/a
Generator	103	100	n/a
Mobile Crane	101	100	1.0

Plant Construction:

Plant Type	Sound Power Level	% Operating Time	Distance Ratio
Mobile Crane	101	100	1.0
Power Tools (drills, saws)	108	20	n/a
Steelwork Erection	108	100	1.0
Telehandler	105	100	1.0
HGV	103	20	1.0
Air Tools (cutting/grinding)	107	50	n/a

Infrastructure Construction:

Plant Type	Sound Power Level	% Operating Time	Distance Ratio
Asphalt Melter	103	100	1.0
Asphalt Spreader	96	100	1.0
Road Roller	102	100	1.0
Lorry	103	10	1.0
Poker Vibrator	106	100	n/a
Concrete pump	103	100	n/a
Compressor	95	100	n/a

Infrastructure Construction (concreting activities):

Plant Type	Sound Power Level	% Operating Time	Distance Ratio
Excavator	106	100	1.0
Truck Mixer	105	100	1.0
Dumper	104	100	1.0
Front Loader	108	100	1.0
Compressor	105	100	n/a
Poker Vibrator	102	100	n/a
HGV	103	10	1.0
Concrete Pump	107	100	n/a
Mobile Crane	110	20	n/a
Cyclone	112	100	n/a

Building Construction:

Plant Type	Sound Power Level	% Operating Time	Distance Ratio
Mobile Crane	101	100	1.0
Power Tools (drills, saws)	108	20	n/a
Steelwork Erection	108	100	1.0
Telehandler	105	100	1.0
HGV	103	20	1.0
Air Tools (cutting/grinding)	107	50	n/a
Generator	103	100	n/a
Compressor	95	100	n/a

APPENDIX 7-5: OPERATIONAL NOISE LEVELS

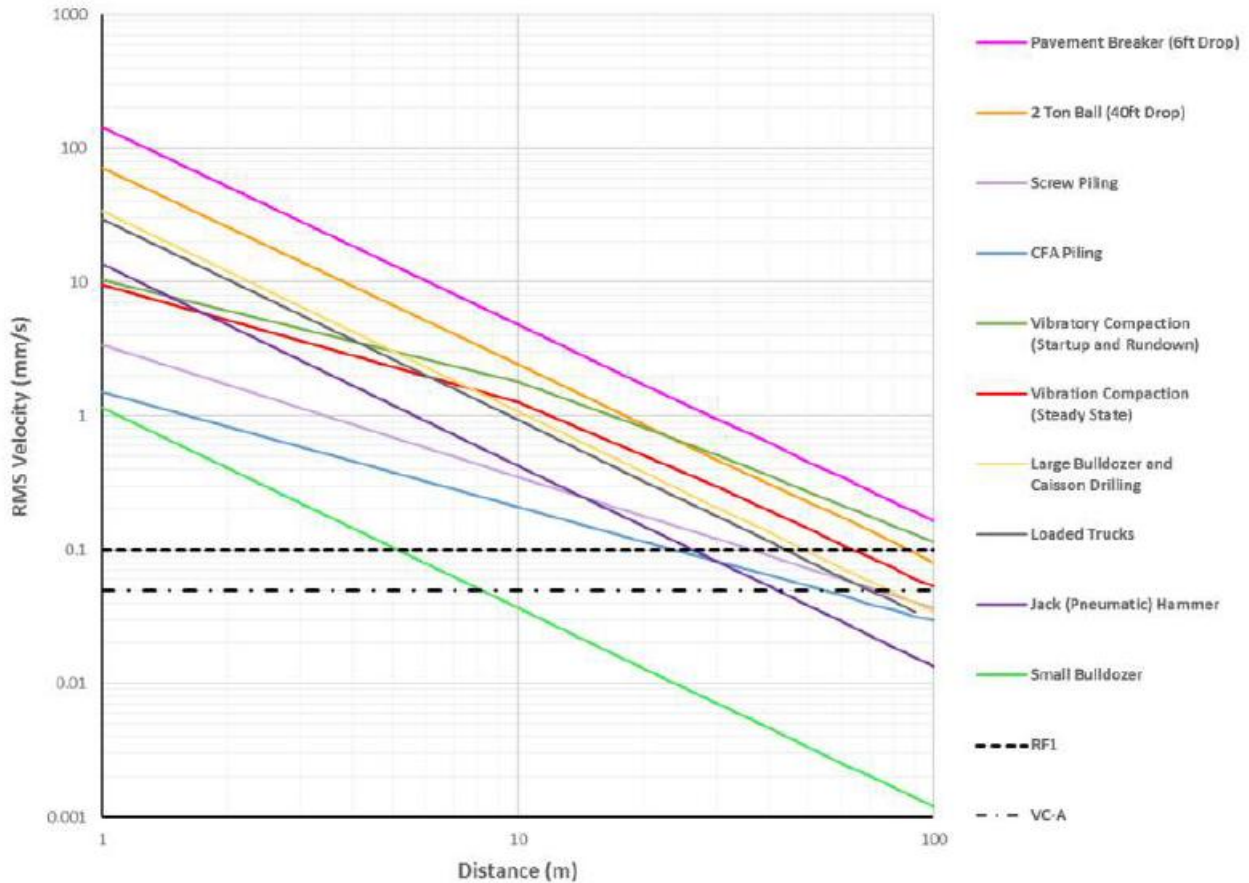
Noise Source	Building Reference	Operational Time of Day	Assumed Noise Level L _{Aeq,T} dB [night-time]	Treatment
AHU stack exit	5,8,11(2),13,14 & 15	Day/Night	70 @ 1m	Silencer
Stack exit	7	Day/Night	70 @ 1m	Silencer
Reactor units	14 (19 off)	Day/Night	68 @ 1m	Design
Pumps	11 (22 off)	Day/Night	60 @ 1m	Design
Pumps	12 (16 off)	Day/Night	50 @ 1m	Design
Tanker Discharge	12 (1 per hour)	Day	88 @ 1m	-
Tanker Delivery	6 per hour	Day	70 @ 10m	-
AHU Stack body	5,8,11(2),13,14 & 15	Day/Night	75 @ 1m	Cladding/Design
Package Waste rec.	5	Day [night]	75 (inside) [65]	Cladding
Storage building	6	Day [night]	75 (inside) [40]	Cladding
Waste Recovery	7	Day [night]	75 (inside) [65]	Cladding
Extractor hoods	7 (roof)	Day/Night	70 @ 1m [70]	Design
Package Waste building	8	Day [night]	80 (inside) [65]	Cladding, Shredder Electric/ Hydraulic type
Package Waste rec.	9	Day [night]	75 (inside) [40]	Cladding
Acid/Alkaline	11 (3)	Day/Night	70 (inside)	Cladding
Acid/Alkaline tanker	11	Day	88 (inside)	Cladding
Liquid Waste/Leachate	12	Day/Night	80 (inside)	Cladding
Waste Dryer	13	Day/Night	75 (inside)	Cladding
Heavy Metal	14	Day/Night	70 (inside)	Cladding
Storage Building	15	Day [night]	75 (inside) [65]	Cladding
Storage Building	16	Day [night]	75 (inside) [40]	Cladding
Storage Building	17	Day[night]	75 (inside) [40]	Cladding

APPENDIX 7-6: TYPICAL CONSTRUCTION VIBRATION LEVELS

Research Data

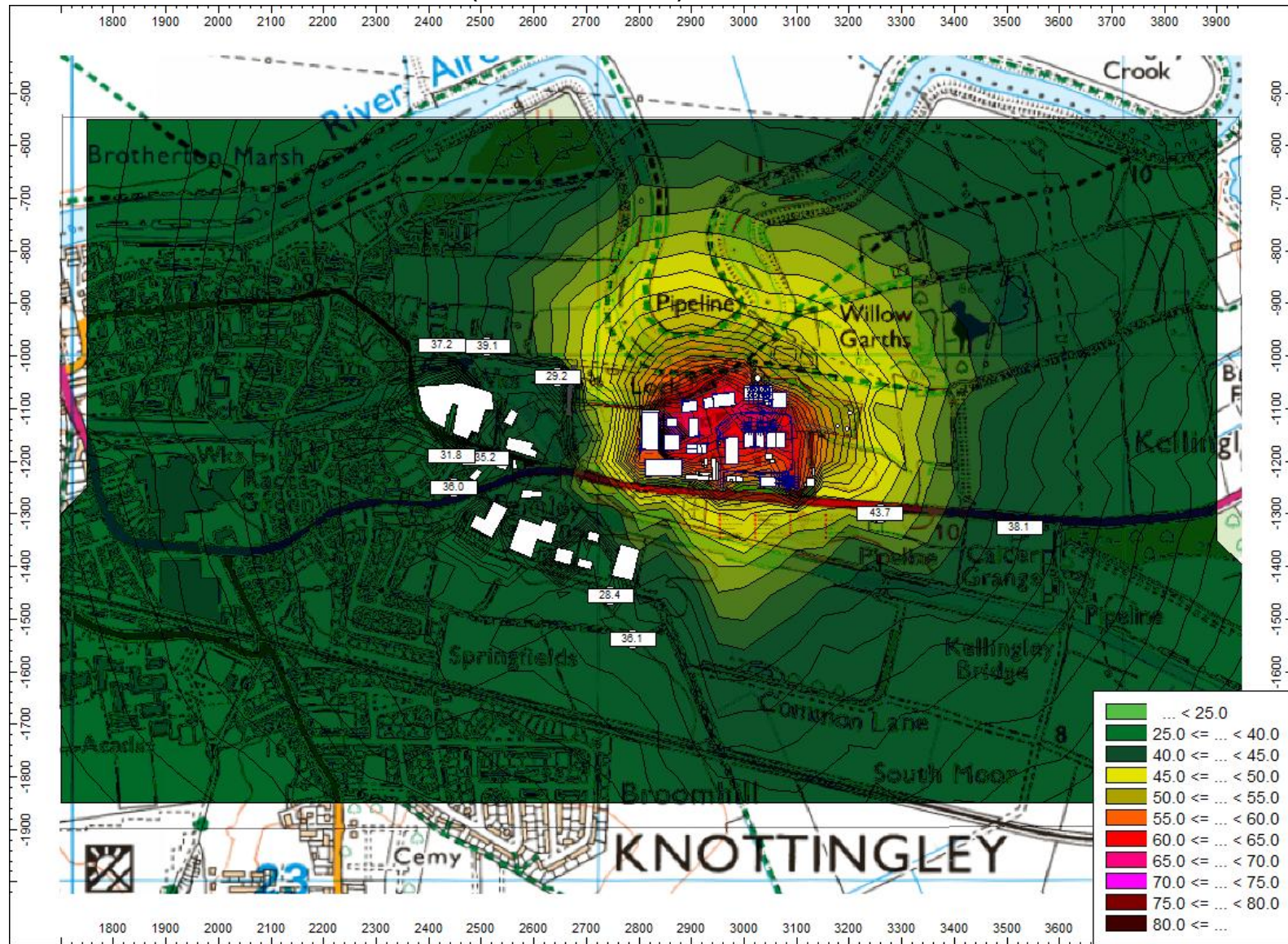
The New Zealand Transport Agency published a research paper entitled 'Ground Vibration from Road Construction' in May 2012, which includes a table of measured PPV values for different types of plant. The results have been provided below as an extract from the paper for ease of reference.

Vibration Levels from a Range of Construction Activities



APPENDIX 7-7: NOISE MAPPING RESULTS

NOISE MAP 7-1: DAYTIME OPERATIONS (WITH MITIGATION)



NOISE MAP 7-2: EVENING OPERATIONS (WITH MITIGATION)



NOISE MAP 7-3: NIGHT-TIME OPERATIONS (WITH MITIGATION)





- | | | | |
|---|--|---|--|
| 1 EXISTING OFFICE (RETAINED) | 7 PACKAGE WASTE RECOVERY FACILITY PROCESSING BUILDING 1 (EXISTING BUILDING) | 13 WASTE DRYER | A BOILER HOUSE 3 (RETAINED) |
| 2 HIGH BRIDGE COMPLEX | 8 PACKAGE WASTE RECOVERY FACILITY PROCESSING BUILDING 2 | 14 HEAVY METAL TREATMENT AND RECOVERY FACILITY | B BOILER HOUSE 5 (RETAINED) |
| 3 PACKAGE WASTE OFFLOADING AREA | 9 PACKAGE WASTE RECOVERY FACILITY STORAGE BUILDING (EXISTING BUILDING) | 15 STORAGE BUILDING | C ARCHIVES BLOCK (RETAINED) |
| 4 TANKER HOLDING AREA | 10 FUTURE DEVELOPMENT PLATFORM | 16 STORAGE BUILDING | D STORE (RETAINED) |
| 5 PACKAGE WASTE RECOVERY FACILITY | 11 ACID/ALKALINE WASTE TREATMENT FACILITY | 17 STORAGE BUILDING | E LABORATORY AND WORKSHOP (RETAINED) |
| 6 PACKAGE WASTE RECOVERY FACILITY STORAGE AREA WITH CANOPY | 12 LIQUID WASTE AND LEAD/ATE TREATMENT HUB | | F TRANSFORMER AND SWITCHROOM (RETAINED) |



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