Noise and Vibration Management Plan

Melton Foods, Melton Mowbray

August 2024






Experts in noise and vibration assessment and management

Document Control

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Job Number	J10-14744A-20

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Document Status and Review Schedule

Report No.	Date	Status	Reviewed by
J10-14744A-20-R02-01	6 August 2024	Final	Jon Sims BEng BSc MIOA (Associate Director)I

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Contents

1 Introduction 2
2 Noise and Vibration Control Strategies 7
3 Noise and Vibration Management Plan 8
4 Glossary 13
5 Appendices 14

Tables

Table 1.1: Nearest Identified NVSRs 4
Table 1.2: Summary of Operational Noise Source 5
Table 2.1: Critical Noise and Vibration Management Strategies 7
Table 3.1: Hierarchy Of Noise and Vibration Control 8
Table 3.2: Noise Control Measures: Administrative 9
Table 3.3: Noise Control Measures: Engineering and Maintenance 12

Figures

Figure 1.1: Site Location Plan and Environs 3
Figure 1.2: Nearest Identified NVSRs 4
Figure 1.3: Site Layout 6

1 Introduction

1.1 This report provides a Noise and Vibration Management Plan (NVMP), prepared by Noise Consultants Ltd (NCL) on behalf of Melton Foods for their manufacturing facility at 3 Samworth Way in Melton Mowbray (the 'Site').

1.2 Melton Foods holds an existing environmental permit (EPR/GP3548QT, dated 2nd May 2023). The NVMP has been requested in connection with Condition 3.4 (Noise and Vibration) of the permit which states:

> *3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration*
>
> *3.4.2 The operator shall:*
>
> *(a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution of from noise and vibration*
>
> *(b) implement the approved noise and vibration management plan, from the date of the approval, unless otherwise agreed in writing by the Environment Agency.*

1.3 NCL understands that no significant complaints have been received to date from nearby residents regarding operational noise from the Site.

Purpose

1.4 A NVMP is an essential document for projects and operations that have the potential to generate significant levels of noise and vibration. Its purpose is to ensure that these impacts are minimized and managed effectively to protect the environment and human health.

1.5 The purpose of this NVMP is to put in place a reasonable set of proactive and reactive measures to reduce, minimise and control the impacts of potential sources of noise and vibration upon surrounding sensitive receptors associated with the operation of the Melton Foods manufacturing facility.

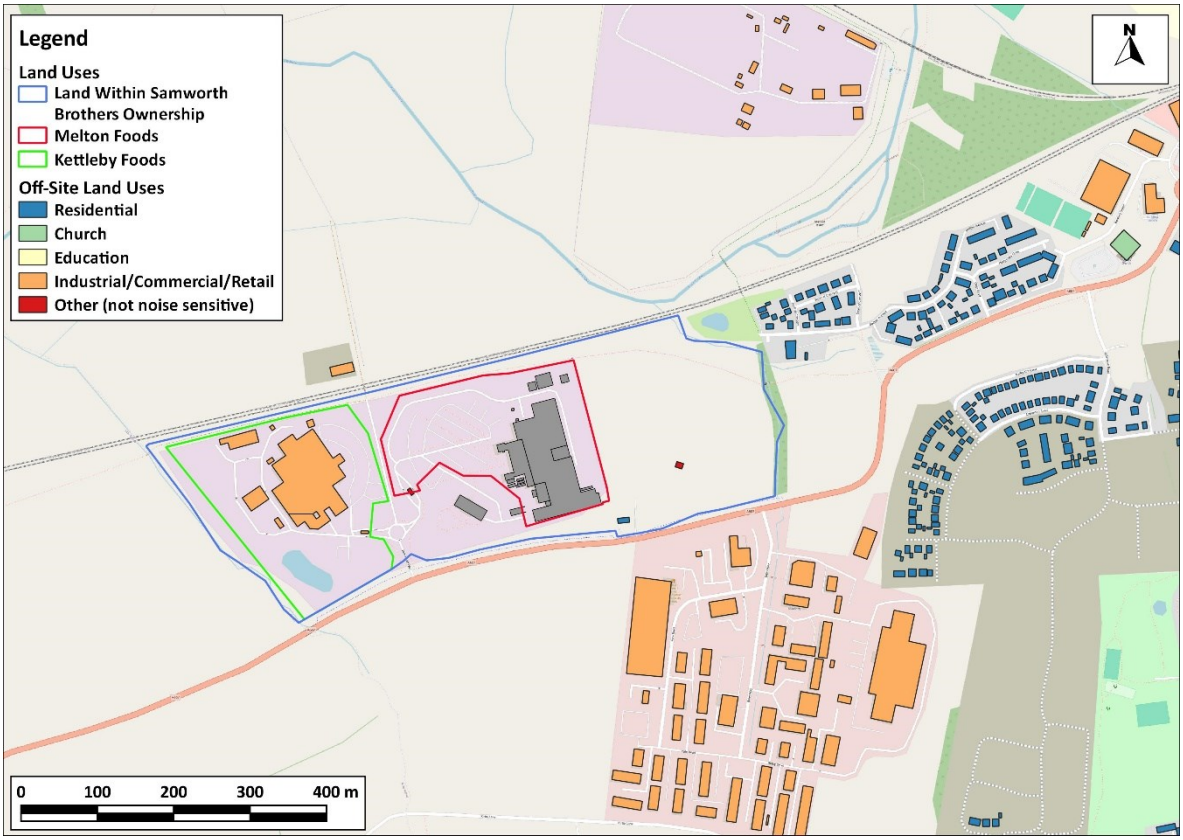
Site Description and Environs

1.6 The Melton Foods manufacturing facility is located 2.2 km to the west of the centre of Melton Mowbray, Leicestershire, as shown in **Figure 1.1**. Access provided from the A607 to the south, beyond which are open fields and Leicester Road Industrial Estate. Directly to the west is Kettleby Foods which also holds a separate environmental permit. Further west are open fields.

1.7 The Birmingham to Peterborough railway runs along the northern boundary in a 5-6m deep cutting and carries both passenger and freight trains, day and night.

1.8 The Site manufactures a range of chilled and ambient foods, including sandwiches, wraps, and porridge. Samworth Brothers Supply Chain provides temperature-controlled distribution services to companies within the Samworth Brothers Group, external food manufacturers, retailers and other distributors. NCL understand that the Site has extant planning consent[1] for all existing operations and is permitted to operate 24 hours a day, 7 days/week.

Figure 1.1: Site Location Plan and Environs



Existing Identified Sensitive Receptors

1.9 This NVMP applies to the nearest existing noise and vibration-sensitive receptors (NVSRs) to the Site as dwellings, identified in **Table 1.1** and **Figure 1.2**.

1.10 Adjacent to the south-eastern corner of the Site, and within the ownership of Melton Foods, is one pair of semi-detached 2-storey dwellings (NVSR1) fronting Leicester Road with rear gardens overlook Melton Foods' Intake Service Yard.

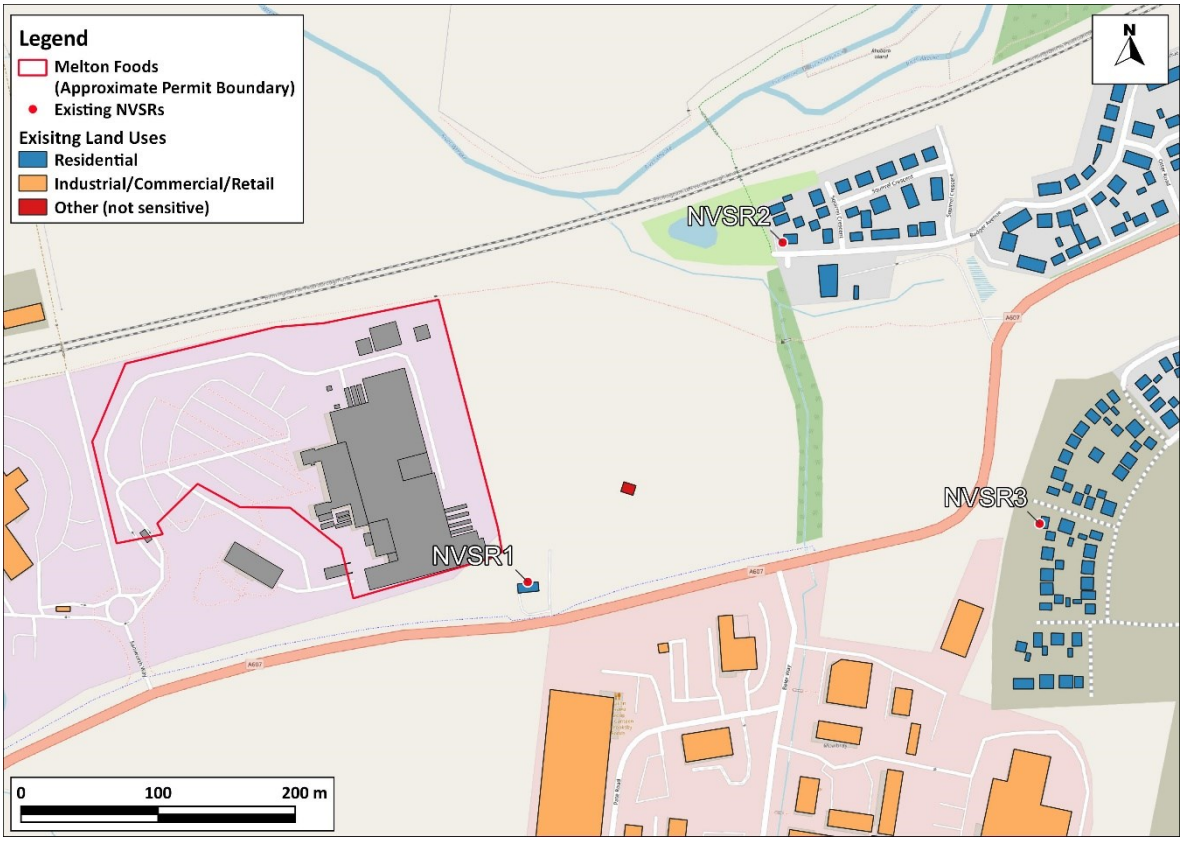
1.11 Around 250m to the east are existing dwellings on Badger Avenue (**NVSR2**). To the east is a new residential development, currently under construction (**NVSR3**).

[1] Melton Borough Council, Planning ref: 31/01054/FUL, Approved 8th April 2024

Table 1.1: Nearest Identified NVSRs

NVSR Ref.	Type	Address / Description	OS Ref (easting, northing)
NVSR1	Two-storey semi-detached dwelling	Nos. 1 and 2 Leicester Road	473551,317952
NVSR2	Two-storey dwelling	Dwellings on Badger Avenue	473738,318200
NVSR3	Two-storey dwelling	Dwellings under construction to the east of the Site and south of the A607	473924,317995

Figure 1.2: Nearest Identified NVSRs



Future Sensitive Receptors

1.12 Paragraph 193 of the National Planning Policy Framework (NPPF, 2023) states that

> *193. Planning policies and decisions should ensure that new development can be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or 'agent of change') should be required to provide suitable mitigation before the development has been completed.*

1.13 Also, guidance from the Environment Agency does not make reference to the need to consider future unknown receptors.

1.14 Therefore, it will be the responsibility of others to ensure that noise and vibration from existing operations, or operations that could reasonably be expected to arise are adequately mitigated, and consequently the scope of this NVMP excludes consideration of any future proposed NVSRs around the Site. Instead, this NVMP includes high-level matters that ought to be considered where new sensitive development may impose unreasonable constraints on the permitted operation of the Site.

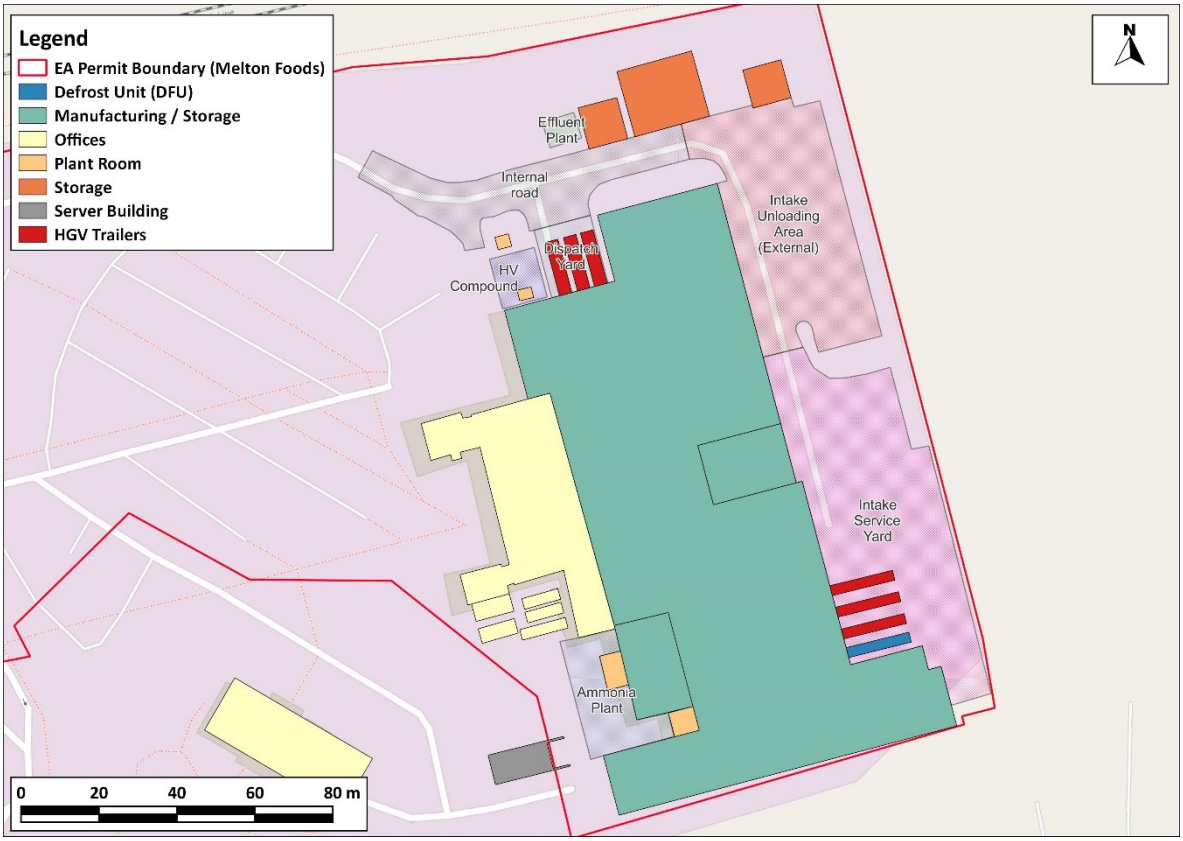
Noise Sources

1.15 **Table 1.2** summarises the various operational sources of noise at the Site as outlined by the noise assessment. Key sources are shown spatially in **Figure 1.3**.

Table 1.2: Summary of Operational Noise Source

Area / Source	Source Summary	Operating Hours	Typical Audibility at NVSR(s)
Intake Service Yard (Goods In)	Hydraulic vertical bailers	24hrs	Inaudible at all NVSRs
	Idling HGVs and HGV movements		Occasionally audible at NVSR1
	Defrost Unit (DFU)	24hrs, predominantly night-time	Faintly audible at night at NVSR1 at night
Intake Unloading area (Packaging)	All unloading activities including HGV and electric forklift truck movements	24hrs, predominantly daytime	Occasionally audible at NVSR1
HV Compound	Two chiller packs (ICS Cool energy AT/PH/k 4161). Typically, 1no. pack operates continuously	24hrs	Inaudible at all NVSRs
Rooftop Plant	Approximately 7no. Searl air-cooled condensers located on the roof of the main manufacturing building towards the Dispatch Yard		
Noise Break-out	Noise breakout from production buildings		
Dispatch Yard (Goods Out)	Idling HGVs and HGV movements		
	Refrigerated trailer chiller packs (Carrier type)		
Ammonia Plant	Several fixed plant items, including chiller packs. An extraction ventilation louvre is located just below eaves level	24hrs	Inaudible at all NVSRs
Effluent Plant	Several items of equipment including a screen and water pump		Inaudible at all NVSRs

Figure 1.3: Site Layout



Vibration Sources

1.16 The Site does not contain any existing sources of vibration that are considered to be potentially significant at nearby NVSRs.

Noise Impact Assessment

1.17 A noise impact assessment has been undertaken by NCL[2] for the existing site activities, by reference to British Standard 4142:2014+A1:2019 '*Methods for Rating and Assessing Industrial and Commercial Sound*'.

1.18 The assessment included a noise survey and noise modelling exercise and concluded that operational noise was likely to result in acceptable noise impacts at the NVSRs.

[2] NCL Report Ref: 14774A-20-R01, August 2024.

2 Noise and Vibration Control Strategies

2.1 A typical NVMP includes several key components and strategic actions. An effective NVMP is a dynamic document that includes critical strategies that evolve with the life of the Site and changing conditions. Critical strategies and associated measures relevant to this Site are summarised in **Table 2.1**.

Table 2.1: Critical Noise and Vibration Management Strategies

Control Strategy	Control Measures
Engineering	Hierarchy of control measures to achieve focused and deliberate reductions to reduce the effects of noise and vibration at existing off-site receptors
	Physical reduction and mitigation measures, such as noise barriers, sound insulation and sound/vibration isolation
	Careful siting of noise/vibration-generating equipment and activities
	Quiet plant purchasing policy
	Process optimisation
	Implementation of noise/vibration-reducing technologies
Maintenance	Regular planned maintenance to minimise atypical emissions
	Unplanned, reactive maintenance to abate/rectify noisy plant and equipment
Administrative	Develop an action plan with clearly defined roles and responsibilities
	Set clear, measurable, achievable and relevant goals
	Implementing quiet working practice
	Temporal management (scheduling noisy activities at less sensitive times)
	Establishing designated areas for noisy plant and activities
	General training for staff and contractors on noise and vibration management policy and practices to raise awareness about the importance of adhering to an NVMP
	Provide specific training for staff and contractors undertaking the noisiest external activities
	Formalised complaints, reporting, and corrective actions procedure(s)
	Regularly review the effectiveness of the NVMP and update as necessary
	Report review findings and suggested improvements to relevant stakeholders and update the NVMP as necessary
	Ensure that all relevant permits and permissions are obtained and updated during the future operational evolution of the Site
	Evaluate the cost-effectiveness (cost-benefit) of any new noise management, mitigation and control measures.
	Evaluate and respond to potential impacts and potentially imposed constraints arising from new nearby sensitive development proposed through the planning and regulatory systems.
	Any signage is relevant, appropriate and effective

2.2 Using the above table as a framework, the following Section sets out a Noise and Vibration Management Plan for this Site.

3 Noise and Vibration Management Plan

3.1 In order to minimise noise impacts at existing off-site NVSRs, the measures described below and will be incorporated into the site's operational practices.

Scope

3.2 As shown in **Table 1.2** not all existing sources of noise within the Site are audible at existing receptors, and any new or additional noise mitigation and control measures to these sources/activities would be ineffective.

3.3 Therefore future noise management is required to focus on;

- noise sources/activities that are audible at sensitive receptors, as summarised in **Table 1.2;**
- land within the boundary as defined in the site's Environmental Permit, as varied;

Hierarchy Of Noise and Vibration Control

3.4 For existing sources that are audible, or future activities plant and equipment that have the potential to generate significant sources of noise, the hierarchy of noise control summarised in the following table shall be used.

Table 3.1: Hierarchy Of Noise and Vibration Control

Priority	Action
1 (Highest)	**Prevent** generation of noise/vibration at source by good design, plant selection and maintenance
2	**Minimise** or contain noise/vibration at source by observing good operational techniques and management practice
3	Increase separation distances and acoustic screening between the noise/vibration source and sensitive receptor(s)
4	Introduction of acoustic screening between the noise/vibration source and sensitive receptor(s). Such measures may required by planning permission and by planning condition(s).
5	Sympathetic timing and control of unavoidable noisy or vibration-generating operations, particularly during the evening and night-time when

Vibration Management Plan

3.5 The Site does not own, hire/rent or utilise any heavy industrial equipment during normal operations. Therefore, it is appropriate that only future vibration impacts from the Site are considered, and with due regard to the hierarchy of control summarised in **Table 3.1**, with relevant measures reflected in an updated NVMP.

Noise Management Plan

Administrative Noise Control Measures

3.6 The administrative noise control measures summarised in the following table shall be adopted.

Table 3.2: Noise Control Measures: Administrative

Control Measure	Description
Preservation of Physical Mitigation	Periodic checks shall be undertaken to ensure that all necessary physical noise control and mitigation measures are in place, effective, and appropriately maintained.
Fixed Noise Sources	All plant shall be used and operated in accordance with the manufacturer's instructions.
	Plant and equipment shall be operated and maintained only by authorised or suitably qualified personnel.
	Any plant shall be turned off when not required.
	There shall be no radios external to the building. Those within the building should provide music at background sound level, and be inaudible at the NVSRs
	Bailers shall only be operating in the daytime.
Mobile Noise Sources	Diesel forklift trucks shall not be deployed at the site on a permanent basis.
	HGV idling times should be reduced and minimised.
	Any new mobile sources of noise should ideally by electric
Reverse Warning Alarms	The feasibility for broadband (i.e. white noise) type reverse warning alarms shall be considered for any new, replacement, and maintained plant and equipment.
	Where feasible, visiting HGVs shall turn off their reverse warning alarms to reduce noise emissions from the external intake and dispatch areas of the site.

Control Measure	Description
Un/Loading and Material Handling	All un/loading activities shall be undertaken with care, attention and diligence, with any loading in the evening/night undertaken quietly, with impact noise minimised as far as reasonably practicable.
	Night-time un/loading in external areas of the Site shall be avoided where safe and practicable to do so.
	Handling of other materials and objects, such as pallets, cages, skips, etc, shall be undertaken in the daytime only, unless there is a specific and justifiable reason to do so in the evening, or at night.
Site Speed Limits	Speed limit signage shall be reviewed and checked annually to ensure they are visible, unobstructed, and cleaned/replaced where deemed necessary.
	Speed limit signage and cleaned/replaced where deemed necessary.
	New speed limit signage shall be installed where deemed necessary.
	All visitors to the site shall be reminded of the site speed limit on arrival, at the gatehouse.
Building Structure and Openings	The envelope (external walls and roof) shall be periodically inspected, and any defects, such as damaged and deformed panels, or holes providing an air path from the outside to the inside shall be fully repaired to meet the original design specification, and to a high standard.
	With the exception of storage sheds and doors providing access to office-type spaces, all access/fire doors shall remain closed at all times when not in use.
	No new openings shall be created in the existing building envelope of manufacturing spaces, plant rooms and enclosures without first considering the need for uprated (i.e. acoustically enhanced) doors/shutters.
Training	All relevant existing and new staff members are given an overview of this NVMP, and its importance in achieving effective noise control, and compliance with the relevant sections of the Environmental Permit, and will be made aware of the complaint procedure.
	Key training requirements shall be identified for key members of administrative, manufacturing and other operational staff. All necessary training shall be completed as soon as reasonably practicable.
Complaints Procedure	Any noise complaints shall be handled by a shift manager (SM) or other nominated person (NP) only, either individually or collectively.
	So that the source of any alleged noise giving rise to the complaint can be located in the first instance and a satisfactory resolution can be found, it is necessary that the complainant first contacts the site when the noise event(s) that has given rise to the complaint occurs. Indeed, a timely and satisfactory resolution relies heavily, if not entirely, on an immediate response, as retrospective investigations can be impaired and ineffective.
	If a noise complaint is received, an investigation by the SM/NP shall be undertaken to identify the cause, and shall commence as soon as possible that permits the SM/NP to satisfactorily locate and identify the source of noise giving rise to the complaint, whether it be within the Site boundary or otherwise.
	Upon receipt of any complaint, the SM/NP shall begin to complete a Complaints Investigation Form (CIF, see **Appendix A2**). The form may be moved online, if it assists with compliance with this NVMP

Control Measure	Description
Noise Monitoring	A noise monitoring plan shall be formalised. The plan shall detail the locations (see **Appendix A1**), periods, durations and operating conditions under which the noise monitoring shall be undertaken.
	In principle, the noise monitoring plan shall focus on sources of continuous noise to facilitate comparison to previous noise monitoring results and assist in determining if noise emissions from existing plant and equipment has increased or if new plant increases noise levels at the Site boundary and in the direction of sensitive receptors. The noise monitoring shall, ideally be carried out; • when other extraneous and time-varying noise is not present • using a Class 2 (or better) sound level meter • to measure the A-weighted equivalent sound pressure level (dB L_{Aeq}) over a period of no less than 5-minutes, with any extraneous noise 'paused out' so as to ensure accuracy of measurement. Noise monitoring shall be carried out during a site-shutdown to quantify noise levels at the same locations and during the same periods of the day/night for ease of comparison to the underlying noise climate.
	Qualitative commentary on the measured noise levels shall be recorded during each survey, and for each measurement, including; • the source(s) of noise giving rise to the measured noise level; • the perceived loudness compared to the underlying noise climate
	A log of the measured noise levels shall be kept for a period no less than 2yrs.
	The results of the noise monitoring shall be made available for inspection by the relevant/authorised pollution control body with an agreed time-frame, typically 2 weeks.
NVMP Review	As a minimum, the NVMP shall be reviewed and updated on an annual basis.
	Changes in the NVMP shall be communicated to relevant stakeholders, including key staff
	The NVMP is a live document and any of the following circumstances may warrant a review: • Noise complaint(s) • Installation of new plant, equipment and processes • Changes to existing plant, equipment and processes • Development of site infrastructure i.e. increased external storage area • Future permit variations (normal or substantial) • Future approved noise-sensitive development located closer to the Site than existing receptors other than NSR1. Recommendations received from external parties or highlighted during ongoing risk assessments
Future Planning Considerations	Land to the east of the Site is within the ownership of Melton Foods. Any future noise-generating or noise-sensitive development on this land shall be thoroughly considered from an early stage.
	Whilst not designated in law, Melton Foods shall seek non-statutory consultee status from the Local Planning Authority on any nearby land uses that have the potential to place any noise constraint upon the legally permitted use of the site, or otherwise unreasonably constrain/affect operational noise from the Site

Engineering and Maintenance Noise Control Measures

3.7 The engineering and maintenance noise control measures summarised in the following table shall be adopted.

Table 3.3: Noise Control Measures: Engineering and Maintenance

Control Measure	Description
Purchasing Policy	Any new or replacement plant and equipment shall be chosen based on its noise emission profile, as far as reasonably practicable, subject to cost-benefit analysis. This may involve noise calculations to demonstrate if noise is a significant constraining factor.
	On-site, mobile plant and machinery shall comply with all relevant legislative requirements, as the time of their purchase.
Technology Advancements	Opportunities to reduce noise emission at source, due to advancements in technology, shall be explored.
	Broadband (white noise) reverse warning alarms are preferred.
Noise Reduction at Source	Noise reduction at source shall be considered, as this reduces the likelihood of needing other noise control measures
Plant Location	New or relocated items of external plant and equipment shall be located to maximise separation distances to sensitive receptors.
	Noisy plant should not be relocated closer to sensitive receptors without proper consideration which may involve noise calculations to demonstrate if noise is a significant constraining factor.
Acoustic Screening and Enclosures	Where necessary, acoustic screening and/or enclosures shall be used to reduce noise immission levels at sensitive receptors
Process Optimisation	Processes and activities, particularly those outside, shall be regularly reviewed to determine opportunities for reducing the level, duration, timing and frequency of noise emissions.
Planned / Preventative Maintenance	Maintenance plans for all fixed and mobile external plant and equipment (including the DFU and forklift trucks) and any ventilation plant with atmosphere-side terminations, shall be formalised, and adhere to the maintenance plan/schedule recommended by the relevant manufacturer/technology provider.
	Maintenance plans for all internal fixed plant and equipment that generate significant levels of noise, particularly those in the 1st-floor boiler room, shall be formalised, and adhere to the maintenance plan/schedule recommended by the relevant manufacturer/technology provider, as appropriate.
Unplanned Maintenance	Where items of plant and equipment are noticeably noisier than expected, they should be inspected, and any necessary maintenance completed as soon as reasonably practicable
	Any unplanned maintenance for external plant and equipment should be completed to a high standard, as soon as reasonably practicable.
	Opportunities to reduce noise emission at source during unplanned maintenance should be considered
Road and Service Yard Maintenance	Site roads and service yards shall be periodically inspected for damage and surface irregularities and made good at the earliest opportunity.

4 Glossary

dB	Decibel. The logarithmically scaled measurement unit of sound.
A-weighting	Frequency weighting applied to measured sound in order to account for the relative loudness perceived by the human ear.
Ambient sound level, $L_a = L_{Aeq,T}$	The A-weighted equivalent continuous sound level of the totally encompassing sound for a given situation and time interval, T.
$L_{Aeq,T}$	A-weighted equivalent continuous sound level over a given time period. It is the sound level of a steady sound that has the same energy as a fluctuating sound over the same time period.
$L_{A90,T}$	The A-weighted sound level exceeded for 90% of the measurement period. Often referred to as the background sound level.
L_{AFmax}	The A-weighted maximum recorded noise level during a measurement period, with a 'fast' time weighting.
NVMP	Noise and Vibration Management Plan

5 Appendices

A1 NVMP Noise Monitoring Locations 15
A2 Complaints Investigation Form (CIF) 16

A1 NVMP Noise Monitoring Locations

A2 Complaints Investigation Form (CIF)

Complaint Details			
Date of Noise Complaint		Shift Manager / Nominated Person	
Time of Noise Complaint		Person Completing CIF	
Complainant Details			
Name		Contact Telephone Number	
Address			
Details of Alleged Noise			
Date of noise ('event/s')		Time(s) of noise ('event/s')	
Address, street, or other identifiable information that details where each noise 'event' was heard (**if not at complainants address).**			
Where does the complaint believe the noise event(s) is/are located			
Thinking out how 'loud' the noise was/is, how does to compare to other noise (comparatively low, quieter, the same, a bit louder, clear, very loud…etc.).			
Was/is the noise continuous, or intermittent?			
Did/does the noise contain any impulsive characteristics (bangs and bumps)?			
If not continuous, was/is the noise periodic (i.e. repetitive) or irregular (comes and goes)?			
Did/does it contain and tonal noise (possibly tonal alarm?), whines, screeches, hisses etc.?			