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Noise Impact Assessment

Planning Permit Variation Application

At

**Kronospan Manufacturing Facility
Holyhead Road
Chirk
Wrexham**

for

**Fichtner Consulting Engineers
Acting on behalf of Kronospan Ltd**

**Consultant: D.R. Kettlewell MSc MIOA MAE I.Eng
Report No.: R23.1106/DRK
Date: 30th November 2023**

Noise & Vibration Consultants Ltd

**Member of Institute of Acoustics
Member of Association of Noise Consultants
Member of Academy of Experts**

**Report undertaken & checked by:
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A handwritten signature in black ink, appearing to read 'DR Kettlewell', is written over a light blue horizontal line.

Date: 30th November 2023

Summary

1. This noise assessment is prepared for Kronospan Ltd in support of an Environmental Permit (EP) Variation application made by Kronospan Limited (hereafter referred to as Kronospan). The EP Variation is applying to make a number of changes to the Facility as permitted. These include the following:
 - i) Installation of an Orientated Strand Board (OSB) manufacturing process/plant.
 - ii) Amendments to the rail unloading and biomass handling and storage arrangements.
 - iii) Additional raw material storage areas, including the installation of hardstanding to some additional storage areas within the Log Yard.
 - iv) A new site access point and new lorry parking facility.
 - v) New Warehouse (northeast of Site).
 - vi) Additional surface water run-off lagoons/wetlands, including discharge of uncontaminated surface water run-off from the lagoons/wetlands.
 - vii) Additional land to be incorporated into the installation boundary to accommodate items iii), iv) and v).

The above would be introduced to the Kronospan Works site located off Holyhead Road, Chirk, Wrexham. Further detailed information in respect of the EP Variation application, site details and relevant documents are provided in the Fichtner Supporting Information document (S2376-0290-0004RSF).

2. The assessment establishes any potential noise impact on existing residential properties resultant from the operation of the various plant associated with the EP Variation.
3. At the request of NRW, the study benefits from an updated baseline noise survey undertaken in July and August 2021 and April 2022 to establish representative residual and background sound levels at agreed noise sensitive receptors (NSRs), which provides comparison and context with the development.
4. The assessment also considers the cumulative effect of the operation of permitted development (that was not built or operational during the latest baseline surveys undertaken in 2021 and 2022).

Noise Criteria

5. BS4142: 2014+A1:2019 is relevant to fixed industrial noise sources and is therefore the most relevant standard for the assessment of noise impacts from the Proposed Development. For context and assessment of impact relative to any increase in residual noise levels, the IEMA guidance is referenced to also provide additional analysis.

Noise from the EP Variation

6. Noise levels have been predicted based on ISO9613-2 methodology using computer-based software and appropriate input settings.

7. Empirical data obtained from Kronospan from similar projects at other sites or library data from on-site measurements, which has been used to maintain the accuracy predictions at the NSRs assuming normal site operations.

Conclusions

8. Following detailed calculations and consideration of appropriate and relevant standards, we have concluded the following:
 - a) The results show that the EP Variation noise sources are between 18dB below to 2dB above the representative baseline background sound levels at residential NSRs during daytime and between 16dB below to 2dB above background sound levels during night-time. This represents an impact which is either **low** or **below an adverse impact** according to BS4142:2014+A1:2019.
 - b) In terms of IEMA guidance on noise level increase the daytime change in ambient noise levels is between 0dB and 1dB LAeq at residential NSRs during the daytime and between 0.1dB and 1.5dB during night-time periods. This represents a **negligible** impact according to IEMA.
 - c) The proposed EP Variation includes the proposed new Access Road and Lorry Park facility. This facility has been designed and optimised through the planning process and is designed to provide improvements to local HGV movement which needs to pass through part of the village to get to the Kronospan entrance and limit the ingress into the Green Belt and any adverse impact on the Pontcysyllte Aqueduct and Canal World Heritage Site buffer zone. This proposal therefore provides an improvement and benefit to local residential amenity from associated site traffic from noise along Holyhead Road and provides minimal visual impact on the World Heritage Site. The effect of the existing traffic flow and lorry park has not been considered in this assessment, but as shown in the planning submission it will provide an improvement in noise levels at NSRs. BAT has therefore been applied to available mitigation measures in context with the applied environmental constraints defined by Local Planning Authority and associated consultees.
 - d) The analysis shows that the Lorry Park and Access Road development is a significant contributor at NSRs to the north and northeast of the Kronospan site (i.e. R1 to R5). This means that trying to reduce noise levels further relative to these NSRs is limited by the mitigation measures proposed, due to the environmental constraints enforced by the Planning Authority consultees (i.e. BAT has been applied).
 - e) The magnitude of the impact during daytime or night-time is shown to be a **low impact** (i.e. according to BS 4142: 2014+A1:2019). In relation to the IEMA guidance which looks at the increase in residual sound levels, the results show a **negligible** impact.

- f) The permitted development that was not in operation when the baseline study was undertaken (i.e. in 2021) has been considered in the assessment. The analysis shows that the permitted development (i.e. plant that is not operating) would result in no changes in the cumulative noise level and would therefore no impacts or effects would occur.

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1.0 INTRODUCTION

- 1.1 This noise assessment is prepared for Kronospan Ltd in support of an Environmental Permit (EP) Variation application made by Kronospan Limited (hereafter referred to as Kronospan). The EP Variation is applying to make a number of changes to the Facility as permitted. These include the following:
- i) Installation of an Orientated Strand Board (OSB) manufacturing process/plant.
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 - vi) Additional surface water run-off lagoons/wetlands, including discharge of uncontaminated surface water run-off from the lagoons/wetlands.
 - vii) Additional land to be incorporated into the installation boundary to accommodate items 3, 4 and 5.
- 1.2 The above would be introduced to the Kronospan Works site located off Holyhead Road, Chirk, Wrexham. Further detailed information in respect of the EP Variation application, site details and relevant documents are provided in the Fichtner Supporting Information document (S2376-0290-0004RSF).
- 1.3 The assessment establishes any potential noise impact on existing residential properties resultant from the operation of the various plant associated with the EP Variation.
- 1.4 At the request of NRW, the study benefits from an updated baseline noise survey undertaken in July and August 2021 and April 2022 to establish representative residual and background sound levels at agreed noise sensitive receptors (NSRs), which provides comparison and context with the development.
- 1.5 Where appropriate, Noise & Vibration Consultants Ltd will provide recommendations for noise amelioration measures to comply with BAT to reduce and minimize the effect of noise on NSRs.

Assessment Aims and Objectives

- 1.6 The aim of the noise assessment is to provide information for the EP Variation application in relation to the impact of noise from the development on NSRs. This includes the provision of the following:
- Provides information on typical existing noise climate at sensitive receptors established from baseline surveys undertaken in July/August 2021 and April 2022.
 - Provides information on noise levels from the plant associated with the EP Variation.
 - Provides information on noise levels from permitted development that has not been built, which is to be included in the assessment of cumulative effects.
 - Provides information on the predicted noise from the EP variation at the NSRs and compares this with the baseline noise climate.

- Where appropriate, provides advice in respect of noise mitigation measures necessary to meet appropriate noise guidance, standards and BAT.
- 1.7 The above potential noise impacts are considered in the context of the existing background noise at site, which is predominantly influenced by local and distant road traffic noise and industrial noise.

Survey Work

- 1.8 The study benefits from baseline noise survey work in July/August 2021 at NRW agreed monitoring locations, which represent a cross-section of sensitive receptor boundaries. Additional baseline monitoring at two further locations for the Access Road and Lorry Park planning application was carried out during April 2022.
- 1.9 The study benefits from further noise survey work on site that has been installed, which provides an update to assumed noise data for inclusion in this assessment.

Sources of Information

- 1.10 Information used in this assessment has been obtained from the following sources:
- Ordnance Survey maps of the local area;
 - general layout and elevations of the Proposed Development including drawing no. 7000/757 showing the location of the associated facilities;
 - British Standards BS 4142: 2014+A1:2019, BS 7445: 2003, BS 8233: 2014; BS5228-1:2009+A1:2014;
 - World Health Organisation: 'Guidelines for Community Noise' - April 1999;
 - 'Night Noise Guidelines for Europe' WHO 2009
 - Technical Advice Note ("TAN") 11, 'Noise' – 1997;
 - EA Noise and vibration management: environmental permits (January 2022);
 - ISO 9613-2: 1996 Acoustics – Attenuation of Sound During Propagation Outdoors;
 - NVC Report R16.0204/DRK dated 12th February 2016 for RCF Facility;
 - NVC Report R16.0705/DRK dated 21st July 2016 for Chip Wash Pre-heating Plant;
 - NVC Report R16.0401/DRK dated 5th April 2016 for proposed building extension for MF Press & relocation of MF Ventilation System;
 - NVC Report R15.0903/DRK dated 4th September 2015 for Gas Engine CHP Facility;
 - NVC Report R17.0306/DRK dated 8th April 2017 for Wood Chip Preparation Facility;
 - NVC Report R17.0506/1/DRK dated 12th June 2018 for OSB Manufacturing Facility;
 - NVC Report R21.0502/DRK dated 7th May 2021 for new Warehouse Facility;
 - NVC Report R21.0807/DRK dated 23rd August 2021 Baseline Noise Survey;

- NVC Report R22.0103/DRK dated 23rd February 2022 for Covered Loading Yard;
- NVC Report R22.0305/DRK dated 23rd March 2022 for the Engineering Stores;
- NVC Report R22.0606/DRK dated 24th June 2022 for the Proposed Extension to the Wood Chip Preparation Building & Silos;
- Access Road & Lorry Park Environmental Statement Chapter 8.0 Noise & Vibration Chapter (July 2023); and
- Brucha Composite Wall & Roof Panel WP-F & WP-D specification and technical brochure.

1.11 Appendix 1 provides details of technical terms described in layman terms for ease of reference. There is also a table showing typical everyday noise levels to assist in understanding the subjective level of noise in terms of decibels.

2.0 SITE DESCRIPTION

2.1 Introduction

- 2.1.1 The existing Kronospan site (the Site) extends to around 40 hectares and comprises a number of large industrial process buildings housing the main manufacturing processes, storage areas for raw materials, warehouse buildings for manufactured products, together with other facilities associated with a discrete manufacturing business.
- 2.1.2 The western perimeter of the Kronospan site is formed by the Shrewsbury to Chester railway. Improved railway siding facilities have been constructed within the Kronospan site to enable an increased volume of timber to be imported by rail and the new rail sidings are now operational. The Shropshire Union Canal is located to the west of the railway line. Water is abstracted from the canal for use in the manufacturing process. The eastern perimeter of the Site is formed by Holyhead Road (B5070). An earth bund, planted with trees, has been developed along the eastern perimeter of the Site in order to reduce the visibility of the site operations from neighbouring properties on Holyhead Road.
- 2.1.3 A sewerage pumping station and one property, owned by Maesgwyn Estate, are located to the immediate north of the Site. To the immediate south of the Site is the Mondelez factory and the Chirk recreational ground.
- 2.1.4 The main residential area of Chirk is located to the east of the Site with residential properties lining the majority of the eastern side of Holyhead Road. Chirk town centre is located approximately 500 m to the south-east of the Site.
- 2.1.5 The wider area beyond the urban settlement of Chirk is dominated by agricultural fields and woodland. Chirk Castle and its grounds are located to the west of the site, beyond the Llangollen Canal.

Access

- 2.1.6 The site is currently accessed via a T-junction with Holyhead Road (B5070) which runs in a north south direction to the east of the site. The B5070 meets the A5 approximately 1.5km to the north of the site via a roundabout junction, known as Whitehurst Roundabout. Approximately 1km to the east of this roundabout the A5 forms a junction with the A483. The A483/A5 provide links north to Chester, west to Llangollen and south to Shrewsbury.
- 2.1.7 To the south of the site access the B5070 leads to the A5 via Chirk town centre, this route is restricted to non-HGV traffic. The existing railhead and sidings within the site are used to import timber for the manufacturing process.

2.2 Permitted Plant in Operation During Latest Baseline Survey in July 2021

- 2.2.1 In respect of what has changed in site noise terms since the baseline survey was carried out in July 2021, we have provided details of the permitted facilities in operation at that time in Table 2.1.

Table 2.1: Permitted Development via Planning Decision Constructed and in Operation during July 2021 Baseline Survey

Facility	Planning Reference	NVC Report	Status in July 2021
1. Biomass Facility	P2012/0165 P/2013/0824	ES Chapter 9 Volume 1 Feb 2012	Operating
2. RCF Facility	P/2016/0219	R16.0204/DRK	Operating
3. Chip Wash Pre-heating Plant	P/2016/0442	R16.0705/DRK	Operating
4. Gas Engine CHP Facility	P/20015/0728	R15.0903/DRK	Operating
5. Wood Chip Preparation Building and WESP Chip Dryer	P/2017/0416	R17.0306/DRK	Operating
6. Melamine Facing Press Hall	P/2016/0336	R16.0601/DRK	Operating
7. Raw Board Store	Appeal Ref. 3193142 P/2017/0700	R17.0507/DRK	Not Operating: Raw Board Store Installed
8. Replacement Chipper & Wood Flaker Facility	P/2017/0699 P/2017/0700	-	Operating- Existing Chipper refurbished with new acoustic cladding and screens. Flaker not yet built (forms part of this variation).
9. Pre-production plant (includes flakers, mills and conveyor plant)	P/2017/0416	-	Operating: The older plant that was outside was removed and the new plant inside the chip prep building & fitted with insulated cladding.
10. MDF Finishing Line	-	-	Operating: Building acoustically lined
11. Tongue & Groove (T&G) Line	-	-	Operating: Plant replaced and new plant fitted with acoustic booths around certain plant.
12. Two additional CHP engines	P/2019/0505	R17.0506/2/DRK	Not Operating
13. OSB Manufacturing facility	P/2018/0551	R17/0506/1/DRK	Forms part of this variation.
14. New Warehouse (northeast of Site)	P/2021/0725	R21.0502/DRK	Forms part of this variation.
15. Covered Loading Yard	P/2022/0336	R22.0103/DRK	Forms part of this variation.
16. Engineering Stores	P/2022/0615	R22.0305/DRK	Forms part of this variation.
17. Extension to the Wood Chip Preparation Building & Silos	P/2022/0765	R22.0606/DRK	Forms part of this variation.
18. North Access Road & Lorry Park/132kV	P/2022/1080	ES Noise Chapter 8 (July 2023) & Addendum Sept 2023	Forms part of this variation.

2.2.2 The above table shows that the only plant **not in operation** at the time of the baseline study in 2021, that now exists and would be operating following commissioning would be the Raw Board Store. This would be considered as part of any cumulative effects in the assessment.

3.0 NOISE GUIDANCE AND CRITERIA

Planning Policy, Guidance and Standards

General

- 3.1 Within the introduction of Technical Advice Note (Wales) 11: 1997 'Noise' it states:

"This note provides advice on how the planning system can be used to minimise the adverse impact of noise without placing unreasonable restrictions on development or adding unduly to the costs and administrative burdens of business."

- 3.2 Technical Advice Note 11 (TAN 11) provides the following information:

- indicates how noise issues should be handled in development plans and development control;
- outlines ways of mitigating the adverse impact of noise;
- provides specific guidance on noisy and noise-sensitive development;
- introduces the use of noise exposure categories; and
- gives guidance on the use of planning conditions relating to noise.

- 3.3 The guidance introduces the concept of Noise Exposure Categories (NEC), which have been derived to assist local planning authorities in their consideration of planning applications for residential development near transport-related noise sources. The NEC procedure is only applicable for the introduction of a new residential development into an area with an existing noise source. At Annex 1, guidance is given for various types of noise sources, which includes road traffic, aircraft and railways.

- 3.4 For reference, the recommended noise exposure categories for new dwellings near existing sources are shown below in Table 3.1. Note that these noise categories are based upon measurements taken in an open site (i.e. without any noise attenuating features in place).

- 3.5 The level at the boundary of NEC A and NEC B is based on guidance provided by the World Health Organisation (WHO) health criteria from 1980, which states that *"general daytime outdoor noise levels of less than 55dB(A) Leq are desirable to prevent any significant community annoyance"*.

- 3.6 The night-time noise level at the boundary of NEC A and NEC B is also based upon the WHO health criteria, stating *"based on limited data available, a level of less than 35dB(A) is recommended to preserve the restorative process of sleep"*.

- 3.7 Table 3.1 below provides an interpretation of the NEC categories in terms of granting planning permission.

Table 3.1: NEC Categories

NEC Category	Description	Noise Range $L_{Aeq,T}$ dB
A	Noise need not be considered as a determining factor in granting planning permission, although the noise level at the high end of the category should not be regarded as desirable.	<55dB(A) daytime (16hr) <45dB(A) night-time (8hr) Road, rail and mixed sources
B	Noise should be taken into account when determining planning applications and, where appropriate, conditions imposed to ensure an adequate level of protection.	55-63dB(A) daytime (16hr) 45-57dB(A) night-time (8hr) Road and mixed sources
C	Planning permission should not normally be granted. Where it is considered that permission should be given, for example, because there are no alternative quieter sites available, conditions should be imposed to ensure a commensurate level of protection against noise.	63-72dB(A) daytime (16hr) 57-66dB(A) night-time (8hr) Road and mixed sources

3.8 In applying these noise exposure categories, it states:

“Different indices have been used to describe noise from different sources, and limits have been set over different time periods. This has caused confusion, and this advice follows the move towards consistency advocated in BS 7445: 1991 by expressing all noises of $L_{Aeq,T}$. The recommended time periods are 0700-2300 and 2300-0700.”

3.9 For noisy industrial development, the guidance refers to BS 4142 - ‘Method for Rating Industrial Noise Affecting Mixed Residential and Industrial Areas’ (updated in 2019).

3.10 To establish the impact of the Proposed Development 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.

BS4142: 2014+A1:2019 ‘Methods for Rating and Assessing industrial and Commercial Sound’

3.11 BS4142: 2014+A1:2019 ‘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, 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).

3.12 To establish the rating level, corrections for the noise character need to be taken into consideration.

3.13 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.”

3.14 The subjective method adopted includes the following character corrections:

Table 3.2: BS4142 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 Buildings'

3.15 The British Standard 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.

3.16 The guidance provided in Section 7.7 of BS8233 provides recommended internal ambient noise levels for resting, dining and sleeping within residential dwellings.

3.17 Table 3.3 provides detail of the levels given in the standard.

Table 3.3: 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
Study and work requiring concentration	Staff/Meeting Room	35-45dB LAeq	
	Training Room/ Executive Office	35-45dB LAeq	

3.18 This standard would be appropriate to apply to existing or proposed residential development. The Site noise contribution should be within the proposed internal noise levels, which would 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]
- Offices: 35dB to $45\text{dB } L_{Aeq,8\text{hours}}$ [equivalent to an external level of approximately 65dB to $75\text{dB } L_{Aeq,8\text{hours}}$ based on typical standard double-glazed units in the closed position].

3.19 The above internal bedroom limits would 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 42dB - $45\text{dB } L_{Amax}$ for regular peak events within bedrooms [which is approximately 57dB - $60\text{dB } L_{Amax}$ external to the bedroom window in the open position].

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

3.20 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 $35\text{dB } L_{Aeq}$. To protect the majority of people from being seriously annoyed during the daytime, the outdoor sound level from steady, continuous noise should not exceed $55\text{dB } L_{Aeq}$ 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 $50\text{dB } L_{Aeq}$. 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

3.21 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 – Guidance: Noise and Vibration Management: Environmental Permits (July 2021)

3.22 As stated in the guidance “*Environmental permits have conditions that require operators to control pollution – this includes controlling noise and vibration. 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*
- *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”*

3.23 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.

3.24 The guidance advises on 4 steps that are required when carrying out a noise impact assessment, these are:

- Desktop risk assessment – identification of any audible noise plant or operations, identification of NSRs, description and ranking of noise sources in terms of potential off-site impact, description of land between site and NSRs.
- 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 ISO 9613 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, to minimise noise impact.

Institute of Environmental Management and Assessment (IEMA)

3.25 The Institute of Environmental Management and Assessment (IEMA) 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 noise relative to the context of the noise climate, which is detailed in Table 3.4.

Table 3.4: 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 (residential: receptor of high 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

Change in sound levels LAeq dB	Description of Effect	Impact Magnitude	PPG Effect Level
+5.0 to +9.9 (residential: receptor of high 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 (residential: receptor of high 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	UOAE

*The level at which physical harm occurs will be dependent upon a number of site-specific factors, which may include type and character of noise source, location, human sensitivities, duration and receptor expectations, effect on health etc.

Noise Assessment Criteria

Noise Assessment Methodology

- 3.2.26 The results of the noise model will assist in determining any increase or decrease in the noise level contribution at the sensitive receptors following the application of BAT. The noise contribution would also be assessed against BS4142: 2014+A1:2019 and the IEMA guidelines for further impact analysis.
- 3.2.27 The calculation method used in this study is based upon ISO 9613: 2, noise propagation model, which takes into account source position, screening effects, distance and direction in relation to the nearest receptor. Noise predictions have been undertaken using CadnaA noise modelling software.
- 3.2.28 The predicted noise levels from the EP Variation application have been calculated using the mitigated noise levels provided within Appendix 4. The noise levels are based on plant noise data provided by Kronospan from similar projects at other sites or library data from on-site measurements.
- 3.2.29 The noise control measures are intended to reduce noise impacts as far as is practicable by applying BAT.

4.0 BASELINE SOUND SURVEY RESULTS

4.1 General Environs

- 4.1.1 The main source of existing noise affecting nearest receptor location relates to the movement of local and distant road traffic and industrial activities.

4.2 Baseline Sound Monitoring Positions

- 4.2.1 Historical noise monitoring has been undertaken by Kronospan at locations surrounding the site in conjunction and agreement with the WCBC Public Protection Officer in or around 2011.
- 4.2.2 Following the EP application, Natural Resources Wales (NRW) issued a Schedule 5 Request, dated 5 February 2020 requiring the baseline to be updated due to significant changes in the Kronospan site.
- 4.2.3 Figure 1 attached shows the site position relative to the noise monitoring positions and receptor locations.
- 4.2.4 Following an agreement with NRW in respect of a baseline monitoring methodology, static noise measurements were undertaken at 9 fixed positions for approximately 1 week between Tuesday 27th July to Tuesday 3rd August 2021.
- 4.2.5 Two additional baseline monitoring positions (to the north of Kronospan) were included for the purpose of the Access Road and Lorry Park planning application and the baseline study was carried out at Afon Bradley Farm (P10) and opposite to Lodge Farm Cottage (P11) between Friday 1st April and Tuesday 5th April 2022.
- 4.2.6 The static monitoring positions provide broadband noise data of the existing noise climate around the site at the nearest residential receptor locations.

Nearest Sensitive Receptor (NSR) Monitoring Positions

- 4.2.7 Details of the NSR monitoring positions and subjective observational notes made during 30th July and 3rd August 2021 and between Friday 1st and 5th April 2022 surveys are provided below in Table 4.1.

Table 4.1: Subjective Observations

NSR Position	Grid Reference	Approximate Distance from Site Boundary (m)	Subjective Description of Noise Climate (2021 & 2022)	Description of Monitoring Position
P1: No.2 Linden Avenue	329196 339250	260	During daytime periods no site noise was audible and the noise climate was formed in general by occasional local road traffic movements, more constant distant road traffic noise and birdsong with occasional high-level aircraft. During night-time periods, noise from site off Linden Avenue was barely audible with no tonal or impulse noise character detected.	This dwelling has a garden facing the direction of Kronospan off Linden Avenue a location area previously used for distant receptor to the northeast. Meter placed in centre of garden away from reflective walls.

NSR Position	Grid Reference	Approximate Distance from Site Boundary (m)	Subjective Description of Noise Climate (2021 & 2022)	Description of Monitoring Position
P2: No. 3 Wern	328935 339034	40	During daytime periods local road traffic noise dominates the noise climate from Holyhead Road. Short periods between traffic movements indicate very low-level steady background site noise but no character detected. During night-time there was intermittent road traffic movement and a low-level steady 'air movement' type noise but no perceptible tonal or impulse character detected.	This dwelling has a front garden facing Kronospan site off Wern. This is a location previously used for receptor to the northeast close to the B5070 Holyhead Road. Meter placed in centre of front garden at least 3.5m away from dwelling.
P3: No. 23 George Street	328896 338882	110	Noise from site was not audible at the rear garden at this location during daytime periods and distant road traffic noise was audible and birdsong with occasional high level short-term aircraft. At the previous West View spot roaming location noise from Holyhead Road was dominant. During night-time periods at positions at similar distance from Holyhead Road a low-level steady 'air movement' type noise was just audible but no noise character evident. Road traffic movements occur occasionally.	This dwelling was closest and most accessible and safe property relative to West View with a garden open to noise from direction of Kronospan closer to the site to the northeast and away from traffic noise off Holyhead Road. This is further back than previous survey positions off West View and therefore more likely to produce lower ambient and background sound levels. Meter placed towards rear of garden away from reflective walls.
P4: Chirk Court	329059 338217	650	This position is adjacent to and a similar distance from Holyhead Road which dominates the daytime noise climate due to vehicle movements here and no site noise audible above road traffic. Similar to P2 during night time there is intermittent road traffic movement and a low-level steady 'air movement' type noise but no perceptible tonal or impulse character detected.	This position was most open location and accessible relative to Maes-y-waun and at similar distance from Holyhead Road and should therefore provide similar ambient and background sound levels to those previously measured. Green space used was in view of Kronospan and location west to southwest of site. Meter placed to the side of bicycle park on lawned area away from reflective walls and main building.
P5: No.2 Hadley Close	329346 337929	1100	This position is at distance from the Site and as such during daytime periods noise was barely perceptible and mainly formed by local and distant road traffic noise. During night-time periods, there is a very low steady 'air movement' type noise but no perceptible tonal or impulse character and local road traffic occurs occasionally.	This dwelling position was the most accessible and open location relative to previous Shepherds Lane monitoring position. Front garden was in directional view of Kronospan site. Meter placed towards centre of front lawn away from reflective surfaces.
P6: Tall Trees, Station Avenue	328572 337837	1120	This position is relatively close to the Mondelez factory and as such during daytime and night-time the noise climate is dominated by a steady 'air movement' type noise which appears to be from a relatively close source, which may be associated with the Mondelez plant. Occasional local road traffic movements occur during daytime and occasionally during night-time. The source of 'air movement' noise does not	This dwelling was the closest to the Mondelez entrance off Station Avenue and the rear garden faces the direction of Mondelez and Kronospan being south of the sites. Meter and weather station placed in rear garden away from reflective walls of dwelling.

NSR Position	Grid Reference	Approximate Distance from Site Boundary (m)	Subjective Description of Noise Climate (2021 & 2022)	Description of Monitoring Position
			present any perceptible tonal or impulse noise character.	
P7: Canalwood Industrial Estate	328403 337898	1060	At this location the monitoring position is towards the entrance of the access road into the estate. Noise from Mondelez and Kronospan and occasional passenger train movement is audible and during night-time periods noise from parked HGVs with engines running can be audible. The low-level air noise and a low frequency pulse type noise was perceptible but appeared to be a relatively local source, which wasn't identifiable.	This position was most appropriate for measuring ambient noise and in a position facing the Kronospan site away from reflective walls and buildings. Meter placed on green space on raised grassed bund just to the west of the railway station complex.
P8: Manatton, Llwyn-y-cil Road	328080 337787	1280	At positions off Llwyn-y-cil Road daytime and night-time noise is formed in general by a distant low-level steady 'air noise' which does not present any tonal or impulse noise character. Local road traffic movements and birdsong form other general noise sources during daytime and occasional vehicle movements during night-time.	This dwelling position was the most accessible position to the southwest of Kronospan site in a position with side lawned area facing an unimpeded direction towards the Kronospan plant. Meter placed in the side private garden just north of the dwelling away from dwelling walls.
P9: New Hall Farm, Castle Gates	327611 338873	1140	At the elevated position to the northwest at New Hall Farm the daytime and night-time noise climate is generally formed by distant, steady 'air movement' type noise which does not indicate any tonal or impulse noise. Other noise sources include local farm animal noise, bird noise and local road traffic movements.	This position was most accessible and appropriate position to the northwest of the Kronospan site and in view of the plant on an elevated land position just east of the farm entrance. Meter was placed in the field opposite the farm site entrance away from reflective walls and buildings,
P10. Afon Bradley Farm	328691 339433	40	The noise climate was formed in general by regular distant road traffic movements, birdsong with occasional high-level aircraft. No significant noise from Kronospan was perceptible.	This property is in the ownership of the Applicant and is located to the northwest of the proposed lorry park.
P11. Opposite Lodge Farm Cottage	328953 339526	50	. During daytime periods local road traffic noise dominates the noise climate from Holyhead Road. During night-time there was intermittent road traffic movement. No significant noise from Kronospan was perceptible.	This property is located opposite the proposed new roundabout junction and therefore northeast of the lorry park. The meter was placed in the field opposite the property at a similar distance from the local road network.

4.3 Existing Background Sound Survey Results

4.3.1 The results of the noise monitoring surveys are provided below in Table 4.2 (daytime) and Table 4.3 (night-time). Please refer to Appendix 2 and Appendix 3 for further details of the surveys and baseline results.

Table 4.2: Daytime Baseline Noise Measurements (0700-2300 hours)

Location	Survey Dates	LAeq dB	Representative LA90 dB	LAmix dB
P1. Linden Avenue	July 2021	46	36-37	47-86
P2. Wern	July 2021	57	45-48	63-91
P3a. George Street	July 2021	40	33-35	43-80
P4. Maes-y-Waun	July 2021	59	49	68-92
P5. Hadley Close	July 2021	47	41-42	47-86
P6. Station Avenue	July 2021	49	45-46	48-84
P7. Canalwood Industrial	July 2021	54	51-54	44-92
P8. Lylwn-y-cil Road	July 2021	46	39-40	42-75
P9. Opposite Castle back	July 2021	48	38	40-99
P10. Afon Bradley Farm	April 2022	51	43	51-83
P11. Opposite Lodge Farm Cottage	April 2022	61	51	69-92

Table 4.3: Night-time Baseline Noise Measurements (2300-0700 hours)

Location	Survey Dates	LAeq dB	Representative LA90 dB	LAmix dB
P1. Linden Avenue	July 2021	41	34	40-81
P2. Wern	July 2021	52	40	54-80
P3a. George Street	July 2021	37	30-31	34-62
P4. Maes-y-Waun	July 2021	53	46-47	49-93
P5. Hadley Close	July 2021	47	39-40	41-82
P6. Station Avenue	July 2021	47	45	47-67
P7. Canalwood Industrial	July 2021	54	49-51	54-80
P8. Lylwn-y-cil Road	July 2021	45	38-39	39-75
P9. Opposite Castle back	July 2021	47	34-36	54-80
P10. Afon Bradley Farm	April 2022	49	43	52-92
P11. Opposite Lodge Farm Cottage	April 2022	55	42	52-92

Historical Baseline Levels

- 4.3.2 Historical baseline data for Bryn Hyfryd, which is owned by the Applicant, was used as a fixed monitoring position for the original baseline survey in 2011. The background and residual levels established were found to be similar to those at Maes-y-Waun at a background level of 48dB LA90 daytime and 46dB LA90 night-time and 58dB and 53dB LAeq respectively. We have therefore used the original established baseline data from 2011 as being relevant for this position.

Representative Background Level

- 4.3.3 Section 8 of BS4142:2014+A1:2019 sets out the parameters for establishing the representative background level. The standard provides an example of statistical analysis that might provide a suitable method using the most commonly occurring value.

4.3.4 The data set obtained during the July and August monitoring period has been statistically analysed and the results provided below in Tables 4.4 and 4.5 and Appendix 3. This includes values for median, mean and most common place figures (including rain and without rain affected data).

Table 4.4: Statistical Analysis of Data Set (including rain affected periods)

With Rain	Position 1 Linden Avenue		Position 2 Wern		Position 3 George Street		Position 4 Maes-y-waun		Position 5 Hadley Close		Position 6 Station Av. (Mondelez)		Position 7 Canalwood Ind Est		Position 8 Llwyn-y-cil Road		Position 9 Castle Gates	
	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
Total number of values	401	192	451	224	373	192	450	224	423	192	411	192	459	224	442	224	376	176
Number of excluded values	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of binned values	401	192	451	224	373	192	450	224	423	192	411	192	459	224	442	224	376	176
Minimum	31	28	36	31	27	24	42	41	33	31	43	43	42	46	34	33	30	30
25% Percentile	36	31.25	45	38	33	29	47	45	39	38	45	45	49	49	38	37	36	34
Median	37	35	48	41	35	31	49	46	41	40	46	45	51	51	40	38	38	36
75% Percentile	41	38	51	45	37	34	51	48	44	42	47	46	54	53	41	40	41	38
Maximum	48	51	58	52	43	40	58	53	50	53	52	57	56	55	51	60	46	54
Most Commonplace	36	30	45	38	33	30	49	47	41	39	45	45	54	49	39	39	38	34
Mean	38.08	35.13	47.49	41.34	34.98	31.83	49.32	46.46	41.15	39.77	46.09	45.74	51.27	50.87	39.97	39.10	38.23	37.40
Std. Deviation	3.13	4.10	4.16	4.77	3.22	3.61	2.63	2.34	3.35	2.90	1.68	1.65	2.58	2.44	2.53	4.23	3.35	4.88
Std. Error of Mean	0.16	0.30	0.20	0.32	0.17	0.26	0.12	0.16	0.16	0.21	0.08	0.12	0.12	0.16	0.12	0.28	0.17	0.37
Lower 95% CI of mean	37.78	34.54	47.11	40.72	34.65	31.32	49.08	46.15	40.83	39.36	45.92	45.50	51.03	50.55	39.74	38.55	37.89	36.67
Upper 95% CI of mean	38.39	35.71	47.88	41.97	35.31	32.35	49.56	46.77	41.47	40.18	46.25	45.97	51.51	51.19	40.21	39.66	38.57	38.12

Table 4.5: Statistical Analysis of Data Set (excluding rain affected periods)

Without Rain	Position 1 Linden Avenue		Position 2 Wern		Position 3 George Street		Position 4 Maes-y-waun		Position 5 Hadley Close		Position 6 Station Av. (Mondelez)		Position 7 Canalwood Ind Est		Position 8 Llwyn-y-cil Road		Position 9 Castle Gates	
	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
Total number of values	387	176	437	208	359	176	418	208	410	176	397	176	445	208	429	208	363	160
Number of excluded values	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of binned values	387	176	437	208	359	176	418	208	410	176	397	176	445	208	429	208	363	160
Minimum	31	28	36	31	27	24	42	41	33	31	43	43	42	46	34	33	30	30
25% Percentile	36	31	45	38	33	29	47	45	39	38	45	45	49	49	38	36	36	34
Median	37	34	48	41	35	31	49	46	41	40	46	45	51	51	40	38	38	36
75% Percentile	41	38	50	45	37	34	51	48	44	41.75	47	46	54	53	41	39	41	38
Maximum	48	42	58	52	43	40	58	52	50	44	51	50	56	55	51	51	46	48
Most Commonplace	36	30	45	38	33	30	49	47	42	39	45	45	54	49	39	39	38	34
Mean	38.05	34.76	47.44	41.36	34.99	31.88	49.31	46.44	41.18	39.62	46.09	45.47	51.34	50.92	39.91	38.37	38.19	36.58
Std. Deviation	3.13	3.76	4.15	4.80	3.18	3.58	2.68	2.30	3.29	2.56	1.67	1.05	2.58	2.51	2.48	2.86	3.38	4.06
Std. Error of Mean	0.16	0.28	0.20	0.33	0.17	0.27	0.13	0.16	0.16	0.19	0.08	0.08	0.12	0.17	0.12	0.20	0.18	0.32
Lower 95% CI of mean	37.74	34.20	47.05	40.70	34.66	31.35	49.06	46.13	40.86	39.24	45.93	45.32	51.10	50.58	39.67	37.98	37.84	35.94
Upper 95% CI of mean	38.37	35.32	47.83	42.01	35.32	32.41	49.57	46.76	41.49	40.00	46.26	45.63	51.58	51.27	40.14	38.76	38.54	37.21

4.3.5 The assumed representative background sound level is taken as either median or most commonplace as the background level is affected by wind direction and this provides some flexibility in assessment under different meteorological conditions.

4.3.6 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.

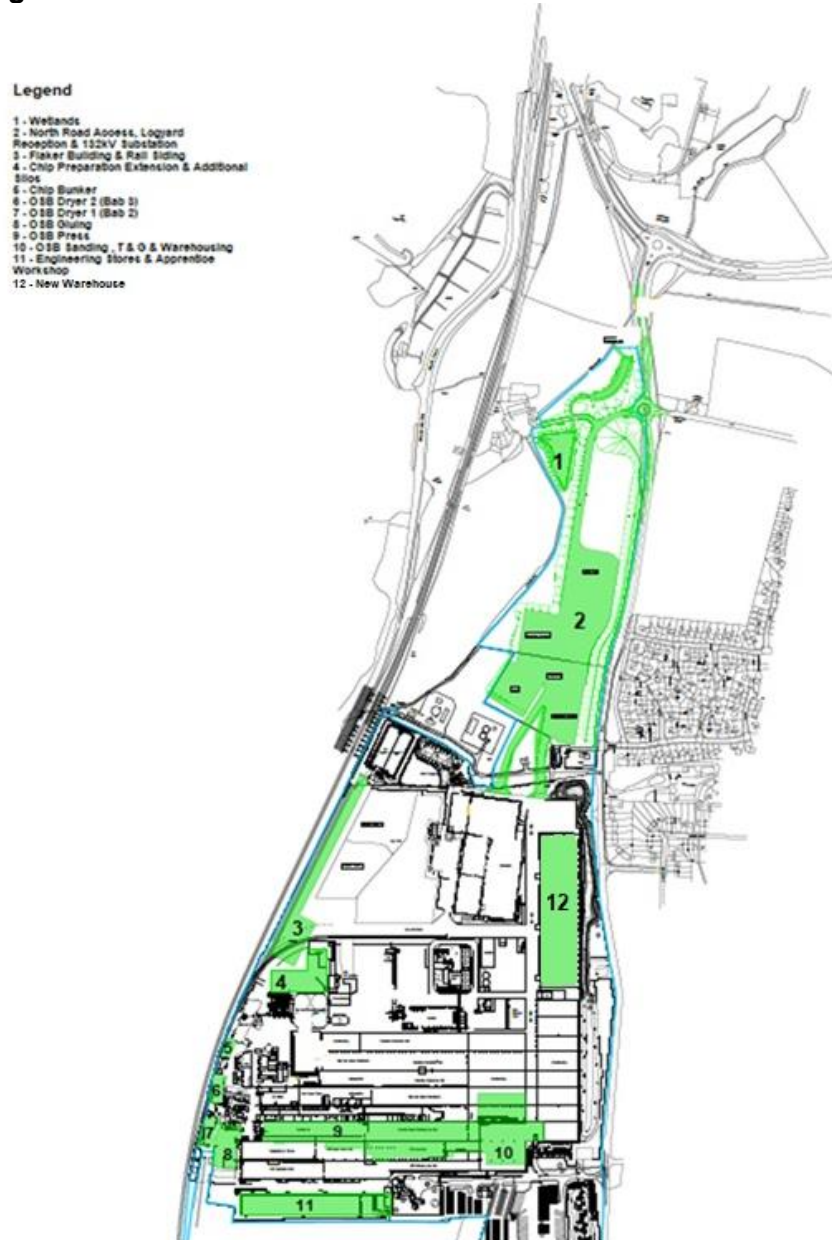
4.3.7 For the purpose of this assessment, it is assumed that operational noise from the Proposed Development would be under appropriate weather conditions and therefore any significant positive or negative vector from wind direction is not representative. The effect of wind speed and direction can also 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.

5.0 NOISE MITIGATION MEASURES & PREDICTIONS

5.1 Introduction

- 5.1.1 The location of proposed development facilities associated with the EP Variation are indicated below in Figure 5.1 and Figure 2 attached.

Figure 5.1: Location of Plant Associated with the EP Variation



5.2 Noise Management Plan (NMP) and EP Variation Mitigation Strategy

Permit requirements

- 5.2.1 The Facility has an EP to operate. Section 3.2 of the EP includes conditions regarding the emissions of substances not controlled by emission limits, this condition states:

“Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.”

“Pollution”, other than in relation to a water discharge activity or groundwater activity, is defined in the Environmental Permitting Regulations as:

“Any emission as a result of human activity which may-

- 18. Be harmful to human health or the quality of the environment;*
- 19. Cause offence to a human sense;*
- 20. Result in damage to material or property; or*
- 21. Impair or interfere with the amenities or other legitimate uses of the environment.”*
- 22. Therefore, the EP controls emissions from all activities on-site. The measures should not only prevent harm to human health but also damage to property which includes noise nuisance. As such, to comply with the requirements of the EP, there are a number of noise emissions control measures in place at the Facility, including both physical measures and management techniques.”*

Draft Noise Management Plan (NMP)

- 5.2.2 The draft Noise Management Plan (NMP) includes a section on **Appropriate measures and Best Available Techniques (BAT)**, which states:

“In respect of the EU BAT ‘Reference Document for the Production of Wood-based Panels’ and the associated BAT Conclusions for the Kronospan site, the following response is provided is applied:

BAT 4. In order to prevent or, where that is not practicable, to reduce noise and vibrations, BAT is to use one or a combination of the techniques given below (prevention / point source reduction / site level reduction):

- (a) Strategic planning of the plant layout in order to accommodate the noisiest operations, e.g. so that on-site buildings act as insulation (generally applicable in new plants – layout of a site may limit applicability on existing plants);**

When installing new plant, noise is taken into consideration and plant is designed in order to minimise noise off-site. Noise surveys are carried out as part of planning applications prior to installation to assess the impact of any new plant to the surrounding areas.

- (b) Applying a noise reduction programme which includes noise source mapping, determination of off-site receptors, modelling of noise propagation and evaluation of the most cost-effective measures and their implementation;**

Various noise surveys have been carried out over the years, in 2012 an extensive survey was carried out by RSK to identify noise sources on-site and sensitive receptors off-site. This report was issued to the regulator for consideration and as a result the most significant sources that contributed to off-site noise were

examined with a view to noise reduction measures. The hierarchy of control was applied. In some cases hardware was required in the form of silencers, acoustic booths / panelling, or lagging. These improvements were documented by the regulator in the environmental permit. On completion of the high-priority sources, additional work was agreed to further reduce the site impact.

The site is currently undergoing major plant improvements, part of which is to reduce the noise impact both on and off-site. Individual projects, as part of the planning application process, require a noise assessment. In most cases, and where possible, a standard of 75 dBA at 1 meter from the exterior of any building is applied. When the plant improvement programme has been completed, a full on and off-site survey will be carried out to assess the improvement and establish a new noise reduction programme.

(c) Performing regular noise surveys with monitoring of noise levels outside the site boundaries;

Qualitative noise monitoring is carried out at least once a month at various locations within the local area. These points take into account sensitive receptors as identified during previous extensive noise surveys, being located where noise from the plant has the potential to cause a nuisance (e.g. areas with a large residential population, or sensitive receptors e.g. schools), or where previous complaints have been received.

Currently there are ten locations that are assessed each month, which have been agreed with the regulator, however additional areas may be included following any complaints or to ensure that any issues found have been resolved effectively. Monthly monitoring takes place at random times throughout the day as well as occasional monitoring at night / early morning / weekends. This is the only time during regular monitoring that quantitative measurements are taken due to the disruption from other background sources during the day. Noise levels are also measured during surveys carried out by third parties.

(d) Enclosing noisy equipment in housing or by encapsulation and by soundproofing buildings;

As previously discussed, going forward a standard of 75dBA at 1 meter from the exterior of the building is being adopted. For plant and equipment outside of buildings, the aim is to reduce noise levels to as reasonably practicable. This will be carried out by careful selection of plant and equipment, for example a band conveyor may be chosen as opposed to a bucket conveyor. Plant that is identified by a noise survey as having a high noise impact, may be enclosed via acoustic booths or panelling as part of the noise reduction programme.

(e) Decoupling individual equipment to pre-empt and limit propagation of vibrations and resonance noise;

Vibrational noise has not been an issue in the past. However, if this was to change and either complaints regarding this type of noise were received or if it was identified via a noise survey, any necessary course of action would be adopted to reduce the impact wherever possible.

(f) Point source insulation using silencer, damping, attenuators on noise sources, e.g. fans, acoustic vents, mufflers, and acoustic enclosures of filters;

As previously discussed in this section, equipment that produces a high level of noise is generally fitted with noise reduction devices to lessen any off-site impact. Careful consideration is taken in selecting the correct device for the plant. For

example, as detailed in the environmental permit improvement programme, the Preproduction Drier 2 Belt Drive was fitted with acoustic screening while the Formalin Plant Turbo Compressor Discharge Pipe was fitted with a silencer.

(g) Keeping gates and doors closed at all times when not in use. Minimising the fall height when unloading roundwood;

Most factory doors are self-closing to reduce noise impact. Where this is not the case, employees are reminded to ensure that doors are closed from 7pm until 7am as a minimum. In some cases this has been in agreement with the environmental regulator. Any complaints arising from local residents due to noise from open doorways are responded to immediately and any remedial action taken. At all times, and as part of routine operations, the fall height when unloading roundwood is minimised from both the rail off-loading facility and road deliveries.

(h) Reducing noise from traffic by limiting the speed of internal traffic and for trucks entering the site;

The on-site speed limit is set at 10 mph, or 5 mph in some designated areas. Speed limiters are installed on certain vehicles, all vehicles entering the site must obey local signage. A speed gun is used occasionally in various areas of the site as a check on compliance, and near miss reporting is used as a tool to identify any vehicles that may be exceeding the speed limits. Any issues with external hauliers would be dealt with by the Despatch / Timber Buying Departments contacting the specific haulier with complaints.

(i) Limiting outdoor activities during the night;

Outdoor activities that may have an impact off-site are prohibited between the hours of 7pm and 7am. This is mainly the use of the main site skips which are located on the eastern boundary of the site, parallel with the main road through the local neighbourhood.

(j) Regular maintenance of all equipment;

Equipment onsite is maintained following a proactive maintenance schedule.

(k) Using noise protection walls, natural barriers or embankments to screen noise sources.

Along the length of the eastern boundary of the site with Holyhead Road is a large embankment and tree-line that acts as a screen to reflect the noise on-site. Occasionally, production requires the use of the Chipper (a large log chipping plant) after the hours 7pm, in these cases a log wall is erected around the plant to screen noise and prevent it from travelling beyond the site boundary as best as possible."

- 5.2.3 The predicted noise levels from the plant associated with the EP Variation have been calculated using the mitigated noise levels provided within Appendix 4. Empirical data obtained from Kronospan from similar projects at other sites or library data from on-site measurements, which has been used to maintain the accuracy predictions at the NSRs assuming normal site operations. The noise mitigation strategy includes the following mitigation measures:

5.3 Noise Control Measures

5.3.1 Sound power levels or sound pressure levels of plant (with mitigation) as detailed in Appendix 4.

(i) North Access Road, Logyard Reception (Area 2 of Figure 2)

- a) One-way system for HGVs to avoid the need for any reverse parking alarms.
- b) Any mobile plant used during the daytime at the roundwood storage areas would be fitted with non-tonal reversing alarms.
- c) Vehicle engines switched off when stationary, unless for short engine warm up.
- d) No use of vehicle horns or vehicle reversing alarms unless in emergency.
- e) Log Loader would not be used at the proposed lorry park and the roundwood storage areas during night-time periods.
- f) Solid acoustic screen east of the lorry park to a height of 5m (e.g. cbf or brick wall and fence on top to a minimum mass of 15kg/m²).
- g) Solid acoustic screen west of the lorry park and east of the HGV access road (the western arm of the proposed roundabout as it starts to head towards the proposed lorry park) to a height of 3m (e.g. cbf or brick wall and fence on top to a minimum mass of 10kg/m²).
- h) The embankment east of the lorry park extended to a minimum height of 4m.

Details of the proposed screening is shown on Figure 3 attached.

Note: The above is best on BAT due to consultation with the Local Authority and consultees (CADW) during planning. The consultation requirements Limitations from other disciplines (i.e. landscaping, visual impact, heritage, drainage and ecology etc).

(ii) Flaker Building & Rail Siding (Area 3 of Figure 2)

- a) Flaker infeed to be enclosed in area where logs are offloaded. Design level excluding mobile plant noise for this facility should be designed to achieve a level of 75dB(A) @ 1m (wherever practicable).
- b) Flaker building to be designed to reduce noise 'break-out' from walls and to a level of 65dB(A) @ 1m. This is likely to require a twin skinned system with mineral wool insulation cladding system having a minimum $R_w = 43-45\text{dB}$. The Flaker noise levels should be checked for frequency spectral content and cladding design adjusted to ensure levels are achieved.
- c) Any doors fitted to the Flaker building to be formed by acoustic doors having a minimum $R_w = 28\text{dB}$.
- d) Ventilation openings (as required) to be acoustically treated, the specification for noise control to be checked with the acoustic consultant prior to finalising the ventilation design.
- e) Any mobile plant used during the daytime at the roundwood storage areas would be fitted with non-tonal reversing alarms.
- f) Vehicle engines switched off when stationary, unless for short engine warm up.

- g) No use of vehicle horns or vehicle reversing alarms unless in emergency.

(iii) Chip Prep Building Extension & Additional Silos (Area 4 of Figure 2)

- a) Introducing suitable acoustic cladding to the building extension that provides adequate noise insulation. The proposed cladding to have an R_w value of 32dB or greater (e.g. Brucha Paneel 100mm DP-F roof composite cladding and Brucha Paneel 100mm WP-F wall composite cladding).
- b) Roller shutter door into the Wood Chip Preparation building to be closed during night-time periods unless temporarily to allow for access for HGVs or mobile plant or in emergency. The roller shutter door to be insulated and operated electrically and regularly maintained.
- c) The proposed bucket elevator ducting and motor drive to be designed to reduce noise levels down to 75dB L_{Aeq} at 1m.
- d) Noise from reverse jet filter nozzles to be reduced to a minimum on existing and proposed filter boxes using silencers and/or lowest practicable operating pressure to reduce impulse noise.

(iv) Chip Bunker (Area 5 of Figure 2)

As this is a storage facility, there is no significant noise expected and would be limited to short-term mobile plant movements.

- a) Any mobile plant used during the daytime at the roundwood storage areas would be fitted with non-tonal reversing alarms.
- b) Vehicle engines switched off when stationary, unless for short engine warm up.
- c) No use of vehicle horns or vehicle reversing alarms unless in emergency.

(v) OSB Dryers (Areas 6 & 7 of Figure 2)

- a) Noise levels from the associated dryer drum, plant and ducting limited to 70dB(A) @ 1m.

(vi) OSB Gluing (Area 8)

- a) The OSB Gluing plant, sifters and ductwork to be enclosed in a building with the introduction of suitable acoustic cladding to limit the noise level from the plant to 60dB(A) @ 1m. The proposed wall and roof cladding to have an R_w value of 32dB or greater (e.g. Brucha Paneel 100mm DP-F roof composite cladding and Brucha Paneel 100mm WP-F wall composite cladding). The underside of the building is assumed to be of concrete construction or floor having a minimum acoustic performance of R_w 42dB.
- b) Noise 'break-out' via any ventilation openings or doors to have a similar acoustic performance as described for the cladding or checked with the acoustic consultant about specific ventilation openings when dimensions and locations are defined.

(vii) OSB Press (Extension to existing building)

- a) The OSB Press building extension on the roof of the Particle Board Production Hall to be formed by cladding to have an R_w value of 32dB or greater (e.g. Brucha Paneel 100mm DP-F roof composite cladding and Brucha Paneel 100mm WP-F wall composite cladding).
- b) Noise 'break-out' via any ventilation openings such as ridge vents to have a similar acoustic performance as described for the cladding.

(viii) OSB Sanding, T&G and Warehousing

- a) Existing cladding has been considered within the noise model and assumes a single skin system having an $R_w = 24$ dB. It should be noted that these existing building roof area areas are already operating under similar reverberant levels and as such this noise source is being 'double counted' on the basis that it existed as an operating noise source during the baseline survey in 2021 and 2022. This provides robustness analysis for this particular noise source.
- b) Mobile plant and site-controlled vehicles working within these areas are fitted with non-tonal reversing alarms (i.e. broadband noise, 'white noise' or SMART type reversing alarms).

(ix) Covered Loading Area (Area 10)

- a) (Acoustic cladding to the building that provides adequate noise insulation. The proposed cladding to have an R_w value of 32dB or greater (e.g. Brucha Paneel 100mm DP-F roof composite cladding and Brucha Paneel 100mm WP-F wall composite cladding).
- b) Noise 'break-out' via roof ridge vents (if required) to have a similar acoustic performance as per the cladding. No ventilation louvres allowed in walls unless acoustically treated to similar performance as described for the cladding.
- c) Door into the building at the southern façade is assumed to be in open position. All other doors into the building would be via standard personnel fire doors.

(x) Engineering Stores (Area 11)

- a) The Engineering Stores building would be fitted with acoustic cladding to an R_w value of 37dB or greater.
- b) Noise 'break-out' via roof ridge vents (if required) to have a similar acoustic performance as per the cladding. No ventilation louvres allowed in walls unless acoustically treated to similar performance as described for the cladding.
- c) Roller shutter doors into the stores building to be closed during night-time periods unless temporarily to allow for access for HGVs or mobile plant or in emergency. Doors into the eastern and western façade to be closed during any extensive use of power tools within the building unless temporarily for vehicle access or emergency. All other doors into the building would be via standard personnel fire doors.

(xi) New Warehouse (Area 12)

- a) Introducing suitable cladding to the building that provides adequate noise insulation. The proposed cladding to have an R_w value of 32dB or greater.
- b) Noise 'break-out' via roof ridge vents to have a similar acoustic performance as per the cladding. No ventilation louvres allowed in walls unless acoustically treated to similar performance as described for the cladding.
- c) Doors into the warehouse to be motorised and have a minimum R_w value of 15dB. The door on the southern façade facing the existing warehouse to be normally closed unless for operational access, maintenance or emergency.
- d) The design of the mobile plant reversing alarms should not contain tonal character (i.e. should be of the broadband noise type reversing alarms) and are not perceptible at the nearest sensitive receptors.

5.3.2 In terms of assumed sound reduction index for associated cladding and walls relative to the are detailed in Appendix 4.

5.3.3 The information assumed for noise emission levels for the plant provides us with noise data for input into the noise model and is provided in Appendix 4.

5.4 Noise Prediction Modelling

5.4.1 In general, the level of noise in the local environs that arises from a development site will depend on a number of factors. The more significant of which are:-

- (a) The sound power levels (SWL's) or sound pressure levels of the plant or equipment used on site.
- (b) The periods of operation of the plant on site.
- (c) The distance between the source noise and the receiving position.
- (d) The presence or absence of screening effects due to barriers, or ground absorption.
- (e) Any reflection effects due to the facades of buildings etc.

5.4.2 It is intended that all of the above equipment and facilities would operate continuously during day and night-time periods with the exception of the log loader in the log reception area (Area 2) would not operate during night-time periods and scheduled maintenance.

5.4.3 Noise prediction modelling of the Site is based on the information detailed in Appendix 4 using CadnaA noise prediction modelling software. The noise prediction includes for one train movement during any 1-hour period. The results of the noise mapping are provided in Table 5.1 and Appendix 5.

5.4.4 The model utilises ISO9613-2 as the method of calculation for propagation from the noise source to the receptor. Settings for the noise model include the following, which is based on industry accepted standards:

Ground effect (A_{gr}) = 0 (hard ground absorption around external Kronospan service yard areas) & 1 (soft ground absorption for intervening land between site and receptors).

Temperature = 10degC

Humidity = 70%

Height above ground for receiver = 4m (night-time) 1.5m (daytime)

5.4.5 Drawings of the Site layout and building elevations have been provided and the main building assumed heights, within the noise model would indicate the following:

- (i) Flaker Building: 11m
- (ii) OSB Press: 18m to 20m
- (iii) OSB Gluing: 13.7m to 33m
- (iv) OSB Sanding/T&G & Warehousing: 8.5m to 11.5m
- (v) Engineering Stores: 10.5m to 13.5m
- (vi) Wood Chip Building: 29m
- (vii) Wood Chip Silos: 24m to 33m
- (viii) Wood Chip Prep Filters: 10m, Conveyor motors: 25m
- (ix) Engineering Stores:
- (x) New Warehouse: 8.5m to 11.7m.

5.4.6 The results of the noise predictions are provided below in Table 5.1, which include the assumed building cladding and insulation specification detailed in section 5.3.1.

5.5 Results of Noise Predictions

5.5.1 Data obtained from Site, Technology Providers and empirical measurements from similar plant in the UK has been used to maintain the accuracy of the calculations at the NSRs during normal site operations. Refer to Appendix 5 for noise mapping results.

Noise Assessment:

5.5.2 The resultant noise contribution from the EP Variation facilities proposed at Kronospan are shown in below in Table 5.1 (**including** noise mitigation measures detailed in section 5.3.1).

Table 5.1: Predicted Noise Contribution from the EP Variation (with mitigation measures)

Receptor Position (Refer to Figure 1)	Time Period (Daytime: 0700-2300 hrs & Night: 2300- 0700 hrs)	Predicted Rating ¹ Noise Level from Site LAeq _{15mins} dB	Assessment ² Baseline Sound Level LA90 dB [LAeq]	Rating Compared to Background Sound LAeq _{15mins} dB	Noise Change ³ LAeq dB
R1. Receptors off Wern & Offa (Lodgevale Park)	Daytime Night-time	40 41-42	45 [57] 40 [52]	-5 +1 to +2	+0.1 +0.4
R2. Receptors off Old Black Park Road	Daytime Night-time	43 44	51 [61] 42 [55]	-8 +2	+0.1 +0.3
R3. Afon Bradley Farm	Daytime Night-time	45 45	43 [51] 43 [49]	+2 +2	+1.0 +1.5
R4. Bryn Hyfryd	Daytime Night-time	41-43 44-46	48 [58] 46 [53]	-7 to -5 0 to +2	+0.1 +0.8
R5. West View	Daytime Night-time	35-41 38-41	45-48 [57] 38-41 [52]	-10 to -7 -6 to -3	+0.1 +0.3
R5. George Street	Daytime Night-time	32 32	33-35 [40] 30-31 [37]	-3 to -1 +1 to +2	+0.6 +1.2
R6. New Hall Farm	Daytime Night-time	33 34	38 [48] 34-36 [47]	-5 -2 to 0	+0.1 +0.2
R7. Canal & Marina	Daytime Night-time	38-48 38-48	43 [51] 43 [49]	-4 to +5 -5 to +5	+1.8 +2.5

Receptor Position (Refer to Figure 1)	Time Period (Daytime: 0700-2300 hrs & Night: 2300- 0700 hrs)	Predicted Rating ¹ Noise Level from Site LAeq _{15mins} dB	Assessment ² Baseline Sound Level LA90 dB [LAeq]	Rating Compared to Background Sound LAeq _{15mins} dB	Noise Change ³ LAeq dB
R8. Maes-y-Waun	Daytime Night-time	36 37	49 [59] 46-47 [53]	-13 -10 to -9	0 +0.1
R9. Shepherds Lane	Daytime Night-time	30 31	41-42 [47] 39-40 [47]	-12 to -11 -9 to -8	+0.1 +0.1
R10. Station Avenue	Daytime Night-time	28 29	45-46 [49] 45 [47]	-18 to -17 -16	0 +0.1
R11. Canalwood Industrial Estate	Daytime Night-time	42 42	51 [54] 49-51 [54]	-9 -9 to -7	+0.3 +0.3
R12. Lylwn-y-cil	Daytime Night-time	36-38 37-39	39-40 [46] 38-39 [45]	-4 to -1 -2 to +1	+0.6 +1.0

Note 1: With mitigation, in view of ambient noise and control measures, no character correction required.

Note 2: Based on a week or 5-day period of baseline sound monitoring including a weekend at NSRs.

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

5.5.3 Table 5.1 represents the proposed noise sources associated with the EP Variation, which includes the proposed new Access Road and Lorry Park facility. This facility has been designed and optimised through the planning process and is designed to provide improvements to local HGV movement which needs to pass through part of the village to get to the Kronospan entrance. This proposal provides an improvement and benefit to local residential amenity from associated site traffic from noise along Holyhead Road. The effect of the existing traffic flow and lorry park has not been considered in this assessment, but as shown in the planning submission it will provide an improvement in noise levels at NSRs. BAT has therefore been applied to available mitigation measures in context with the applied environmental constraints.

5.5.4 The results shown in Table 5.1 indicate that the EP Variation noise sources are between 18dB below and 2dB above the representative baseline background sound levels at residential NSRs during daytime and between 16dB below and 2dB above background sound levels during night-time. This represents an impact **below and adverse impact** according to BS4142:2014+A1:2019.

5.5.5 In terms of IEMA guidance on noise level increase the daytime change in ambient noise levels is between 0dB and 1dB LAeq at residential NSRs during the daytime and between 0.1dB and 1.5dB during night-time periods. This represents a **negligible** impact according to IEMA (i.e. refer to Table 3.4).

5.5.6 To show the noise contribution from the new lorry park and access road in isolation of the other facilities, Table 5.2 below provides the associated noise level for this development and the calculated noise contribution from all other sources for comparison.

Table 5.2: Predicted Noise Contribution from the Proposed Lorry Park & Access Road (with mitigation measures)

Receptor Position (Refer to Figure 1)	Time Period (Daytime: 0700-2300 hrs & Night: 2300-0700 hrs)	Predicted Rating Noise Level from Access Road & Lorry Park Only LAeq _{15mins} dB	Predicted Rating Noise Level Excluding Lorry Park LAeq _{15mins} dB	Overall Level From EP Variation LAeq _{15mins} dB
R1. Receptors off Wern & Offa (east – Lodgevale Park)	Daytime Night-time	33-38 35-41	32-37 33-37	40 41-42
R2. Receptors off Old Black Park Road	Daytime Night-time	42 44	33 32	43 44
R3. Afon Bradley Farm	Daytime Night-time	44 45	36 36	45 45
R4. Bryn Hyfryd	Daytime Night-time	38-39 44-45	37-43 30-38	41-43 44-46
R5. West View	Daytime Night-time	36 38	34-39 37-38	35-41 38-41
R5. George Street	Daytime Night-time	30 31	29 26	32 32
R6. New Hall Farm	Daytime Night-time	25 26	32 33	33 34
R7. Canal & Marina	Daytime Night-time	36-39 36-39	34-48 33-47	38-48 38-48
R8. Maes-y-Waun	Daytime Night-time	24 25	36 37	36 37
R9. Shepherds Lane	Daytime Night-time	20 21	29 30	30 31
R10. Station Avenue	Daytime Night-time	14 26	27 29	28 29
R11. Canalwood Industrial Estate	Daytime Night-time	17 17	42 42	42 42
R12. Lylwn-y-cil	Daytime Night-time	21-23 21-24	36-38 37	36-38 37-39

5.4.7 Table 5.2 shows, as expected, the dominance of the lorry park in NSRs in residential areas around the site (i.e. R1 to R3) and significant contribution at NSR R4 and R5. This means that trying to reduce noise levels further relative to these NSRs is limited by the mitigation measures proposed, due to the environmental constraints enforced by the Planning Authority consultees (i.e. BAT has been applied).

5.4.8 The magnitude of the impact during daytime or night-time is shown to be a **low impact** (i.e. according to BS 4142: 2014+A1:2019). In relation to the IEMA guidance which looks at the increase in residual sound levels, the results show a **negligible** impact (refer to Table 3.4).

5.4.9 Section 5.3.1 of this report provides the noise control measures that would be employed to ensure the predicted noise levels are achieved.

Cumulative Impact Assessment

5.4.10 The only permitted development that was not in operation when the previous baseline study was undertaken (i.e. 2021) relates to the Raw Board Store (Appeal Ref. 3193142 P/2017/0700) and two additional gas engines. The NVC reports (ref. R17.0507/DRK & R17.0506/2/DRK) provide details of the predicted noise contribution, which is included in analysis below in Table 5.3 for cumulative effects.

Table 5.3: Cumulative Effect of Permitted Raw Board Store Facility & 2 Additional Gas Engines

Receptor Position (Refer to Figure 1)	Raw Board Store Noise Level L _{Aeq15mins} dB	CHP Engines Noise Level L _{Aeq15mins} dB	Overall ¹ Noise Level L _{Aeq15mins} dB	Total Noise Level From EP Variation L _{Aeq15mins} dB	Cumulative ² Noise Level (EP Variation + Raw Board Store + CHP) L _{Aeq15mins} dB	Increase in L _{Aeq} dB Due to Raw Board Store & CHP
R1. Receptors off Wern & Offa	20 (Day) 20 (Night)	7 7	20 20	40 41-42	40 41-42	0 0
R2. Receptors off Old Black Park Rd	14 14	2 2	14 14	43 44	43 44	0 0
R3. Afon Bradley Farm	15 15	5 5	15 15	45 45	45 45	0 0
R4. Bryn Hyfryd	19 19	8 8	19 19	41-43 44-46	41-43 44-46	0 0
R5. West View	20 20	9 9	20 20	35-41 38-41	35-41 38-41	0 0
R5. George St.	21 21	7 7	21 21	32 32	32 32	0 0
R6. New Hall Farm	11 11	18 18	19 19	33 34	33 34	0 0
R7. Canal & Marina	16-20 16-20	6-9 6-9	17-20 17-20	38-48 38-48	38-48 38-48	0 0
R8. Maes-y-Waun	19 19	8 8	19 19	36 37	36 37	0 0
R9. Shepherds Lane	15 15	4 4	15 15	30 31	30 31	0 0
R10. Station Avenue	14 14	9 9	15 15	28 29	28 29	0 0
R11. Canalwood Industrial Estate	17 17	12 12	18 18	42 42	42 42	0 0
R12. Lylwn-y-cil	14 14	7 7	15 15	36-38 37-39	36-37 37-39	0 0

¹Overall level is the logarithmic addition of columns 2 & 3.

5.4.11 Table 5.3 above shows that the permitted development (i.e. plant that is not operating) would result in no changes in the cumulative noise level and would therefore no impacts or effects would occur.

6.0 CONCLUSIONS

General

- 6.1 This noise assessment is prepared for Kronospan Ltd in support of an Environmental Permit (EP) Variation application made by Kronospan Limited (hereafter referred to as Kronospan). The EP Variation is applying to make a number of changes to the Facility as permitted.
- 6.2 The assessment establishes any potential noise impact on existing residential properties resultant from the operation of the various plant associated with the EP Variation.
- 6.3 At the request of NRW, the study benefits from an updated baseline noise survey undertaken in July and August 2021 and April 2022 to establish representative residual and background sound levels at agreed noise sensitive receptors (NSRs), which provides comparison and context with the development.
- 6.4 The assessment has also considered the cumulative effect of the operation of permitted development i.e. development that was not built or operational during the latest baseline surveys undertaken in 2021 and 2022.
- 6.5 BS4142: 2014+A1:2019 is relevant to fixed industrial noise sources and is therefore the most relevant standard for the assessment of noise impacts from the Proposed Development. For context and assessment of impact relative to any increase in residual noise levels, the IEMA guidance is referenced to also provide additional analysis.
- 6.6 Noise levels have been predicted based on ISO9613-2 methodology using CadnaA computer-based software and appropriate input settings.
- 6.7 Empirical data obtained from Kronospan from similar projects at other sites or library data from on-site measurements, which has been used to maintain the accuracy predictions at the NSRs assuming normal site operations.
- 6.8 Following detailed calculations and consideration of appropriate and relevant standards and guidance, we have concluded the following:
 - a) The results show that the EP Variation noise sources are between 18dB below to 2dB above the representative baseline background sound levels at residential NSRs during daytime and between 16dB below to 2dB above background sound levels during night-time. This represents an impact which is either **low** or **below an adverse impact** according to BS4142:2014+A1:2019.
 - b) In terms of IEMA guidance on noise level increase the daytime change in ambient noise levels is between 0dB and 1dB LAeq at residential NSRs during the daytime and between 0.1dB and 1.5dB during night-time periods. This represents a **negligible** impact according to IEMA.

- c) The proposed EP Variation includes the proposed new Access Road and Lorry Park facility. This facility has been designed and optimised through the planning process and is designed to provide improvements to local HGV movement which needs to pass through part of the village to get to the Kronospan entrance. This proposal therefore provides an improvement and benefit to local residential amenity from associated site traffic from noise along Holyhead Road. The effect of the existing traffic flow and lorry park has not been considered in this assessment, but as shown in the planning submission it will provide an improvement in noise levels at NSRs. BAT has therefore been applied to available mitigation measures in context with the applied environmental constraints defined by Local Planning Authority and associated consultees.
- d) The analysis shows that the Lorry Park and Access Road development is a significant contributor at NSRs to the north and northeast of the Kronospan site (i.e. R1 to R5). This means that trying to reduce noise levels further relative to these NSRs is limited by the mitigation measures proposed, due to the environmental constraints enforced by the Planning Authority consultees (i.e. BAT has been applied).
- e) The magnitude of the impact during daytime or night-time is shown to be a **low impact** (i.e. according to BS 4142: 2014+A1:2019). In relation to the IEMA guidance which looks at the increase in residual sound levels, the results show a **negligible** impact.
- f) The permitted development that was not in operation when the baseline study was undertaken (i.e. in 2021) has been considered in the assessment. The analysis shows that the permitted development (i.e. plant that is not operating) would result in no changes in the cumulative noise level and would therefore no impacts or effects would occur.

Noise Mitigation Measures

- 6.9 In terms of applying 'best available techniques' ("BAT") for the control of noise from the Proposed Development we have recommended appropriate development controls and/or specification design levels.

REFERENCES

BS4142: 2014+A1:2019 'Methods for rating and assessing industrial and commercial sound'

BS8233: 2014 'Guidance on sound insulation and noise reduction for buildings'

World Health Organisation: 'Guidelines for Community Noise' - April 1999

BS7445: 2003- 'Description and measurement of environmental noise'

ISO 9613-2: 1996 Acoustics – Attenuation of Sound During Propagation Outdoors

BS5228-1:2009+A1:2014 'Code of practice for control of noise and vibration on construction and open sites'

Technical Advice Note ("TAN") 11, 'Noise' – 1997.

'Night Noise Guidelines for Europe' WHO 2009

EA Noise and vibration management: environmental permits (January 2022)

NVC Report R16.0204/DRK dated 12th February 2016 for RCF Facility

NVC Report R16.0705/DRK dated 21st July 2016 for Chip Wash Pre-heating Plant

NVC Report R16.0401/DRK dated 5th April 2016 for proposed building extension for MF Press & relocation of MF Ventilation System

NVC Report R15.0903/DRK dated 4th September 2015 for Gas Engine CHP Facility

NVC Report R17.0306/DRK dated 8th April 2017 for Wood Chip Preparation Facility

NVC Report R17.0506/1/DRK dated 12th June 2018 for OSB Manufacturing Facility

NVC Report R21.0502/DRK dated 7th May 2021 for new Warehouse Facility

NVC Report R21.0807/DRK dated 23rd August 2021 Baseline Noise Survey

NVC Report R22.0103/DRK dated 23rd February 2022 for Covered Loading Yard

NVC Report R22.0305/DRK dated 23rd March 2022 for the Engineering Stores

NVC Report R22.0606/DRK dates 24th June 2022 for the Proposed Extension to the Wood Chip Preparation Building & Silos

Access Road & Lorry Park Environmental Statement Chapter 8.0 Noise & Vibration Chapter (July 2023)

Brucha Composite Wall & Roof Panel WP-F & WP-D specification and technical brochure.

Figure 2: EP Variation Facility Location

Legend

- 1 - Wetlands
- 2 - North Road Access, Logyard
Reception & 152kV Substation
- 3 - Flaker Building & Rail siding
- 4 - Chip Preparation Extension & Additional
Silos
- 5 - Chip Bunker
- 6 - OSB Dryer 2 (Bab 3)
- 7 - OSB Dryer 1 (Bab 2)
- 8 - OSB Oiling
- 9 - OSB Press
- 10 - OSB Sanding, T & O & Warehousing
- 11 - Engineering Stores & Apprentice
Workshop
- 12 - New Warehouse



Figure 3: Site Access Road & Lorry Park Site Layout (showing proposed screening)



Figure 4: Wood Chip Prep Building Extension & Additional Silos

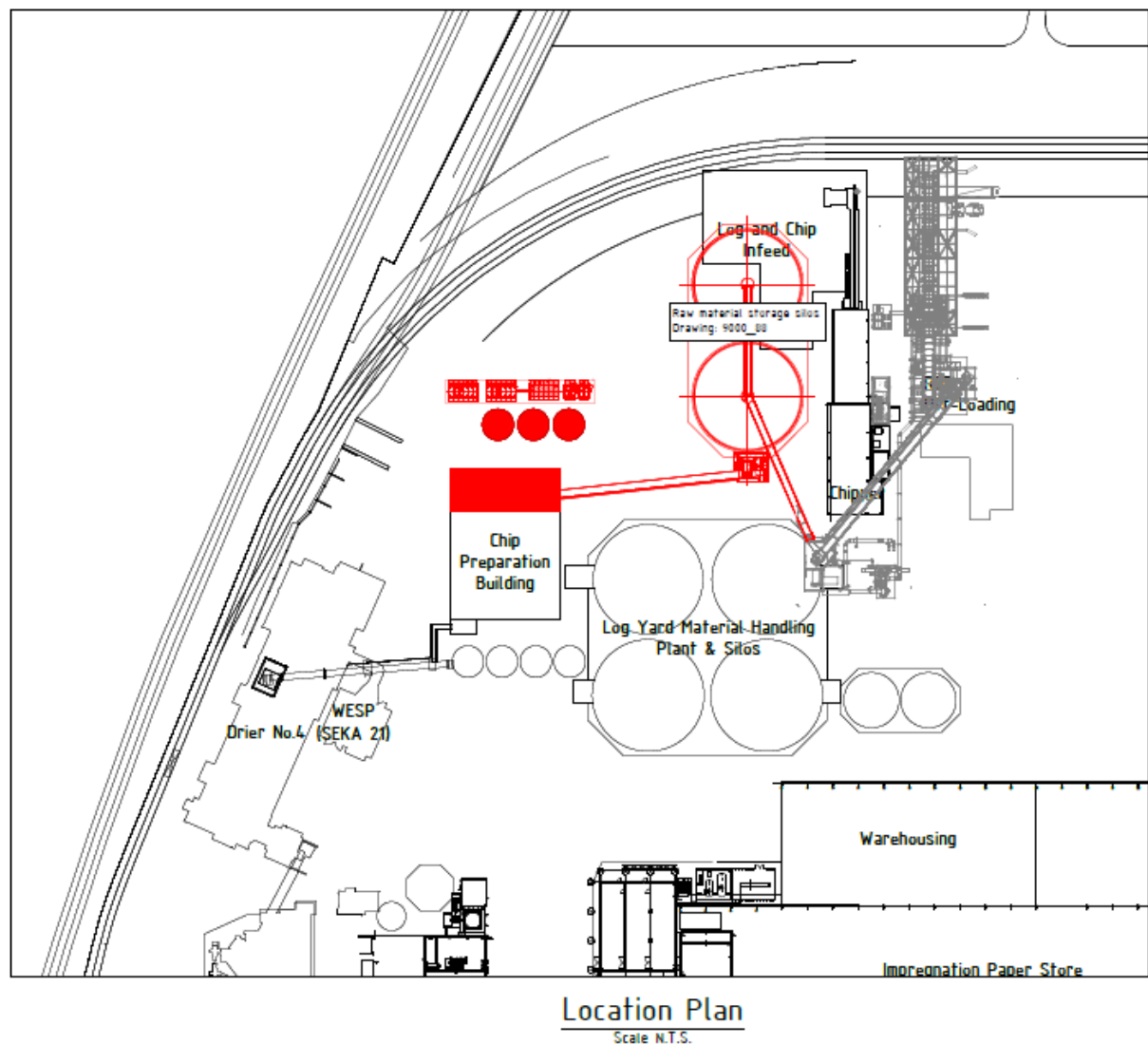


Figure 5: Layout of Wood Chip Prep Building Extension & Additional Silos

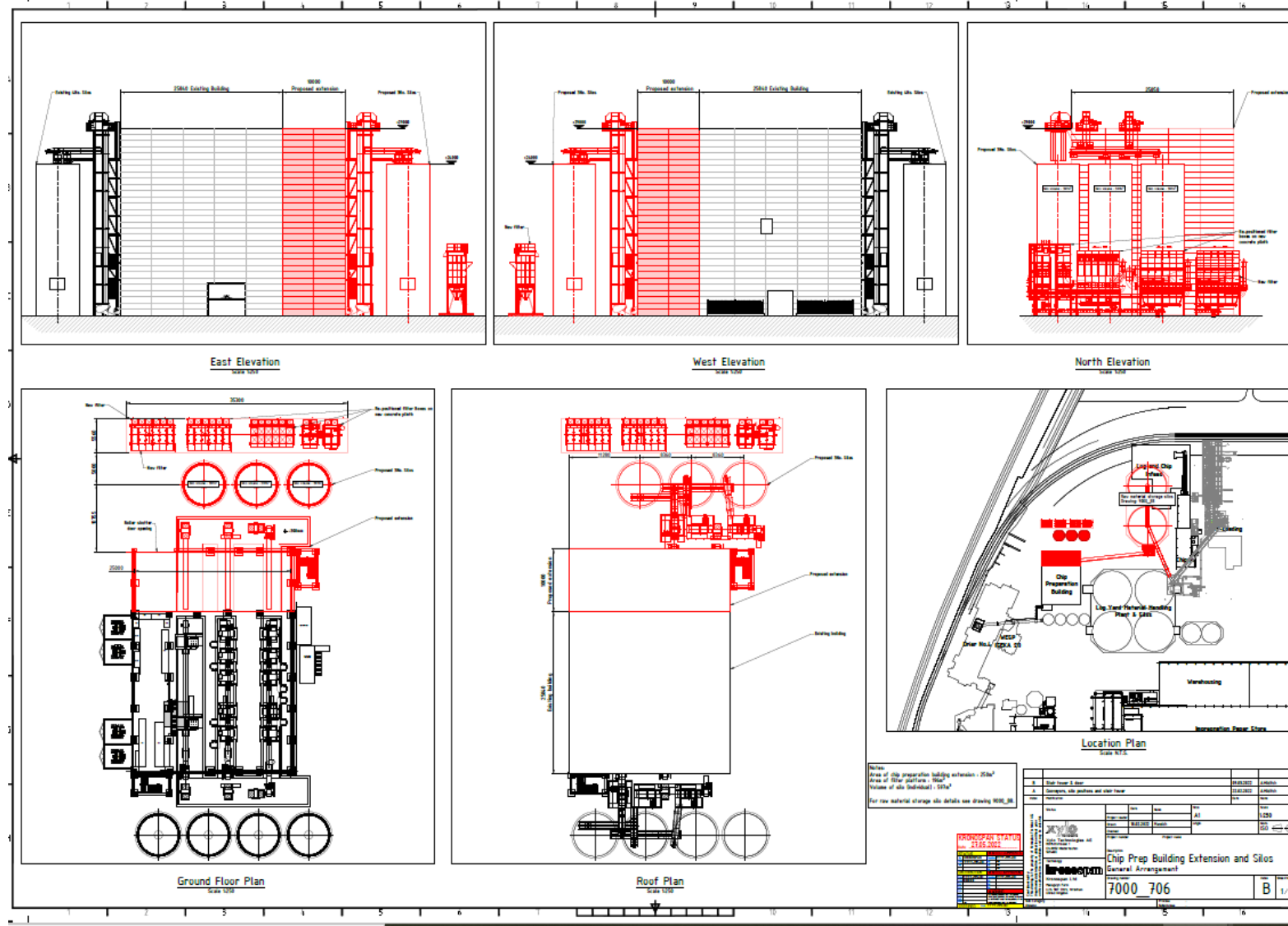


Figure 6: OSB Press & Gluing Facilities

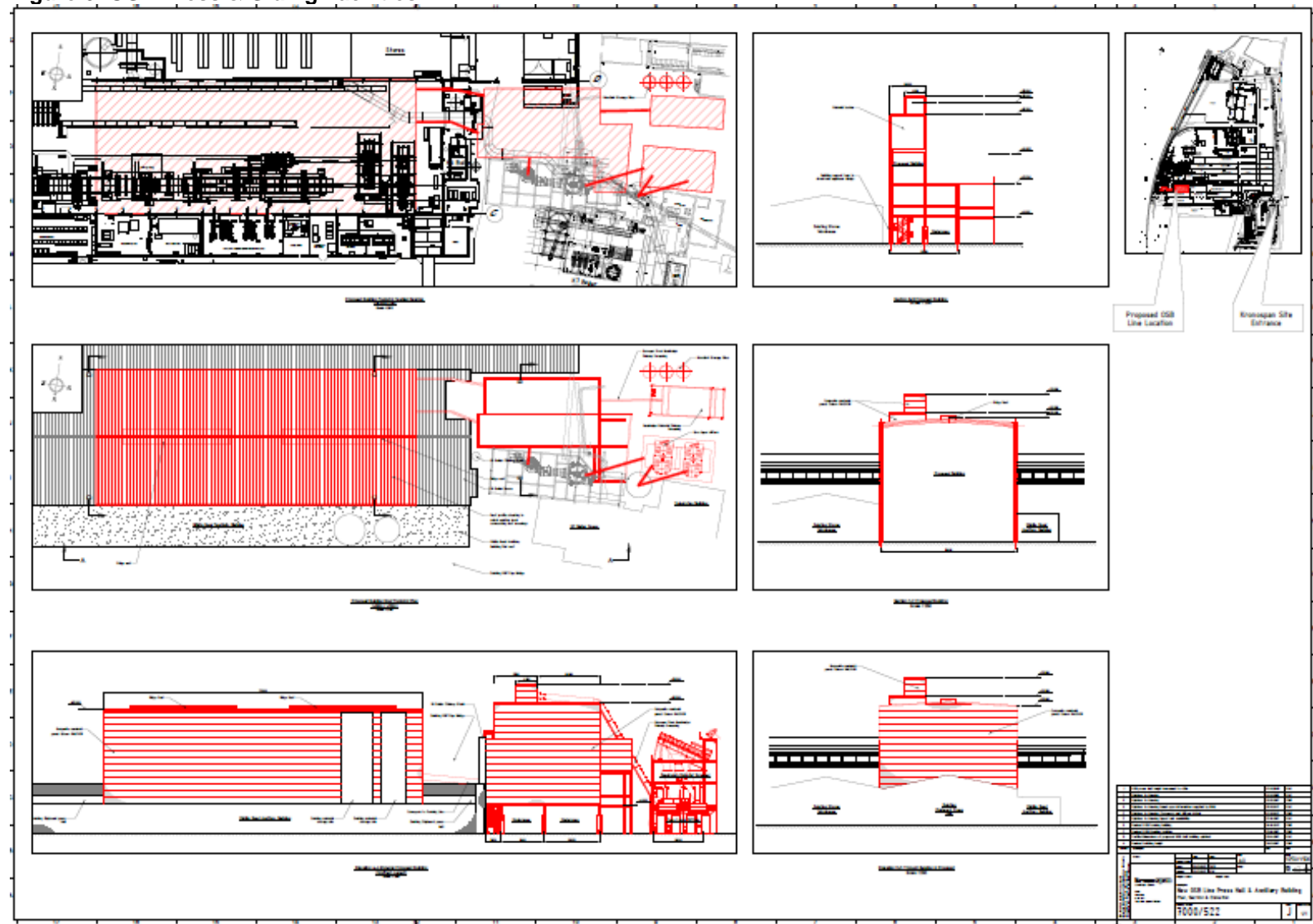


Figure 7: Layout of Engineering Stores

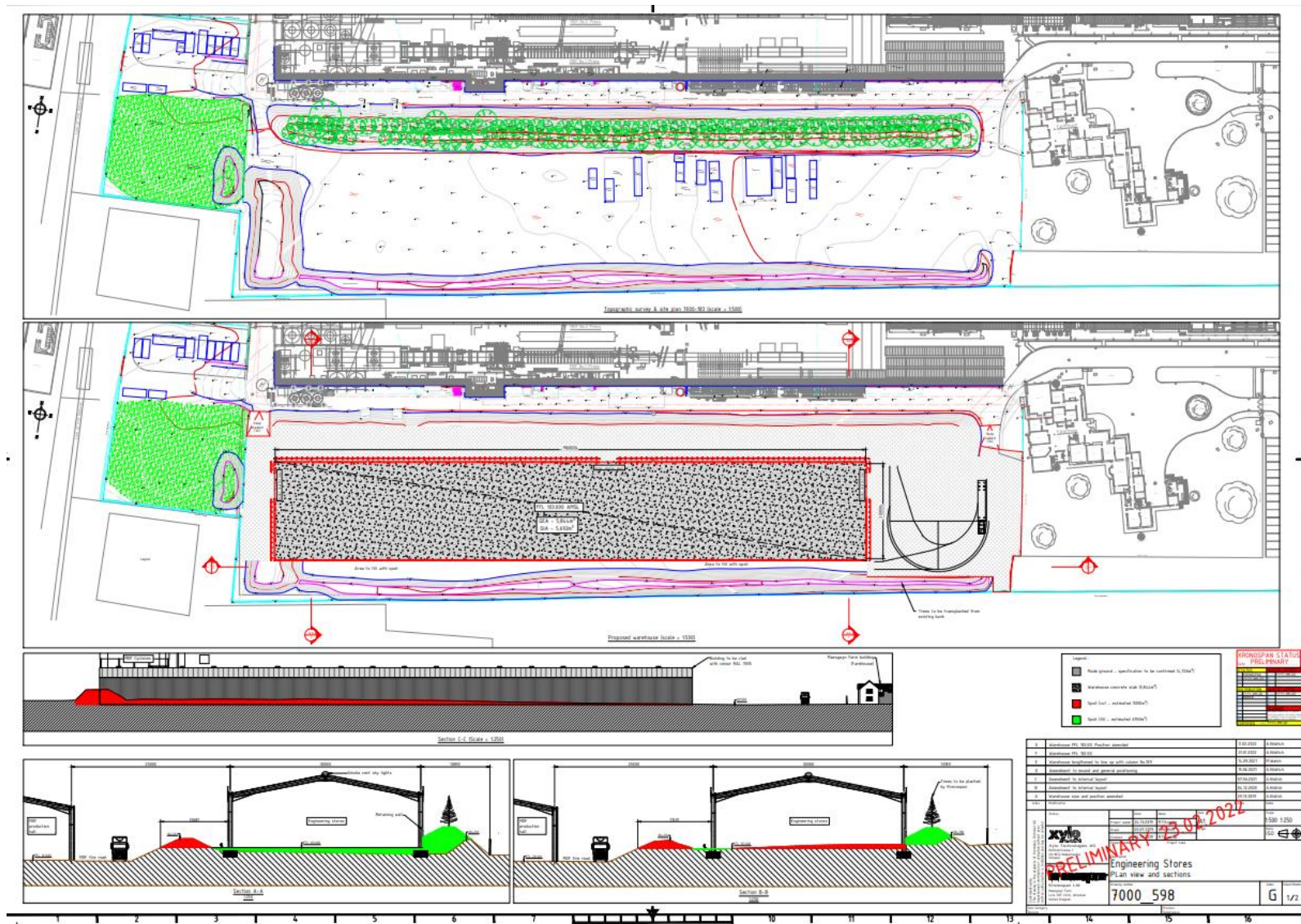
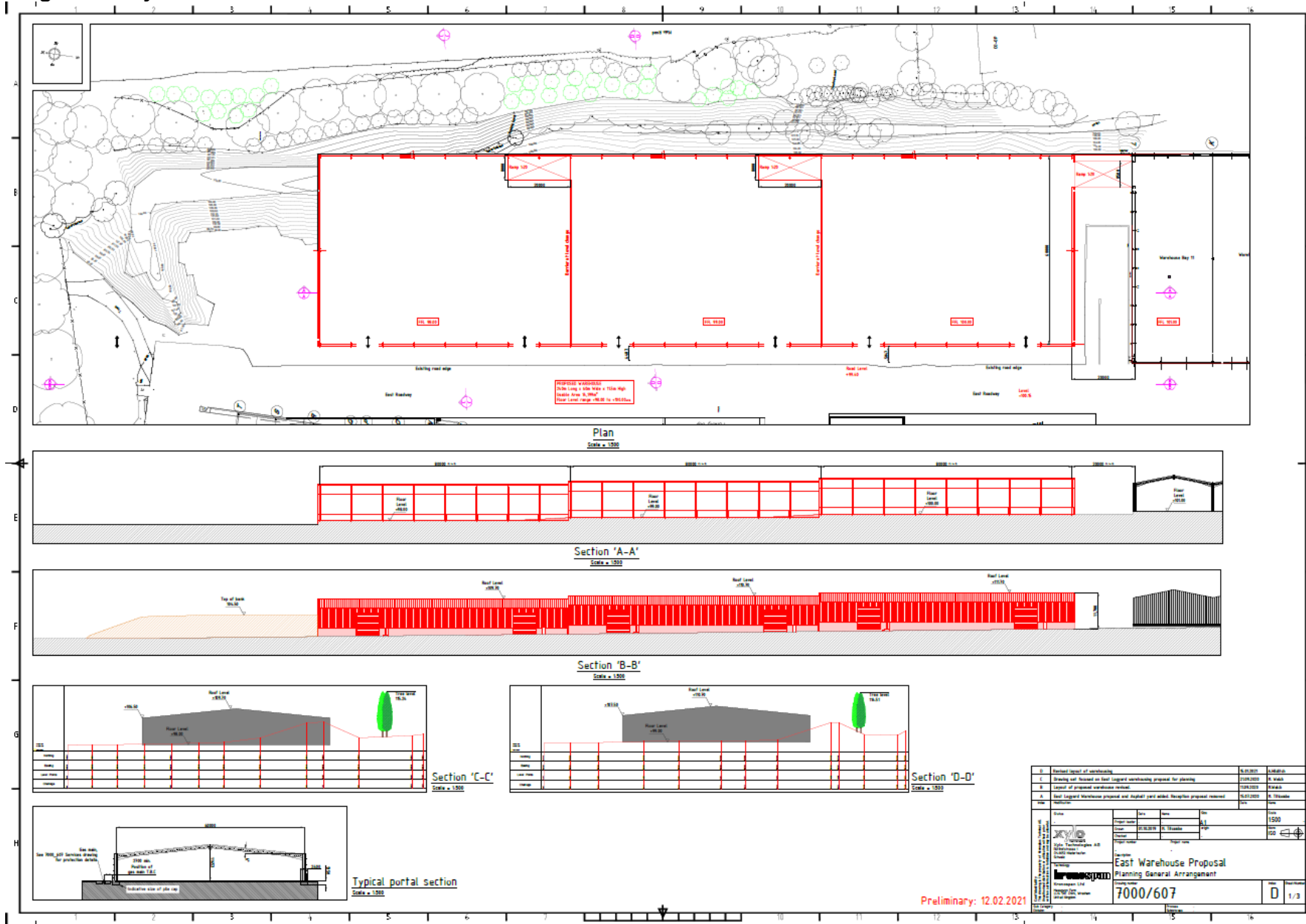


Figure 8: Layout of New Warehouse



APPENDICES

APPENDIX 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.

L_{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.

L_{A10,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 2

NOISE SURVEY DETAILS

Instrumentation and Fieldwork Details

Noise Survey July – August 2021

The noise measurements were undertaken at the locations detailed in section 3.0 and as indicated on Figure 1 attached.

The monitoring was carried out over approximately one week under suitable weather conditions.

Instrumentation:

Manufacturer	Description	Type	Calibration Due date	Serial No.
Norsonic	Integrating Sound Level Meter	116	January 2022	21589
Norsonic	Real Time Sound Analyser	118	July 2022	31992
Norsonic	Real Time Sound Analyser	140	Feb 2022	1405418
Bruel & Kjaer	Real Time Sound Analyser	2250	June 2022	2590499
Bruel & Kjaer	Real Time Sound Analyser	2250	June 2022	2590403
Bruel & Kjaer	Real Time Sound Analyser	2250	June 2022	2630261
Bruel & Kjaer	Real Time Sound Analyser	2250	January 2022	2506557
Cirrus	Real Time Sound Analyser	171A	June 2022	G061253
Cirrus	Real Time Sound Analyser	1710	April 2022	G066350
Cirrus	Real Time Sound Analyser	171B	April 2022	G056142
Cirrus	Electronic Calibrator	CR: 513A	April 2022	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: Tuesday 27th July to Tuesday 3rd August 2021.

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 advice given in BS4142:2014+A1:2019.

Instrumentation and Fieldwork Details

Noise Survey April 2022

The noise measurements were undertaken at the locations 10 and 11 as indicated on Figure 1.

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

Instrumentation:

Manufacturer	Description	Type	Calibration Due date	Serial No.
Cirrus	Real Time Sound Analyser	171A	June 2022	G061253
Cirrus	Real Time Sound Analyser	1710	May 2022	G066350
Cirrus	Electronic Calibrator	CR: 513A	May 2022	031523

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

Calibration Setting: 94dB

Meter Setting: Fast Response

Fieldwork Details:

Date of tests: Friday 1st April to Tuesday 5th April 2022

Time Period: Approximately 96 hours

Calibration: Before and after: 94dB

Meteorological Conditions

Weather conditions were recorded during the baseline survey are detailed below:

The climatic conditions were suitable for monitoring environmental noise levels in accordance with advice given in BS 7445:2003 'Description and measurement of environmental noise'.

Friday April 1st

Wind speeds are recorded at 10m height above ground level and therefore significantly higher than at the monitoring positions. Sample readings with hand held anemometer at monitoring positions indicate around 5-6m/s higher than shown below.

Today at					
06:00	07:00	08:00	09:00	10:00	11:00
Chance of precipitation					
<5%	<5%	<5%	<5%	<5%	10%
Temperature °C					
2°	2°	2°	3°	5°	6°
Feels like temperature (°C)					
-1°	-1°	-1°	0°	2°	3°
Wind direction and speed mph					
↙ NNW 6	↙ NNW 6	↘ N 7	↘ N 7	↘ N 8	↘ N 8
Wind gust (mph)					
15	14	14	13	15	15

Today at					
10:00	11:00	12:00	13:00	14:00	15:00
Chance of precipitation					
<5%	<5%	10%	10%	10%	10%
Temperature °C					
3°	5°	6°	6°	7°	7°
Feels like temperature (°C)					
-1°	1°	2°	3°	4°	3°
Wind direction and speed mph					
↘ N 10	↘ N 10	↘ N 11	↘ N 11	↘ N 11	↘ N 13
Wind gust (mph)					
17	18	19	19	19	22

Today at					
14:00	15:00	16:00	17:00	18:00	19:00
Chance of precipitation					
0%	10%	10%	<5%	<5%	<5%
Temperature °C					
7°	7°	7°	7°	6°	5°
Feels like temperature (°C)					
4°	3°	3°	3°	2°	2°
Wind direction and speed mph					
↘ N 11	↘ N 13	↘ NNW 13	↘ NNW 13	↘ NNW 12	↘ NNW 11
Wind gust (mph)					
19	22	22	23	22	21

Today at					
14:00	15:00	16:00	17:00	18:00	19:00
Chance of precipitation					
0%	10%	10%	<5%	<5%	<5%
Temperature °C					
7°	7°	7°	7°	6°	5°
Feels like temperature (°C)					
4°	3°	3°	3°	2°	2°
Wind direction and speed mph					
↘ N 11	↘ N 13	↘ NNW 13	↘ NNW 13	↘ NNW 12	↘ NNW 11
Wind gust (mph)					
19	22	22	23	22	21

Saturday 2nd April 2022

Saturday at						Today at					
00:00	01:00	02:00	03:00	04:00	05:00	09:00	10:00	11:00	12:00	13:00	14:00
Chance of precipitation						Chance of precipitation					
10%	40%	50%	50%	50%	50%	<5%	10%	10%	10%	10%	10%
Temperature °C						Temperature °C					
3°	3°	2°	2°	1°	1°	1°	2°	3°	4°	4°	5°
Feels like temperature (°C)						Feels like temperature (°C)					
1°	0°	0°	0°	0°	0°	0°	0°	1°	2°	3°	4°
Wind direction and speed mph						Wind direction and speed mph					
↖ NW	↖ WNW	↙ SW	↙ SW	↗ W	↗ W	↗ SSE	↘ SE	↘ SE	↘ SE	↘ ESE	↘ ESE
5	5	4	4	3	3	4	5	4	5	4	3
Wind gust (mph)											
8	7	7	6	5	5						

Today at						Today at				Sunday
14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00
Chance of precipitation						Chance of precipitation				<5%
10%	10%	10%	<5%	<5%	<5%	10%	10%	<5%	<5%	<5%
Temperature °C						Temperature °C				3°
5°	6°	6°	6°	6°	6°	6°	5°	4°	4°	3°
Feels like temperature (°C)						Feels like temperature (°C)				2°
4°	5°	5°	5°	5°	5°	4°	3°	3°	2°	2°
Wind direction and speed mph						Wind direction and speed mph				
↘ ESE	↙ E	↗ NE	↗ S	↘ N	↙ NW	↘ N	↘ N	↘ NNW	↙ NW	↙ NW
3	3	4	4	4	3	4	4	4	3	3

Sunday 3rd April 2022

Sunday at						Today at					
01:00	02:00	03:00	04:00	05:00	06:00	10:00	11:00	12:00	13:00	14:00	15:00
Chance of precipitation						Chance of precipitation					
<5%	<5%	<5%	<5%	<5%	<5%	<5%	<5%	10%	10%	10%	10%
Temperature °C						Temperature °C					
3°	2°	2°	2°	2°	2°	5°	7°	7°	8°	9°	8°
Feels like temperature (°C)						Feels like temperature (°C)					
1°	1°	0°	0°	0°	-1°	3°	4°	4°	6°	6°	6°
Wind direction and speed mph						Wind direction and speed mph					
WNW	WNW	W	W	W	W	WNW	NW	WNW	NW	WNW	WNW
3	4	4	4	5	6	7	10	10	8	10	10

Today at						Today at				Monday	
14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	00:00	
Chance of precipitation						Chance of precipitation				20%	
10%	10%	<5%	10%	<5%	10%	10%	10%	10%	10%		
Temperature °C						Temperature °C				7°	
9°	8°	8°	8°	8°	7°	7°	6°	6°	7°		
Feels like temperature (°C)						Feels like temperature (°C)				3°	
6°	6°	6°	6°	6°	5°	4°	3°	3°	3°		
Wind direction and speed mph						Wind direction and speed mph				WSW	
WNW	WNW	WNW	WNW	WNW	W	WSW	WSW	WSW	WSW	WSW	
10	10	10	9	9	8	8	10	10	13	15	

Monday 4th April 2022

Monday at						Monday at					
00:00	01:00	02:00	03:00	04:00	05:00	05:00	06:00	07:00	08:00	09:00	10:00
Chance of precipitation						Chance of precipitation					
10%	50%	60%	80%	60%	20%	20%	20%	80%	60%	20%	20%
Temperature °C						Temperature °C					
7°	8°	8°	8°	8°	9°	9°	9°	9°	10°	10°	11°
Feels like temperature (°C)						Feels like temperature (°C)					
4°	4°	4°	4°	5°	5°	5°	6°	6°	7°	7°	7°
Wind direction and speed mph						Wind direction and speed mph					
SW 10	WSW 13	WSW 14	W 14	W 14	W 14	W 14	W 14	W 14	WNW 15	WNW 15	WNW 15

Monday at						Today at					
10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00
Chance of precipitation						Chance of precipitation					
20%	10%	20%	20%	20%	20%	30%	70%	10%	90%	90%	80%
Temperature °C						Temperature °C					
11°	11°	12°	12°	12°	12°	12°	12°	11°	11°	11°	11°
Feels like temperature (°C)						Feels like temperature (°C)					
7°	8°	8°	9°	9°	9°	9°	9°	8°	8°	8°	8°
Wind direction and speed mph						Wind direction and speed mph					
WNW 14	WNW 14	WNW 10	WNW 9	WNW 9	WNW 8	WNW 10	WNW 10	WNW 13	WNW 13	WNW 15	WNW 15

Tuesday 5th April 2022

Today at		Tuesday at				Tuesday at						
22:00	23:00	00:00	01:00	02:00	03:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00
Chance of precipitation		Chance of precipitation				Chance of precipitation						
50%	50%	50%	60%	60%	50%	10%	10%	10%	10%	10%	<5%	0%
Temperature °C		Temperature °C				Temperature °C						
10°	10°	10°	10°	10°	10°	9°	9°	10°	10°	11°	11°	11°
Feels like temperature (°C)		Feels like temperature (°C)				Feels like temperature (°C)						
8°	8°	7°	7°	7°	7°	6°	6°	6°	7°	8°	8°	8°
Wind direction and speed mph		Wind direction and speed mph				Wind direction and speed mph						
WNW	WNW	WNW	WNW	WNW	WNW	WNW	W	W	W	W	W	W
15	15	16	14	14	14	15	14	15	15	14	17	17

APPENDIX 3

BASELINE SURVEY RESULTS

July – August 2021 Baseline Survey

Statistical Analysis of Data Set (including rain affected periods)

With Rain	Position 1 Linden Avenue	Position 1 Day Night	Position 2 Wern	Position 2 Day Night	Position 3 George Street	Position 3 Day Night	Position 4 Maes-y-waun	Position 4 Day Night	Position 5 Hadley Close	Position 5 Day Night	Position 6 Station Av. (Mondelez)	Position 6 Day Night	Position 7 Canalwood Ind Est	Position 7 Day Night	Position 8 Llwyn-y-cil Road	Position 8 Day Night	Position 9 Castle Gates	Position 9 Day Night
Total number of values	401	192	451	224	373	192	450	224	423	192	411	192	459	224	442	224	376	176
Number of excluded values	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of binned values	401	192	451	224	373	192	450	224	423	192	411	192	459	224	442	224	376	176
Minimum	31	28	36	31	27	24	42	41	33	31	43	43	42	46	34	33	30	30
25% Percentile	36	31.25	45	38	33	29	47	45	39	38	45	45	49	49	38	37	36	34
Median	37	35	48	41	35	31	49	46	41	40	46	45	51	51	40	38	38	36
75% Percentile	41	38	51	45	37	34	51	48	44	42	47	46	54	53	41	40	41	38
Maximum	48	51	58	52	43	40	58	53	50	53	52	57	56	55	51	60	46	54
Most Commonplace	36	30	45	38	33	30	49	47	41	39	45	45	54	49	39	39	38	34
Mean	38.08	35.13	47.49	41.34	34.98	31.83	49.32	46.46	41.15	39.77	46.09	45.74	51.27	50.87	39.97	39.10	38.23	37.40
Std. Deviation	3.13	4.10	4.16	4.77	3.22	3.61	2.63	2.34	3.35	2.90	1.68	1.65	2.58	2.44	2.53	4.23	3.35	4.88
Std. Error of Mean	0.16	0.30	0.20	0.32	0.17	0.26	0.12	0.16	0.16	0.21	0.08	0.12	0.12	0.16	0.12	0.28	0.17	0.37
Lower 95% CI of mean	37.78	34.54	47.11	40.72	34.65	31.32	49.08	46.15	40.83	39.36	45.92	45.50	51.03	50.55	39.74	38.55	37.89	36.67
Upper 95% CI of mean	38.39	35.71	47.88	41.97	35.31	32.35	49.56	46.77	41.47	40.18	46.25	45.97	51.51	51.19	40.21	39.66	38.57	38.12

Statistical Analysis of Data Set (excluding rain affected periods)

Without Rain	Position 1 Linden Avenue	Position 1 Day Night	Position 2 Wern	Position 2 Day Night	Position 3 George Street	Position 3 Day Night	Position 4 Maes-y-waun	Position 4 Day Night	Position 5 Hadley Close	Position 5 Day Night	Position 6 Station Av. (Mondelez)	Position 6 Day Night	Position 7 Canalwood Ind Est	Position 7 Day Night	Position 8 Llwyn-y-cil Road	Position 8 Day Night	Position 9 Castle Gates	Position 9 Day Night
Total number of values	387	176	437	208	359	176	418	208	410	176	397	176	445	208	429	208	363	160
Number of excluded values	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of binned values	387	176	437	208	359	176	418	208	410	176	397	176	445	208	429	208	363	160
Minimum	31	28	36	31	27	24	42	41	33	31	43	43	42	46	34	33	30	30
25% Percentile	36	31	45	38	33	29	47	45	39	38	45	45	49	49	38	36	36	34
Median	37	34	48	41	35	31	49	46	41	40	46	45	51	51	40	38	38	36
75% Percentile	41	38	50	45	37	34	51	48	44	41.75	47	46	54	53	41	39	41	38
Maximum	48	42	58	52	43	40	58	52	50	44	51	50	56	55	51	51	46	48
Most Commonplace	36	30	45	38	33	30	49	47	42	39	45	45	54	49	39	39	38	34
Mean	38.05	34.76	47.44	41.36	34.99	31.88	49.31	46.44	41.18	39.62	46.09	45.47	51.34	50.92	39.91	38.37	38.19	36.58
Std. Deviation	3.13	3.76	4.15	4.80	3.18	3.58	2.68	2.30	3.29	2.56	1.67	1.05	2.58	2.51	2.48	2.86	3.38	4.06
Std. Error of Mean	0.16	0.28	0.20	0.33	0.17	0.27	0.13	0.16	0.16	0.19	0.08	0.08	0.12	0.17	0.12	0.20	0.18	0.32
Lower 95% CI of mean	37.74	34.20	47.05	40.70	34.66	31.35	49.06	46.13	40.86	39.24	45.93	45.32	51.10	50.58	39.67	37.98	37.84	35.94
Upper 95% CI of mean	38.37	35.32	47.83	42.01	35.32	32.41	49.57	46.76	41.49	40.00	46.26	45.63	51.58	51.27	40.14	38.76	38.54	37.21

PHOTOGRAPHS OF MONITORING POSITIONS

Position 1: 2 Linden Avenue



Position 2: No. 3 Wern



Position 3: 23 George Street (near West View)



Position 4: Chirk Court (adjacent to Maes y Waun)



Position 5: No. 2 Hadley Close (adjacent to Shepherds Lane)



Position 6: Tall Trees, Station Avenue (adjacent to Mondelez entrance)



Position 6A: Tall Trees, Station Avenue (weather station)



Position 7: Canalwood Industrial Estate



Position 8: Manatton Llwyn-y-cil Road



Position 9: New Hall Farm – Castle Gates



Position 10: Afon Bradley Farm



Position 11: Opposite to Lodge Farm Cottage



BASELINE SURVEY RESULTS

July – August 2021 Baseline Survey

Noise Survey Results

Date: Tuesday 27th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 1

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 1 - 2 Linden Avenue**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590499)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
10:15	15:00	45.8	36.1	79.1	
10:30	15:00	45.6	35.8	66.0	
10:45	15:00	47.7	37.2	65.7	
11:00	15:00	41.8	36.7	59.6	
11:15	15:00	41.1	36.5	69.7	
11:30	15:00	40.8	36.2	60.0	
11:45	15:00	49.8	36.4	74.6	
12:00	15:00	47.6	36.2	78.0	
12:15	15:00	45.8	36.1	66.9	
12:30	15:00	45.5	35.0	67.3	Rain
12:45	15:00	45.1	40.5	72.5	
13:00	15:00	41.8	36.9	56.5	
13:15	15:00	53.3	43.9	63.4	
13:30	15:00	54.1	42.0	62.1	
13:45	15:00	45.8	41.0	56.8	Rain
14:00	15:00	44.8	39.2	70.5	
14:15	15:00	41.9	36.3	67.4	
14:30	15:00	40.9	37.4	63.0	
14:45	15:00	41.9	37.1	69.9	Rain
Log Average 1015-1500		47.3	38.5	57-79	
Average 1015-1500		45.3	37.7	57-79	

Noise Survey Results

Date: Tuesday 27th July 2021

TABLE 2

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 1 - 2 Linden Avenue**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590499)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	41.0	36.2	60.6	Rain
15:15	15:00	42.2	35.4	59.0	
15:30	15:00	41.9	35.5	66.9	Rain
15:45	15:00	38.3	35.6	64.3	
16:00	15:00	38.7	34.3	53.6	
16:15	15:00	43.4	34.4	64.3	
16:30	15:00	47.0	36.6	68.8	
16:45	15:00	45.7	37.6	69.3	
17:00	15:00	41.1	34.4	60.0	
17:15	15:00	40.6	33.9	60.3	Rain
17:30	15:00	37.7	34.1	55.6	
17:45	15:00	38.9	34.5	57.4	
18:00	15:00	38.4	35.8	58.6	
18:15	15:00	39.0	36.2	54.2	
18:30	15:00	44.3	35.9	67.5	
18:45	15:00	40.3	36.2	63.1	
19:00	15:00	41.9	37.2	66.1	
19:15	15:00	40.5	37.2	62.1	
19:30	15:00	38.6	34.5	54.7	
19:45	15:00	39.0	34.7	54.2	
20:00	15:00	41.3	36.1	54.8	
20:15	15:00	42.2	38.2	65.9	
20:30	15:00	45.2	36.8	62.4	
20:45	15:00	42.5	37.4	61.3	
21:00	15:00	60.4	40.0	69.3	Rain
21:15	15:00	59.9	41.1	68.4	
21:30	15:00	39.9	35.8	53.6	
21:45	15:00	37.0	33.9	53.8	
22:00	15:00	34.5	32.6	52.5	
22:15	15:00	35.5	32.7	50.1	
22:30	15:00	36.3	34.0	48.9	
22:45	15:00	37.3	33.6	47.5	
Log Average 1500-2300		48.9	36.1	48-69	
Average 1500-2300		41.6	35.7	48-69	

Noise Survey Results

Date: Tuesday 27th- Wednesday 28th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 1 - 2 Linden Avenue**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590499)

Calibration: 94dB

TABLE 3

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	35.9	34.2	53.1	
23:15	15:00	37.5	35.7	48.7	
23:30	15:00	39.8	36.2	51.1	
23:45	15:00	40.0	36.2	49.5	
00:00	15:00	39.7	38.8	47.4	
00:15	15:00	37.3	34.0	45.1	
00:30	15:00	37.6	33.5	49.5	
00:45	15:00	38.9	37.3	46.2	
01:00	15:00	37.7	35.0	47.1	
01:15	15:00	35.9	33.0	43.7	
01:30	15:00	35.7	32.7	43.5	
01:45	15:00	39.0	34.3	43.2	
02:00	15:00	39.3	36.7	45.2	
02:15	15:00	39.0	37.9	47.9	
02:30	15:00	40.2	37.9	47.5	
02:45	15:00	40.1	38.0	50.6	Rain
03:00	15:00	39.7	38.3	48.9	Rain
03:15	15:00	38.2	35.2	49.2	
03:30	15:00	35.7	33.3	46.5	
03:45	15:00	39.0	35.9	50.8	
04:00	15:00	38.7	35.5	49.4	
04:15	15:00	39.0	35.8	46.2	
04:30	15:00	39.2	35.5	52.3	
04:45	15:00	39.7	36.2	54.1	
05:00	15:00	41.1	37.8	50.4	
05:15	15:00	42.2	37.9	57.0	
05:30	15:00	43.2	40.5	53.0	
05:45	15:00	44.8	40.6	56.4	
06:00	15:00	45.9	40.2	66.5	
06:15	15:00	44.4	38.5	67.7	
06:30	15:00	44.6	39.4	58.6	
06:45	15:00	43.7	38.9	64.3	
Log Average 2300-0700		40.6	37.1	43-68	
Average 2300-0700		39.8	36.6	43-68	

Noise Survey Results

Date: Wednesday 28th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 4

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 1 - 2 Linden Avenue**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590499)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	45.5	38.5	74.0	
07:15	15:00	45.8	39.0	63.6	
07:30	15:00	46.7	40.4	65.5	
07:45	15:00	45.8	41.7	63.5	
08:00	15:00	40.6	38.1	58.9	
08:15	15:00	42.6	36.6	58.0	
08:30	15:00	42.1	37.3	61.5	
08:45	15:00	40.2	38.5	59.3	
09:00	15:00	41.1	39.1	55.3	
09:15	15:00	43.5	40.2	61.1	
09:30	15:00	43.5	39.4	65.5	
09:45	15:00	43.2	41.8	56.2	
10:00	15:00	43.5	41.4	54.5	
10:15	15:00	43.6	40.8	58.5	
10:30	15:00	44.3	42.1	56.5	
10:45	15:00	45.9	42.3	60.3	
11:00	15:00	45.5	43.3	60.4	
11:15	15:00	44.0	41.1	64.4	
11:30	15:00	44.3	41.7	58.9	
11:45	15:00	46.0	41.9	64.1	
12:00	15:00	45.5	43.3	61.2	Rain
12:15	15:00	45.5	42.7	62.7	
12:30	15:00	42.6	40.5	55.0	Rain
12:45	15:00	46.1	43.0	70.0	
13:00	15:00	45.8	43.8	57.5	
13:15	15:00	44.1	41.8	53.1	
13:30	15:00	44.0	41.8	56.4	
13:45	15:00	44.9	42.5	52.0	
14:00	15:00	44.1	42.5	58.6	Rain
14:15	15:00	45.7	43.1	58.5	
14:30	15:00	45.5	42.4	63.3	
14:45	15:00	45.5	41.3	61.1	
Log Average 0700-1500		44.5	41.4	52-74	
Average 0700-1500		44.3	41.1	52-74	

Noise Survey Results

Date: Wednesday 28th July 2021

TABLE 5

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 1 - 2 Linden Avenue**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590499)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	46.2	43.1	56.4	
15:15	15:00	46.2	44.4	59.7	
15:30	15:00	45.6	41.8	59.9	
15:45	15:00	49.4	43.8	67.2	
16:00	15:00	49.7	45.1	74.6	
16:15	15:00	45.3	43.4	60.0	
16:30	15:00	46.7	45.3	56.3	
16:45	15:00	49.8	47.2	68.5	
17:00	15:00	51.3	47.5	77.3	
17:15	15:00	47.3	44.0	55.8	
17:30	15:00	43.0	40.8	53.0	Rain
17:45	15:00	45.8	42.7	69.4	
18:00	15:00	45.3	43.3	64.5	
18:15	15:00	46.8	42.8	58.3	
18:30	15:00	46.4	43.9	59.7	
18:45	15:00	44.4	41.1	61.1	
19:00	15:00	44.0	40.7	56.4	
19:15	15:00	46.3	41.8	64.8	
19:30	15:00	44.2	40.4	60.1	
19:45	15:00	44.2	41.2	61.0	
20:00	15:00	43.4	39.1	61.7	
20:15	15:00	43.0	39.3	55.8	Rain
20:30	15:00	45.1	42.7	59.3	
20:45	15:00	44.9	40.7	57.4	
21:00	15:00	42.5	40.9	53.1	
21:15	15:00	42.3	40.1	50.5	
21:30	15:00	46.5	39.8	70.0	
21:45	15:00	43.1	39.6	53.1	
22:00	15:00	42.9	39.1	54.7	
22:15	15:00	40.1	38.3	48.4	
22:30	15:00	38.6	35.1	49.6	
22:45	15:00	39.8	37.3	48.7	
Log Average 1500-2300		45.9	42.5	48-77	
Average 1500-2300		45.0	41.8	48-77	

Noise Survey Results

Date: Wednesday 28th to Thursday 29th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 6

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 1 - 2 Linden Avenue**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590499)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	41.1	38.7	47.6	Rain
23:15	15:00	41.3	38.9	51.5	
23:30	15:00	40.0	37.1	46.4	
23:45	15:00	41.7	38.2	53.3	
00:00	15:00	42.6	39.7	58.0	
00:15	15:00	42.5	38.2	56.0	
00:30	15:00	41.2	38.1	58.4	
00:45	15:00	41.8	38.7	50.9	
01:00	15:00	43.3	37.3	54.4	
01:15	15:00	44.2	39.7	55.8	
01:30	15:00	42.2	39.0	51.1	
01:45	15:00	42.4	39.9	57.4	
02:00	15:00	45.2	40.1	58.8	
02:15	15:00	44.9	40.8	68.6	
02:30	15:00	43.4	39.9	55.1	
02:45	15:00	45.2	41.5	58.1	
03:00	15:00	44.4	40.4	56.9	
03:15	15:00	43.9	41.1	55.2	
03:30	15:00	47.1	41.0	80.1	
03:45	15:00	44.1	39.9	58.6	
04:00	15:00	42.2	40.1	51.9	
04:15	15:00	41.7	39.4	47.8	
04:30	15:00	42.4	39.5	51.7	
04:45	15:00	40.3	37.5	48.1	
05:00	15:00	42.9	40.0	53.8	
05:15	15:00	44.9	39.2	58.6	
05:30	15:00	45.5	40.7	57.5	
05:45	15:00	45.1	41.3	61.5	
06:00	15:00	46.1	41.8	56.7	
06:15	15:00	45.3	40.9	58.2	
06:30	15:00	45.8	40.4	64.1	
06:45	15:00	46.6	42.1	66.4	
Log Average 2300-0700		43.8	39.9	46-80	
Average 2300-0700		43.5	39.7	46-80	
Average 0700-2300		45.2	42.0	48-77	

Noise Survey Results

Date: Thursday 29th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 7

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 1 - 2 Linden Avenue**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590499)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	46.6	41.7	72.1	
07:15	15:00	46.1	42.5	59.7	
07:30	15:00	46.7	44.8	59.6	
07:45	15:00	48.4	45.5	65.3	
08:00	15:00	46.6	44.1	58.1	
08:15	15:00	45.5	42.1	60.1	
08:30	15:00	45.6	41.8	65.1	
08:45	15:00	45.0	41.5	53.3	
09:00	15:00	46.1	41.5	58.7	
09:15	15:00	45.9	41.9	57.7	
09:30	15:00	45.8	42.1	58.8	
09:45	15:00	48.1	43.8	63.2	
10:00	15:00	46.8	42.3	57.5	
10:15	15:00	46.9	42.3	65.9	
10:30	15:00	46.2	41.7	63.4	
10:45	15:00	47.2	40.5	74.6	
11:00	15:00	47.2	40.4	69.1	
11:15	15:00	46.9	42.8	71.2	
11:30	15:00	45.5	41.8	70.7	
11:45	15:00	45.2	42.6	56.9	
12:00	15:00	45.4	41.3	57.1	
12:15	15:00	45.7	41.6	63.2	
12:30	15:00	44.4	40.9	58.0	
12:45	15:00	46.2	41.4	66.9	
13:00	15:00	46.1	44.3	62.3	
13:15	15:00	44.3	42.1	65.5	
13:30	15:00	43.8	39.8	68.4	
13:45	15:00	43.9	39.3	62.0	
14:00	15:00	45.3	40.6	60.1	
14:15	15:00	51.2	41.7	71.2	
14:30	15:00	47.9	45.5	67.6	
14:45	15:00	49.9	43.8	68.5	
Log Average 0700-1500		46.6	42.4	53-75	
Average 0700-1500		46.3	42.2	53-75	

Noise Survey Results

Date: Thursday 29th July 2021

TABLE 8

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 1 - 2 Linden Avenue**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590499)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	46.8	41.7	65.6	
15:15	15:00	51.2	41.0	73.4	
15:30	15:00	44.3	41.1	58.3	
15:45	15:00	45.6	43.1	59.4	
16:00	15:00	45.6	41.5	59.0	
16:15	15:00	50.0	41.6	77.6	
16:30	15:00	44.8	41.2	62.9	
16:45	15:00	44.4	41.3	57.4	
17:00	15:00	44.1	41.6	64.0	
17:15	15:00	43.3	41.6	59.3	
17:30	15:00	50.5	41.9	61.5	
17:45	15:00	48.3	40.9	67.0	
18:00	15:00	43.3	39.4	60.3	
18:15	15:00	45.5	38.6	76.1	
18:30	15:00	41.9	38.8	56.7	
18:45	15:00	42.1	38.3	59.6	
19:00	15:00	43.9	41.0	59.2	
19:15	15:00	42.4	36.4	59.2	
19:30	15:00	42.2	39.3	66.9	
19:45	15:00	45.2	40.1	67.3	
20:00	15:00	44.5	40.4	65.4	
20:15	15:00	41.8	36.7	64.2	
20:30	15:00	40.9	35.1	60.2	
20:45	15:00	35.2	34.0	48.2	
21:00	15:00	39.4	34.7	62.6	
21:15	15:00	37.0	35.3	61.3	
21:30	15:00	36.3	33.8	51.9	
21:45	15:00	38.0	36.1	47.2	
22:00	15:00	38.7	35.8	52.9	
22:15	15:00	38.0	34.9	53.6	
22:30	15:00	35.4	33.1	50.9	
22:45	15:00	37.8	34.0	48.3	
Log Average 1500-2300		44.7	39.4	47-78	
Average 1500-2300		42.8	38.6	47-78	

Noise Survey Results

Date: Thursday 29th to Friday 30th July 2021
 Location: Kronospan Ltd, Off Holyhead Road, Chirk
 Client: Kronospan Ltd
 Project: **Baseline Sound Survey**
 Data: **Position 1 - 2 Linden Avenue**
 Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590499)
 Calibration: 94dB

TABLE 9

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmix (dB)	Observations
23:00	15:00	40.9	38.6	52.0	
23:15	15:00	36.5	33.2	50.2	
23:30	15:00	38.7	32.6	63.7	
23:45	15:00	45.6	39.7	55.6	
00:00	15:00	41.7	33.9	55.1	Rain
00:15	15:00	33.9	31.9	42.9	Rain
00:30	15:00	40.6	34.6	48.9	
00:45	15:00	34.7	30.5	45.5	Rain
01:00	15:00	33.0	31.1	42.7	
01:15	15:00	36.3	34.1	43.4	
01:30	15:00	34.6	33.8	44.2	
01:45	15:00	35.2	33.9	44.3	
02:00	15:00	35.6	34.1	39.7	
02:15	15:00	35.5	34.2	45.9	
02:30	15:00	35.6	33.6	45.7	
02:45	15:00	44.8	38.9	51.6	
03:00	15:00	45.1	40.8	52.1	Rain
03:15	15:00	48.0	41.5	55.3	Rain
03:30	15:00	42.0	35.5	52.9	Rain
03:45	15:00	43.5	37.2	51.2	Rain
04:00	15:00	47.0	41.7	54.6	Rain
04:15	15:00	52.8	50.9	58.0	Rain
04:30	15:00	52.2	49.3	59.7	Rain
04:45	15:00	50.4	42.0	57.2	Rain
05:00	15:00	42.4	37.6	58.0	
05:15	15:00	40.9	37.2	54.1	
05:30	15:00	40.7	37.8	53.7	Rain
05:45	15:00	41.0	36.0	61.3	
06:00	15:00	42.4	37.6	60.8	
06:15	15:00	40.8	36.2	55.0	
06:30	15:00	43.9	40.8	60.3	
06:45	15:00	42.2	37.7	59.6	Rain
Log Average 2300-0700		44.5	40.6	40-64	
Average 2300-0700		41.2	37.1	40-64	
Average 0700-2300		48.0	42.1	47-78	

Noise Survey Results

Date: Friday 30th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 10

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 1 - 2 Linden Avenue**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590499)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	44.7	37.4	64.2	
07:15	15:00	42.3	37.4	64.2	
07:30	15:00	43.7	39.4	59.9	
07:45	15:00	42.3	39.4	60.0	
08:00	15:00	44.5	38.6	71.5	
08:15	15:00	41.8	38.8	62.4	
08:30	15:00	42.7	39.8	57.7	
08:45	15:00	46.2	40.5	70.5	
09:00	15:00	48.0	40.3	78.5	
09:15	15:00	43.7	38.1	67.0	
09:30	15:00	44.2	38.5	67.3	
09:45	15:00	43.7	39.5	63.9	
10:00	15:00	42.6	40.1	59.7	
10:15	15:00	44.5	39.5	66.4	
10:30	15:00	42.5	39.9	58.3	
10:45	15:00	43.8	39.1	69.6	
11:00	15:00	44.2	39.1	66.4	
11:15	15:00	43.7	40.4	58.3	
11:30	15:00	43.3	38.3	60.5	
11:45	15:00	44.5	40.8	63.6	
12:00	15:00	44.2	40.2	62.8	
12:15	15:00	43.0	40.4	51.9	
12:30	15:00	43.6	39.8	60.2	
12:45	15:00	44.1	39.9	60.6	
13:00	15:00	45.8	39.9	67.7	
13:15	15:00	44.5	40.6	60.4	
13:30	15:00	44.6	40.9	56.5	
13:45	15:00	43.7	41.2	56.6	
14:00	15:00	44.9	38.6	61.8	
14:15	15:00	45.0	41.4	58.2	
14:30	15:00	44.6	41.6	61.0	
14:45	15:00	44.8	40.0	62.7	
Log Average 0700-1500		44.2	39.7	52-79	
Average 0700-1500		44.0	39.7	52-79	

Noise Survey Results

Date: Friday 30th July 2021

TABLE 11

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 1 - 2 Linden Avenue**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590499)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	47.7	41.2	76.0	
15:15	15:00	44.5	40.2	63.1	
15:30	15:00	45.5	40.1	71.6	
15:45	15:00	44.2	42.1	61.0	
16:00	15:00	44.1	40.8	58.5	
16:15	15:00	44.4	41.8	67.4	
16:30	15:00	46.7	40.9	67.2	
16:45	15:00	45.4	42.2	57.5	
17:00	15:00	45.7	41.5	59.4	
17:15	15:00	45.8	40.0	59.2	
17:30	15:00	45.0	40.9	58.9	
17:45	15:00	44.3	40.2	62.6	
18:00	15:00	44.2	39.5	56.6	
18:15	15:00	43.2	38.8	56.7	
18:30	15:00	43.7	38.8	64.3	
18:45	15:00	42.5	37.3	59.3	
19:00	15:00	43.0	37.8	57.6	
19:15	15:00	39.8	35.4	58.7	
19:30	15:00	43.5	34.2	64.4	
19:45	15:00	41.2	36.4	60.7	
20:00	15:00	43.7	38.0	61.6	
20:15	15:00	41.4	36.3	57.1	
20:30	15:00	41.0	36.1	57.7	
20:45	15:00	40.1	36.4	56.1	
21:00	15:00	41.1	36.6	52.8	
21:15	15:00	40.0	38.6	49.9	
21:30	15:00	39.4	36.7	54.1	
21:45	15:00	42.4	37.9	64.3	
22:00	15:00	41.6	38.3	61.9	
22:15	15:00	41.9	36.9	56.4	
22:30	15:00	41.8	38.3	58.5	
22:45	15:00	44.2	39.1	57.9	
Log Average 1500-2300		43.6	39.2	50-76	
Average 1500-2300		43.2	38.7	50-76	

Noise Survey Results

Date: Friday 30th to Saturday 31st July 2021
 Location: Kronospan Ltd, Off Holyhead Road, Chirk
 Client: Kronospan Ltd
 Project: **Baseline Sound Survey**
 Data: **Position 1 - 2 Linden Avenue**
 Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590499)
 Calibration: 94dB

TABLE 12

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	43.9	39.2	65.9	
23:15	15:00	42.5	39.6	56.3	
23:30	15:00	42.1	37.4	58.8	
23:45	15:00	39.2	35.3	55.6	
00:00	15:00	35.6	33.3	47.6	
00:15	15:00	35.4	32.8	45.9	
00:30	15:00	36.2	33.4	47.7	
00:45	15:00	35.5	32.2	46.7	
01:00	15:00	33.8	32.3	43.0	
01:15	15:00	33.7	30.9	43.8	
01:30	15:00	33.5	30.9	45.0	
01:45	15:00	33.3	30.8	46.5	
02:00	15:00	33.2	30.5	42.7	
02:15	15:00	34.4	31.2	47.1	
02:30	15:00	35.2	33.8	49.1	
02:45	15:00	35.3	31.8	50.5	
03:00	15:00	36.6	33.7	45.1	
03:15	15:00	35.6	32.6	42.4	
03:30	15:00	35.2	31.8	50.1	
03:45	15:00	35.4	31.4	50.0	
04:00	15:00	36.7	32.4	47.0	
04:15	15:00	36.2	33.0	46.6	
04:30	15:00	35.0	32.0	45.4	
04:45	15:00	37.8	33.5	57.5	
05:00	15:00	36.2	33.0	48.8	
05:15	15:00	36.0	32.4	47.1	
05:30	15:00	38.7	36.2	50.3	
05:45	15:00	41.8	35.8	59.2	
06:00	15:00	40.8	34.7	64.2	
06:15	15:00	40.6	35.6	56.6	
06:30	15:00	41.0	35.2	56.1	
06:45	15:00	42.2	35.6	62.2	
Log Average 2300-0700		38.3	34.2	42-66	
Average 2300-0700		37.1	33.6	42-66	
Average 0700-2300		43.9	39.5	50-79	

Noise Survey Results

Date: Saturday 31st July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 13

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 1 - 2 Linden Avenue**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590499)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	41.9	36.6	64.9	
07:15	15:00	43.9	35.8	66.3	
07:30	15:00	44.9	37.1	76.4	
07:45	15:00	43.0	36.0	64.2	
08:00	15:00	40.5	35.3	63.4	
08:15	15:00	39.4	35.5	58.2	
08:30	15:00	43.0	34.1	66.6	
08:45	15:00	40.7	35.8	62.3	
09:00	15:00	41.0	35.6	62.1	
09:15	15:00	41.4	36.2	67.3	
09:30	15:00	39.3	35.0	55.3	
09:45	15:00	40.3	35.9	56.4	
10:00	15:00	42.0	36.5	67.2	
10:15	15:00	41.3	36.9	53.8	
10:30	15:00	40.2	36.9	58.2	
10:45	15:00	45.5	37.1	67.5	
11:00	15:00	41.0	35.8	66.2	
11:15	15:00	40.9	35.1	63.5	
11:30	15:00	41.5	36.8	63.4	
11:45	15:00	43.5	37.4	61.3	
12:00	15:00	40.6	37.6	60.4	
12:15	15:00	42.4	39.0	67.6	
12:30	15:00	40.0	37.3	57.6	
12:45	15:00	44.3	39.0	71.7	
13:00	15:00	43.6	38.7	67.6	
13:15	15:00	42.5	39.9	68.3	
13:30	15:00	42.5	38.9	62.0	
13:45	15:00	38.5	37.1	49.1	
14:00	15:00	40.4	37.0	55.9	
14:15	15:00	44.8	35.2	72.0	
14:30	15:00	41.2	37.9	53.5	
14:45	15:00	54.2	37.8	85.8	
Log Average 0700-1500		43.8	36.9	49-86	
Average 0700-1500		42.2	36.8	49-86	

Noise Survey Results

Date: Saturday 31st July 2021

TABLE 14

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 1 - 2 Linden Avenue**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590499)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	44.1	38.2	67.9	
15:15	15:00	44.2	37.3	71.7	
15:30	15:00	42.4	36.1	66.2	
15:45	15:00	41.0	36.8	58.1	
16:00	15:00	41.7	36.0	65.8	
16:15	15:00	39.1	34.2	55.4	
16:30	15:00	41.7	35.3	69.0	
16:45	15:00	41.8	37.3	57.5	
17:00	15:00	42.6	36.1	63.7	
17:15	15:00	47.9	36.6	76.1	
17:30	15:00	39.9	35.4	60.1	
17:45	15:00	40.5	34.9	69.1	
18:00	15:00	46.9	36.6	74.1	
18:15	15:00	38.3	34.6	54.9	
18:30	15:00	42.2	35.1	59.5	
18:45	15:00	44.2	35.9	68.8	
19:00	15:00	41.9	38.4	58.2	
19:15	15:00	42.5	37.3	62.1	
19:30	15:00	43.6	38.3	66.8	
19:45	15:00	41.3	38.0	66.5	
20:00	15:00	40.9	36.5	62.0	
20:15	15:00	42.7	36.6	67.9	
20:30	15:00	42.9	38.2	58.7	
20:45	15:00	43.2	37.9	65.0	
21:00	15:00	42.8	36.3	66.9	
21:15	15:00	43.2	37.7	60.3	
21:30	15:00	42.3	36.2	65.3	
21:45	15:00	39.2	35.4	55.9	
22:00	15:00	38.7	34.5	51.7	
22:15	15:00	41.1	35.2	55.2	
22:30	15:00	39.9	36.2	56.4	
22:45	15:00	39.5	37.7	54.6	
Log Average 1500-2300		42.5	36.6	52-76	
Average 1500-2300		42.0	36.5	52-76	

Noise Survey Results

Date: Saturday 31st July to Sunday 1st August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 15

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 1 - 2 Linden Avenue**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590499)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	38.5	35.8	46.9	
23:15	15:00	38.8	35.7	51.0	
23:30	15:00	39.7	36.9	47.4	
23:45	15:00	37.4	33.6	46.9	
00:00	15:00	35.6	33.9	46.4	
00:15	15:00	35.2	33.6	43.3	
00:30	15:00	36.1	33.5	50.5	
00:45	15:00	35.6	33.6	43.7	
01:00	15:00	35.4	33.5	40.2	
01:15	15:00	32.4	29.7	48.1	
01:30	15:00	35.4	33.5	40.6	
01:45	15:00	35.2	33.8	57.7	
02:00	15:00	34.1	31.0	42.0	
02:15	15:00	30.4	28.8	40.7	
02:30	15:00	29.5	27.6	45.6	
02:45	15:00	31.0	28.8	44.1	
03:00	15:00	31.3	28.9	43.2	
03:15	15:00	32.0	29.8	42.8	
03:30	15:00	31.7	29.1	42.6	
03:45	15:00	32.0	30.1	43.4	
04:00	15:00	32.7	31.1	39.9	
04:15	15:00	33.3	30.4	45.6	
04:30	15:00	32.9	30.2	48.4	
04:45	15:00	32.2	30.5	44.2	
05:00	15:00	43.4	34.2	67.6	
05:15	15:00	36.3	33.6	56.7	
05:30	15:00	36.7	33.5	60.4	
05:45	15:00	42.1	33.6	62.2	
06:00	15:00	39.6	33.8	57.3	
06:15	15:00	43.0	32.3	67.3	
06:30	15:00	47.6	33.4	66.4	
06:45	15:00	48.4	34.5	69.4	
Log Average 2300-0700		39.3	32.8	40-69	
Average 2300-0700		36.1	32.3	40-69	
Average 0700-2300		43.2	36.8	49-86	

Noise Survey Results

Date: Sunday 1st August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 16

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 1 - 2 Linden Avenue**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590499)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	45.4	35.3	64.4	
07:15	15:00	43.2	36.6	68.4	
07:30	15:00	43.4	34.7	65.4	
07:45	15:00	42.2	35.8	57.5	
08:00	15:00	43.5	36.8	66.7	
08:15	15:00	43.3	37.4	57.8	
08:30	15:00	41.6	36.2	58.4	
08:45	15:00	46.3	36.8	78.0	
09:00	15:00	44.8	36.1	62.5	
09:15	15:00	44.0	38.9	59.3	
09:30	15:00	40.4	37.1	53.7	
09:45	15:00	41.8	34.3	55.0	
10:00	15:00	40.8	36.4	59.3	
10:15	15:00	38.7	37.0	54.7	
10:30	15:00	42.1	38.2	59.4	
10:45	15:00	46.4	38.2	68.6	
11:00	15:00	42.9	38.6	61.1	
11:15	15:00	45.2	36.4	59.0	
11:30	15:00	49.8	38.4	59.0	
11:45	15:00	43.0	39.9	58.6	
12:00	15:00	42.3	36.6	63.8	
12:15	15:00	40.3	35.2	55.9	
12:30	15:00	59.2	38.4	76.3	
12:45	15:00	55.8	36.5	68.0	
13:00	15:00	38.5	35.5	57.0	
13:15	15:00	39.7	36.5	55.2	
13:30	15:00	38.7	35.2	52.8	
13:45	15:00	39.2	35.7	62.3	
14:00	15:00	42.5	35.9	65.9	
14:15	15:00	36.9	34.9	49.7	
14:30	15:00	38.2	34.3	56.4	
14:45	15:00	39.4	35.7	66.1	
Log Average 0700-1500		47.5	36.7	50-78	
Average 0700-1500		43.1	36.5	50-78	

Noise Survey Results

Date: Sunday 1st August 2021

TABLE 17

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 1 - 2 Linden Avenue**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590499)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	38.3	35.8	58.8	
15:15	15:00	41.4	35.0	70.7	
15:30	15:00	42.9	34.9	65.8	
15:45	15:00	42.8	34.0	73.3	
16:00	15:00	40.5	36.3	69.1	
16:15	15:00	42.1	35.9	68.0	
16:30	15:00	42.7	35.9	63.8	
16:45	15:00	41.0	38.9	59.7	
17:00	15:00	47.5	38.7	74.9	
17:15	15:00	49.1	37.5	69.7	
17:30	15:00	42.1	34.8	64.5	
17:45	15:00	50.0	38.0	72.4	
18:00	15:00	43.0	36.2	68.7	
18:15	15:00	40.8	36.4	65.7	
18:30	15:00	41.7	36.8	63.3	
18:45	15:00	41.5	34.9	57.2	
19:00	15:00	42.6	36.2	69.7	
19:15	15:00	44.2	36.6	63.3	
19:30	15:00	43.5	36.8	68.0	
19:45	15:00	42.0	35.1	63.2	
20:00	15:00	42.5	34.9	60.5	
20:15	15:00	41.1	33.9	67.1	
20:30	15:00	37.3	34.0	55.1	
20:45	15:00	38.1	32.4	59.8	
21:00	15:00	42.8	33.9	68.7	
21:15	15:00	37.2	31.8	55.3	
21:30	15:00	37.9	31.3	60.3	
21:45	15:00	37.0	31.7	54.4	
22:00	15:00	35.6	30.8	54.1	
22:15	15:00	34.5	32.3	47.9	
22:30	15:00	34.9	30.6	51.8	
22:45	15:00	35.4	30.8	50.4	
Log Average 1500-2300		42.7	35.3	48-75	
Average 1500-2300		41.1	34.8	48-75	

Noise Survey Results

Date: Sunday 1st to Monday 2nd August 2021
 Location: Kronospan Ltd, Off Holyhead Road, Chirk
 Client: Kronospan Ltd
 Project: **Baseline Sound Survey**
 Data: **Position 1 - 2 Linden Avenue**
 Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590499)
 Calibration: 94dB

TABLE 18

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmix (dB)	Observations
23:00	15:00	33.7	30.4	55.6	
23:15	15:00	32.3	29.7	43.7	
23:30	15:00	34.9	30.1	51.9	
23:45	15:00	32.5	30.3	53.0	
00:00	15:00	32.7	31.3	41.4	
00:15	15:00	35.0	33.6	44.7	
00:30	15:00	34.4	32.1	44.3	
00:45	15:00	33.4	30.6	45.6	
01:00	15:00	32.2	29.5	43.9	
01:15	15:00	32.0	30.6	43.1	
01:30	15:00	33.1	31.3	40.8	
01:45	15:00	34.4	32.2	45.5	
02:00	15:00	33.8	31.5	45.0	
02:15	15:00	33.1	31.4	41.5	
02:30	15:00	36.0	33.6	45.0	
02:45	15:00	36.6	33.6	44.3	
03:00	15:00	35.7	33.6	45.7	
03:15	15:00	37.9	34.8	47.4	
03:30	15:00	35.6	33.5	41.4	
03:45	15:00	34.9	33.5	50.0	
04:00	15:00	36.0	33.7	42.5	
04:15	15:00	37.5	35.1	51.9	
04:30	15:00	36.2	33.6	40.4	
04:45	15:00	37.0	33.6	56.9	
05:00	15:00	40.4	37.0	54.0	
05:15	15:00	39.3	36.1	59.1	
05:30	15:00	43.9	33.6	64.3	
05:45	15:00	43.0	37.6	63.1	
06:00	15:00	43.1	38.4	60.7	
06:15	15:00	43.6	38.6	64.6	
06:30	15:00	48.0	38.5	66.0	
06:45	15:00	47.2	39.0	81.3	
Log Average 2300-0700		39.6	34.4	40-81	
Average 2300-0700		36.8	33.5	40-81	
Average 0700-2300		45.8	36.1	48-78	

Noise Survey Results

Date: Monday 2nd August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 19

Client: Kronospan Ltd

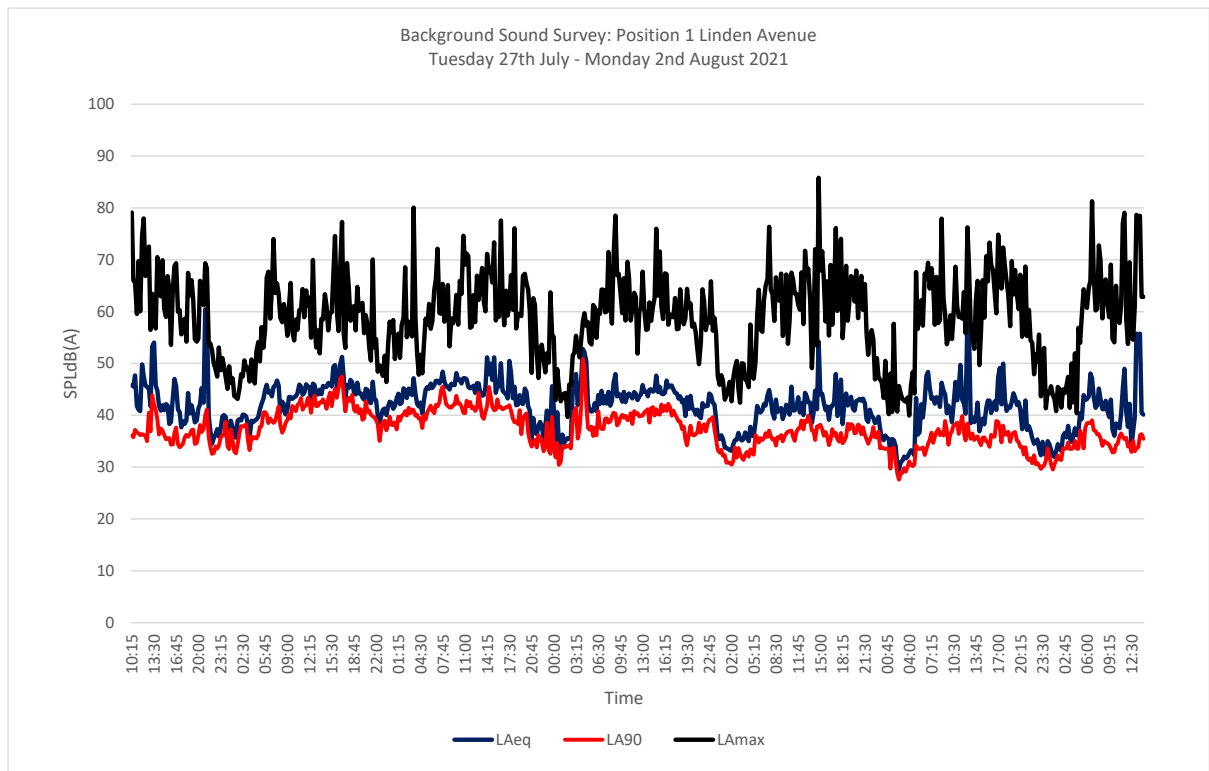
Project: **Baseline Sound Survey**

Data: **Position 1 - 2 Linden Avenue**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590499)

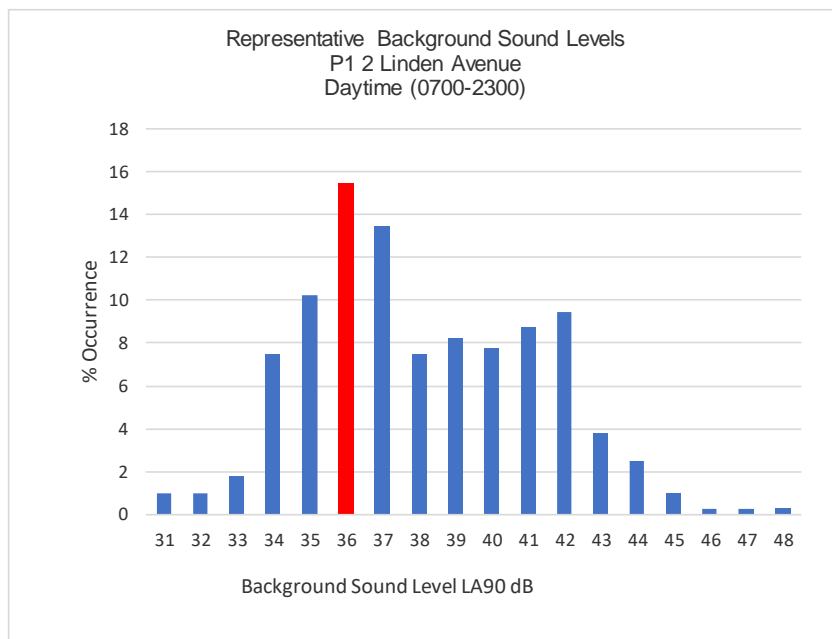
Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	43.5	37.2	66.9	
07:15	15:00	41.5	37.0	60.3	
07:30	15:00	42.0	36.4	60.5	
07:45	15:00	45.1	36.3	72.8	
08:00	15:00	43.1	35.6	69.8	
08:15	15:00	41.2	34.1	58.7	
08:30	15:00	41.2	35.0	64.8	
08:45	15:00	42.8	34.8	66.2	
09:00	15:00	40.8	34.6	61.3	
09:15	15:00	39.7	34.3	58.9	
09:30	15:00	43.0	33.6	69.1	
09:45	15:00	37.3	32.9	54.8	
10:00	15:00	36.1	32.9	54.1	
10:15	15:00	38.4	34.3	65.0	
10:30	15:00	38.0	34.5	58.7	
10:45	15:00	37.5	36.0	57.8	
11:00	15:00	40.3	36.5	61.4	
11:15	15:00	45.1	35.9	77.1	
11:30	15:00	49.0	35.4	79.1	
11:45	15:00	40.5	35.6	58.3	
12:00	15:00	37.8	34.0	53.8	
12:15	15:00	42.2	34.5	69.5	
12:30	15:00	34.2	32.9	54.9	
12:45	15:00	37.0	35.1	54.6	
13:00	15:00	39.7	33.1	61.2	
13:15	15:00	55.7	33.6	78.7	
13:30	15:00	55.4	33.8	78.3	
13:45	15:00	55.7	36.1	78.5	
14:00	15:00	40.5	36.4	62.9	
14:15	15:00	40.1	35.5	62.9	
Log Average 0700-1430		47.0	35.0	54-71	
Average 0700-1430		42.1	34.9	54-71	
Overall Log Average		41.7	37.5	40-81	With Rain
Overall Log Average		45.7	39.2	47-86	With Rain
Overall Log Average		40.8	36.4	40-81	No Rain
Overall Log Average		45.5	39.2	47-86	No Rain

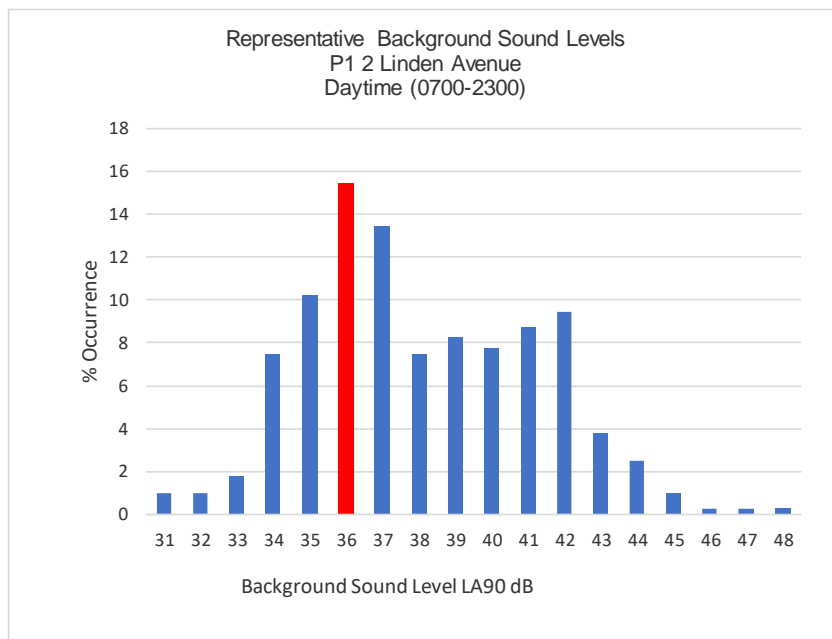


LA90 Representative Levels

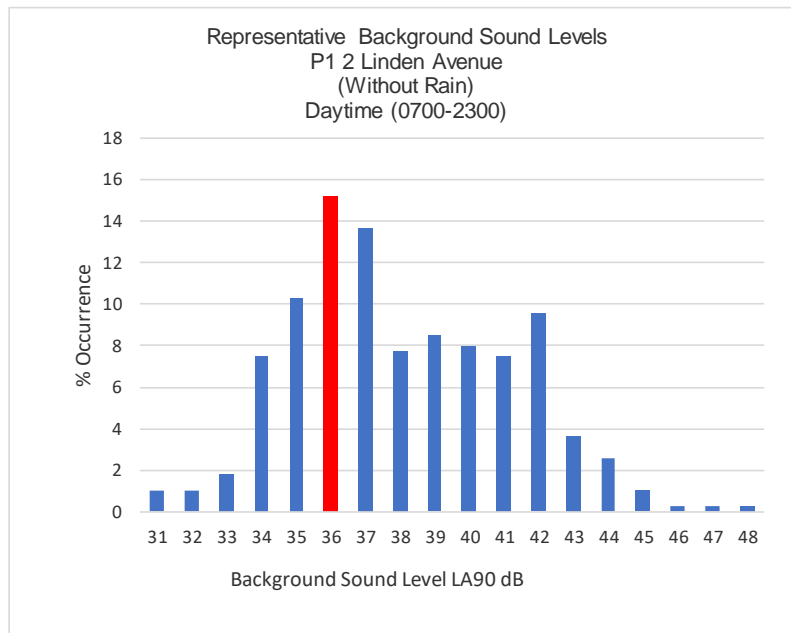
LA90	% Occurrence
31	1.0
32	1.0
33	1.7
34	7.5
35	10.2
36	15.5
37	13.5
38	7.5
39	8.2
40	7.7
41	8.7
42	9.5
43	3.7
44	2.5
45	1.0
46	0.2
47	0.2
48	0.2



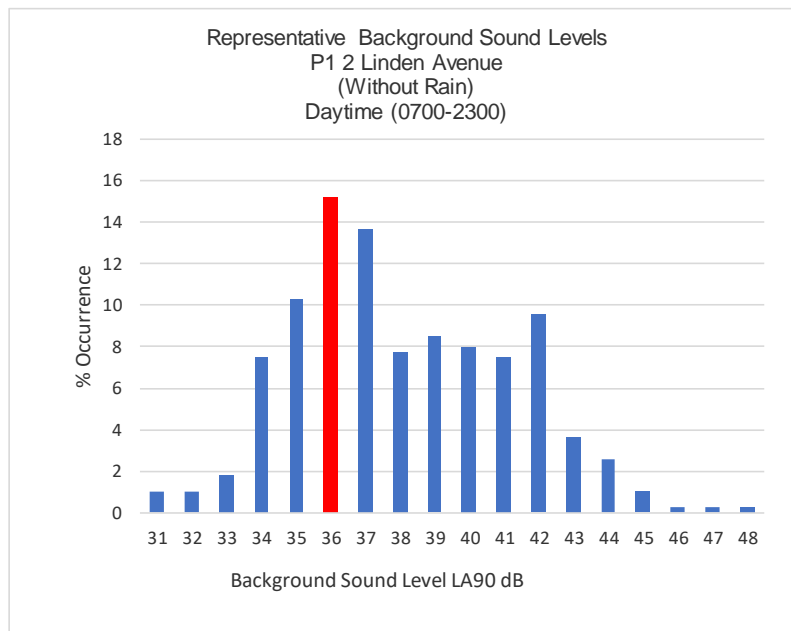
LA90	% Occurrence
31	1.0
32	1.0
33	1.7
34	7.5
35	10.2
36	15.5
37	13.5
38	7.5
39	8.2
40	7.7
41	8.7
42	9.5
43	3.7
44	2.5
45	1.0
46	0.2
47	0.2
48	0.2



LA90	% Occurrence
31	1.0
32	1.0
33	1.8
34	7.5
35	10.3
36	15.2
37	13.7
38	7.8
39	8.5
40	8.0
41	7.5
42	9.6
43	3.6
44	2.6
45	1.0
46	0.3
47	0.3
48	0.3



LA90	% Occurrence
31	1.0
32	1.0
33	1.8
34	7.5
35	10.3
36	15.2
37	13.7
38	7.8
39	8.5
40	8.0
41	7.5
42	9.6
43	3.6
44	2.6
45	1.0
46	0.3
47	0.3
48	0.3



Noise Survey Results

Date: Tuesday 27th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 20

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 2 - 3 Wern**

Instrumentation: Cirrus 171A Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
10:00	15:00	57.3	49.1	77.3	
10:15	15:00	56.7	47.5	73.2	
10:30	15:00	56.5	48.7	74.5	
10:45	15:00	57.5	50.9	74.1	
11:00	15:00	55.2	47.7	68.3	
11:15	15:00	55.8	46.7	70.1	
11:30	15:00	55.6	47.8	70.6	
11:45	15:00	56.6	46.3	73.1	
12:00	15:00	55.4	47.0	67.0	
12:15	15:00	55.9	47.7	70.7	
12:30	15:00	55.1	44.8	68.3	Rain
12:45	15:00	55.6	46.4	67.8	
13:00	15:00	57.0	50.4	73.3	
13:15	15:00	57.6	50.9	66.8	
13:30	15:00	60.8	52.8	73.4	
13:45	15:00	59.0	50.6	71.4	Rain
14:00	15:00	58.9	51.0	76.9	
14:15	15:00	57.0	46.8	67.8	
14:30	15:00	58.1	51.1	74.1	
14:45	15:00	58.1	49.4	70.1	Rain
Log Average 1000-1500		57.2	49.1	67-77	
Average 1000-1500		57.0	48.7	67-77	

Noise Survey Results

Date: Tuesday 27th July 2021

TABLE 21

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 2 - 3 Wern**

Instrumentation: Cirrus 171A Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	58.3	49.5	70.2	Rain
15:15	15:00	58.1	48.5	70.3	
15:30	15:00	57.4	48.0	67.0	Rain
15:45	15:00	57.2	48.4	67.8	
16:00	15:00	57.7	46.4	73.3	
16:15	15:00	57.2	49.5	67.1	
16:30	15:00	58.1	51.1	66.5	
16:45	15:00	58.0	51.7	74.9	
17:00	15:00	58.1	52.2	73.5	
17:15	15:00	59.4	52.6	77.1	Rain
17:30	15:00	59.0	54.4	72.4	
17:45	15:00	59.0	54.3	72.0	
18:00	15:00	58.6	52.7	77.4	
18:15	15:00	56.7	47.7	72.8	
18:30	15:00	56.2	47.5	68.1	
18:45	15:00	56.1	45.5	68.8	
19:00	15:00	55.8	45.0	67.3	
19:15	15:00	62.1	46.1	89.5	
19:30	15:00	55.3	45.9	68.0	
19:45	15:00	55.5	44.5	72.5	
20:00	15:00	55.0	45.0	69.6	
20:15	15:00	55.0	46.6	64.2	
20:30	15:00	54.2	45.4	79.4	
20:45	15:00	54.7	44.8	71.9	
21:00	15:00	63.6	47.1	79.3	
21:15	15:00	60.2	44.4	74.2	Rain
21:30	15:00	52.8	37.9	67.4	
21:45	15:00	52.8	40.2	68.9	
22:00	15:00	52.8	37.4	67.8	
22:15	15:00	54.4	41.3	72.7	
22:30	15:00	51.8	39.2	65.9	
22:45	15:00	52.1	42.0	67.3	
Log Average 1500-2300		57.5	48.6	64-90	
Average 1500-2300		56.7	46.7	64-90	

Noise Survey Results

Date: Tuesday 27th- Wednesday 28th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 22

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 2 - 3 Wern**

Instrumentation: Cirrus 171A Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	53.7	41.2	79.7	
23:15	15:00	50.9	42.7	65.3	
23:30	15:00	50.4	44.4	65.6	
23:45	15:00	48.6	44.5	64.0	
00:00	15:00	49.2	43.6	60.7	
00:15	15:00	46.7	42.1	62.9	
00:30	15:00	48.0	42.7	62.6	
00:45	15:00	46.8	42.9	65.6	
01:00	15:00	49.3	41.7	68.1	
01:15	15:00	46.7	38.3	64.6	
01:30	15:00	42.1	37.6	58.8	
01:45	15:00	50.0	41.4	69.2	
02:00	15:00	46.5	43.6	62.8	
02:15	15:00	49.0	45.2	65.2	
02:30	15:00	48.6	45.9	62.1	
02:45	15:00	46.7	44.5	62.9	Rain
03:00	15:00	49.8	44.6	66.9	Rain
03:15	15:00	46.9	42.3	60.0	
03:30	15:00	44.2	41.0	57.0	
03:45	15:00	52.2	45.5	68.6	
04:00	15:00	51.6	44.7	66.2	
04:15	15:00	51.3	43.9	67.7	
04:30	15:00	52.7	44.3	66.7	
04:45	15:00	55.2	45.9	74.8	
05:00	15:00	54.5	47.1	67.8	
05:15	15:00	55.5	48.1	73.3	
05:30	15:00	56.8	48.9	70.9	
05:45	15:00	57.3	47.6	68.9	
06:00	15:00	57.1	47.1	70.6	
06:15	15:00	56.5	46.1	73.2	
06:30	15:00	58.2	48.0	68.5	
06:45	15:00	58.0	48.1	71.1	
Log Average 2300-0700		52.9	45.0	57-80	
Average 2300-0700		51.0	44.2	57-80	
Average 1000-2300		57.4	48.8	64-90	

Noise Survey Results

Date: Wednesday 28th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 23

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 2 - 3 Wern**

Instrumentation: Cirrus 171A Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	57.0	48.0	67.1	
07:15	15:00	57.7	50.1	69.6	
07:30	15:00	59.0	49.7	75.1	
07:45	15:00	58.3	47.8	72.2	
08:00	15:00	58.0	48.7	69.2	
08:15	15:00	58.1	49.0	74.6	
08:30	15:00	58.2	49.2	78.4	
08:45	15:00	57.5	49.2	72.5	
09:00	15:00	57.2	49.1	67.8	
09:15	15:00	57.8	50.6	69.2	
09:30	15:00	58.5	50.9	73.1	
09:45	15:00	58.4	52.8	69.7	
10:00	15:00	58.0	52.0	69.8	
10:15	15:00	58.2	51.4	73.9	
10:30	15:00	58.3	51.0	68.2	
10:45	15:00	59.0	53.5	71.7	
11:00	15:00	58.5	52.6	69.3	
11:15	15:00	58.0	52.2	69.4	
11:30	15:00	58.2	53.2	67.2	
11:45	15:00	58.5	52.6	69.1	
12:00	15:00	57.9	52.4	67.6	Rain
12:15	15:00	58.6	53.1	78.2	
12:30	15:00	57.9	52.9	72.1	Rain
12:45	15:00	59.0	53.9	68.6	
13:00	15:00	59.5	53.4	77.1	
13:15	15:00	58.6	52.9	70.7	
13:30	15:00	58.6	52.6	72.6	
13:45	15:00	58.3	52.7	69.2	
14:00	15:00	58.7	52.7	76.3	Rain
14:15	15:00	59.9	54.2	79.7	
14:30	15:00	58.2	53.7	70.1	
14:45	15:00	58.5	53.5	66.9	
Log Average 0700-1500		58.3	51.9	67-80	
Average 0700-1500		58.3	51.6	67-80	

Noise Survey Results

Date: Wednesday 28th July 2021

TABLE 24

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 2 - 3 Wern**

Instrumentation: Cirrus 171A Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	60.7	53.9	81.4	Rain
15:15	15:00	58.6	53.2	70.6	
15:30	15:00	59.3	53.9	72.0	
15:45	15:00	61.3	55.4	70.1	
16:00	15:00	60.1	55.1	70.6	
16:15	15:00	58.9	53.1	70.8	
16:30	15:00	60.3	55.1	69.9	
16:45	15:00	61.5	56.5	70.1	
17:00	15:00	61.9	57.6	77.8	
17:15	15:00	61.4	57.0	80.2	
17:30	15:00	59.9	53.4	81.5	
17:45	15:00	59.8	54.4	70.7	
18:00	15:00	59.9	54.5	70.9	
18:15	15:00	60.1	54.4	76.7	
18:30	15:00	58.9	51.9	78.4	
18:45	15:00	58.5	50.8	78.0	
19:00	15:00	57.7	50.4	69.5	
19:15	15:00	57.7	51.2	66.6	Rain
19:30	15:00	56.6	49.6	67.1	
19:45	15:00	57.0	49.8	68.5	
20:00	15:00	56.0	48.6	68.6	
20:15	15:00	57.0	49.7	68.2	
20:30	15:00	58.5	50.7	74.7	
20:45	15:00	56.6	50.1	66.2	
21:00	15:00	55.3	49.6	64.9	
21:15	15:00	55.7	49.8	68.0	
21:30	15:00	56.7	48.9	69.8	
21:45	15:00	56.2	49.1	82.7	
22:00	15:00	53.7	46.8	66.7	
22:15	15:00	51.8	44.9	64.2	
22:30	15:00	52.1	44.3	67.5	
22:45	15:00	53.3	45.5	69.4	
Log Average 1500-2300		58.6	52.7	64-83	
Average 1500-2300		57.9	51.5	64-83	

Noise Survey Results

Date: Wednesday 28th to Thursday 29th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 25

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 2 - 3 Wern**

Instrumentation: Cirrus 171A Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	50.3	45.7	62.7	Rain
23:15	15:00	51.6	46.2	64.6	
23:30	15:00	50.9	46.8	62.6	
23:45	15:00	51.8	46.3	66.5	
00:00	15:00	52.6	47.8	62.7	
00:15	15:00	51.3	47.7	64.9	
00:30	15:00	51.3	47.5	64.7	
00:45	15:00	49.9	47.1	63.1	
01:00	15:00	53.0	47.5	66.4	
01:15	15:00	55.0	47.7	71.9	
01:30	15:00	51.1	48.1	64.2	
01:45	15:00	50.6	48.6	66.7	
02:00	15:00	54.2	49.6	64.9	
02:15	15:00	52.9	49.3	65.4	
02:30	15:00	52.5	48.6	71.8	
02:45	15:00	54.0	49.8	68.6	
03:00	15:00	53.1	49.7	68.6	
03:15	15:00	54.0	50.0	69.4	
03:30	15:00	52.9	49.4	69.7	
03:45	15:00	54.1	48.9	70.5	
04:00	15:00	52.4	48.5	68.8	
04:15	15:00	52.6	49.2	68.3	
04:30	15:00	53.3	48.5	66.8	
04:45	15:00	53.7	47.0	67.7	
05:00	15:00	54.7	47.7	69.2	
05:15	15:00	55.5	48.3	70.0	
05:30	15:00	57.3	49.5	76.0	
05:45	15:00	57.5	50.5	71.5	
06:00	15:00	59.0	50.9	71.0	
06:15	15:00	56.5	49.4	67.7	
06:30	15:00	58.4	50.8	68.9	
06:45	15:00	58.5	51.8	76.7	
Log Average 2300-0700		54.4	48.8	63-77	
Average 2300-0700		53.6	48.6	63-77	
Average 0700-2300		58.4	52.3	64-83	

Noise Survey Results

Date: Thursday 29th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 26

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 2 - 3 Wern**

Instrumentation: Cirrus 171A Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	58.8	52.0	69.1	
07:15	15:00	59.6	52.1	67.6	
07:30	15:00	59.8	53.6	68.9	
07:45	15:00	59.9	53.8	70.1	
08:00	15:00	60.1	52.8	75.7	
08:15	15:00	59.1	52.5	69.9	
08:30	15:00	59.1	51.6	75.9	
08:45	15:00	59.5	51.5	77.9	
09:00	15:00	58.6	52.3	70.3	
09:15	15:00	58.5	51.8	69.2	
09:30	15:00	58.5	52.3	69.1	
09:45	15:00	59.8	54.2	72.2	
10:00	15:00	59.3	52.3	72.2	
10:15	15:00	58.7	51.3	73.9	
10:30	15:00	58.5	53.5	69.1	
10:45	15:00	59.0	53.6	71.0	
11:00	15:00	59.2	53.3	71.1	
11:15	15:00	58.5	52.2	69.1	
11:30	15:00	58.8	52.3	74.6	
11:45	15:00	58.1	52.6	69.4	
12:00	15:00	58.9	53.2	68.7	
12:15	15:00	58.2	52.4	68.8	
12:30	15:00	57.0	50.2	67.7	
12:45	15:00	59.3	54.0	68.5	
13:00	15:00	59.1	52.0	69.1	
13:15	15:00	58.4	52.5	70.5	
13:30	15:00	58.4	51.5	71.3	
13:45	15:00	58.4	52.2	70.3	
14:00	15:00	59.1	52.4	74.1	
14:15	15:00	58.3	50.9	74.2	
14:30	15:00	58.6	53.0	67.3	
14:45	15:00	58.9	52.3	71.8	
Log Average 0700-1500		58.9	52.5	67-78	
Average 0700-1500		58.9	52.4	67-78	

Noise Survey Results

Date: Thursday 29th July 2021

TABLE 27

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 2 - 3 Wern**

Instrumentation: Cirrus 171A Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	58.3	52.2	67.3	
15:15	15:00	58.3	51.7	71.7	
15:30	15:00	58.7	52.9	73.9	
15:45	15:00	59.6	54.4	73.3	
16:00	15:00	58.8	53.7	71.0	
16:15	15:00	58.3	52.5	72.5	
16:30	15:00	58.5	53.0	70.5	
16:45	15:00	58.8	52.3	73.1	
17:00	15:00	57.8	51.4	68.7	
17:15	15:00	58.5	53.5	73.0	
17:30	15:00	59.2	53.0	75.0	
17:45	15:00	57.5	50.3	71.8	
18:00	15:00	57.9	51.2	71.8	
18:15	15:00	56.9	48.8	71.3	
18:30	15:00	56.7	49.1	72.2	
18:45	15:00	56.5	47.6	69.1	
19:00	15:00	57.4	50.0	69.0	
19:15	15:00	58.9	49.8	83.3	
19:30	15:00	56.6	50.0	73.9	
19:45	15:00	54.8	48.9	67.1	
20:00	15:00	56.2	47.3	73.9	
20:15	15:00	53.6	42.3	68.5	
20:30	15:00	54.3	41.6	67.4	
20:45	15:00	53.7	41.5	67.6	
21:00	15:00	55.0	42.7	74.8	
21:15	15:00	52.4	41.7	66.8	
21:30	15:00	53.0	42.2	65.7	
21:45	15:00	51.6	40.5	67.7	
22:00	15:00	52.3	43.5	66.8	
22:15	15:00	51.0	40.3	68.3	
22:30	15:00	51.2	41.2	67.2	
22:45	15:00	51.4	44.5	64.3	
Log Average 1500-2300		56.7	49.9	64-83	
Average 1500-2300		56.1	48.0	64-83	

Noise Survey Results

Date: Thursday 29th to Friday 30th July 2021
 Location: Kronospan Ltd, Off Holyhead Road, Chirk
 Client: Kronospan Ltd
 Project: **Baseline Sound Survey**
 Data: **Position 2 - 3 Wern**

TABLE 28

Instrumentation: Cirrus 171A Real Time Analyser (G066350)
 Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	50.5	42.2	64.8	
23:15	15:00	47.5	37.8	61.9	
23:30	15:00	50.3	38.4	66.1	
23:45	15:00	47.7	42.9	64.6	
00:00	15:00	50.8	39.8	68.1	Rain
00:15	15:00	45.6	36.9	60.4	Rain
00:30	15:00	49.4	37.6	64.7	
00:45	15:00	44.3	32.7	65.0	Rain
01:00	15:00	47.0	35.8	67.4	
01:15	15:00	42.4	36.2	61.9	
01:30	15:00	47.1	32.5	64.6	
01:45	15:00	40.8	34.0	60.9	
02:00	15:00	44.6	35.4	62.7	
02:15	15:00	43.4	33.4	64.2	
02:30	15:00	46.6	33.1	63.4	
02:45	15:00	48.8	38.6	66.1	
03:00	15:00	50.6	38.7	68.1	Rain
03:15	15:00	50.4	39.9	68.9	Rain
03:30	15:00	50.7	35.7	67.5	Rain
03:45	15:00	49.0	36.5	66.5	Rain
04:00	15:00	49.1	39.8	65.7	Rain
04:15	15:00	53.7	46.4	69.7	Rain
04:30	15:00	55.0	47.5	70.3	Rain
04:45	15:00	53.5	40.5	71.7	Rain
05:00	15:00	52.6	37.0	70.5	
05:15	15:00	55.3	38.6	70.3	
05:30	15:00	56.9	39.0	77.4	Rain
05:45	15:00	55.0	39.4	69.7	
06:00	15:00	56.0	42.0	68.6	
06:15	15:00	55.3	38.8	68.9	
06:30	15:00	58.4	41.6	71.4	
06:45	15:00	58.2	43.7	75.7	Rain
Log Average 2300-0700		52.4	40.1	60-77	
Average 2300-0700		50.2	38.5	60-77	
Average 0700-2300		57.9	51.2	64-83	

Noise Survey Results

Date: Friday 30th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 29

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 2 - 3 Wern**

Instrumentation: Cirrus 171A Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	57.9	43.6	74.5	
07:15	15:00	57.2	43.0	69.8	
07:30	15:00	58.2	46.6	69.3	
07:45	15:00	56.7	46.5	69.8	
08:00	15:00	57.5	47.4	70.9	
08:15	15:00	56.3	47.5	66.7	
08:30	15:00	57.7	46.1	77.3	
08:45	15:00	57.2	47.1	73.8	
09:00	15:00	58.4	46.6	86.4	
09:15	15:00	56.0	46.2	69.2	
09:30	15:00	55.2	45.1	68.7	
09:45	15:00	56.2	49.0	67.1	
10:00	15:00	55.4	46.1	67.0	
10:15	15:00	55.2	44.1	70.1	
10:30	15:00	55.3	47.4	68.2	
10:45	15:00	54.8	47.0	70.4	
11:00	15:00	55.3	46.3	66.7	
11:15	15:00	55.2	48.3	66.2	
11:30	15:00	55.7	47.5	69.8	
11:45	15:00	55.9	46.8	67.8	
12:00	15:00	56.2	49.0	75.4	
12:15	15:00	54.8	48.0	65.6	
12:30	15:00	55.8	49.3	66.4	
12:45	15:00	55.7	48.8	67.8	
13:00	15:00	55.6	49.5	69.8	
13:15	15:00	55.6	49.2	74.3	
13:30	15:00	56.0	48.4	66.3	
13:45	15:00	56.6	51.4	64.8	
14:00	15:00	57.4	50.6	68.1	
14:15	15:00	57.2	52.8	66.5	
14:30	15:00	56.3	50.8	70.1	
14:45	15:00	55.7	48.9	66.3	
Log Average 0700-1500		56.3	48.1	65-86	
Average 0700-1500		56.3	47.7	65-86	

Noise Survey Results

Date: Friday 30th July 2021

TABLE 30

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 2 - 3 Wern**

Instrumentation: Cirrus 171A Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	56.0	50.4	65.0	
15:15	15:00	55.6	49.5	69.4	
15:30	15:00	55.1	49.6	70.6	
15:45	15:00	55.7	50.1	68.6	
16:00	15:00	60.5	52.1	91.4	
16:15	15:00	58.2	49.6	89.9	
16:30	15:00	56.5	50.1	71.8	
16:45	15:00	55.1	49.7	65.4	
17:00	15:00	56.4	50.3	71.9	
17:15	15:00	55.6	50.0	66.8	
17:30	15:00	54.5	48.6	65.2	
17:45	15:00	57.5	51.0	72.1	
18:00	15:00	58.1	50.9	67.9	
18:15	15:00	58.3	51.1	76.0	
18:30	15:00	58.3	50.4	74.8	
18:45	15:00	57.2	48.2	75.9	
19:00	15:00	58.7	46.2	77.2	
19:15	15:00	56.7	46.0	72.8	
19:30	15:00	57.0	43.8	76.0	
19:45	15:00	56.0	46.0	77.1	
20:00	15:00	55.5	46.2	71.5	
20:15	15:00	54.5	44.5	73.8	
20:30	15:00	56.2	44.1	79.9	
20:45	15:00	53.4	44.4	66.2	
21:00	15:00	54.1	44.4	67.6	
21:15	15:00	53.8	44.5	71.2	
21:30	15:00	52.4	44.2	66.9	
21:45	15:00	52.6	44.3	63.5	
22:00	15:00	53.8	45.1	73.1	
22:15	15:00	53.2	46.5	70.8	
22:30	15:00	53.2	46.1	66.9	
22:45	15:00	53.5	45.6	65.8	
Log Average 1500-2300		56.1	48.3	64-91	
Average 1500-2300		55.7	47.6	64-91	

Noise Survey Results

Date: Friday 30th to Saturday 31st July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 31

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 2 - 3 Wern**

Instrumentation: Cirrus 171A Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	50.9	45.6	61.9	
23:15	15:00	52.5	46.3	64.8	
23:30	15:00	50.1	44.0	62.4	
23:45	15:00	48.1	41.5	62.1	
00:00	15:00	49.8	38.4	63.9	
00:15	15:00	46.2	39.1	63.3	
00:30	15:00	45.6	39.7	61.2	
00:45	15:00	48.1	38.8	66.8	
01:00	15:00	44.9	37.2	60.6	
01:15	15:00	45.0	36.2	63.5	
01:30	15:00	44.5	36.3	64.4	
01:45	15:00	39.7	35.1	53.5	
02:00	15:00	44.7	37.0	60.8	
02:15	15:00	45.5	37.3	62.3	
02:30	15:00	41.6	36.1	62.8	
02:45	15:00	46.7	37.3	63.1	
03:00	15:00	48.4	40.4	65.9	
03:15	15:00	47.4	38.1	64.2	
03:30	15:00	46.9	37.2	62.6	
03:45	15:00	45.2	37.1	61.5	
04:00	15:00	49.2	38.4	65.9	
04:15	15:00	47.7	38.0	65.7	
04:30	15:00	46.4	36.8	63.9	
04:45	15:00	48.4	38.6	68.9	
05:00	15:00	51.0	38.8	66.7	
05:15	15:00	50.3	38.4	68.4	
05:30	15:00	53.0	43.5	68.6	
05:45	15:00	52.4	41.0	71.4	
06:00	15:00	53.0	40.8	67.2	
06:15	15:00	51.8	42.2	67.1	
06:30	15:00	54.3	41.9	67.5	
06:45	15:00	53.2	41.8	68.8	
Log Average 2300-0700		49.4	40.3	54-71	
Average 2300-0700		48.2	39.3	54-71	
Average 0700-2300		56.2	48.2	64-91	

Noise Survey Results

Date: Saturday 31st July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 32

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 2 - 3 Wern**

Instrumentation: Cirrus 171A Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	53.6	43.2	71.4	
07:15	15:00	52.9	42.9	65.0	
07:30	15:00	54.0	42.9	65.1	
07:45	15:00	54.3	42.5	67.7	
08:00	15:00	55.2	44.8	69.6	
08:15	15:00	54.8	43.6	68.1	
08:30	15:00	56.7	42.9	79.1	
08:45	15:00	55.7	43.3	68.7	
09:00	15:00	55.3	46.2	67.2	
09:15	15:00	56.0	46.4	68.7	
09:30	15:00	55.6	47.1	67.3	
09:45	15:00	56.6	47.8	68.3	
10:00	15:00	56.8	48.4	68.3	
10:15	15:00	57.1	48.8	69.4	
10:30	15:00	57.2	48.7	73.9	
10:45	15:00	56.1	46.5	69.3	
11:00	15:00	57.2	49.3	76.0	
11:15	15:00	55.9	45.5	76.0	
11:30	15:00	56.3	50.1	65.0	
11:45	15:00	57.7	48.5	76.9	
12:00	15:00	57.0	49.0	69.9	
12:15	15:00	57.4	51.1	68.8	
12:30	15:00	57.2	50.6	67.5	
12:45	15:00	58.1	51.7	77.6	
13:00	15:00	57.7	50.6	69.0	
13:15	15:00	57.2	50.9	66.8	
13:30	15:00	56.9	50.1	69.7	
13:45	15:00	58.0	49.7	78.6	
14:00	15:00	56.3	47.6	65.2	
14:15	15:00	55.8	45.4	71.3	
14:30	15:00	55.8	47.4	72.3	
14:45	15:00	57.5	50.6	68.8	
Log Average 0700-1500		56.4	48.1	65-79	
Average 0700-1500		56.2	47.3	65-79	

Noise Survey Results

Date: Saturday 31st July 2021

TABLE 33

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 2 - 3 Wern**

Instrumentation: Cirrus 171A Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	59.6	46.6	83.5	
15:15	15:00	57.4	47.1	76.4	
15:30	15:00	55.8	45.2	64.5	
15:45	15:00	56.8	46.9	73.2	
16:00	15:00	55.9	45.9	68.9	
16:15	15:00	55.5	45.3	68.5	
16:30	15:00	55.8	44.6	67.6	
16:45	15:00	56.7	48.6	69.2	
17:00	15:00	56.3	46.9	71.0	
17:15	15:00	56.1	47.1	70.2	
17:30	15:00	56.0	46.3	71.5	
17:45	15:00	54.8	45.3	68.3	
18:00	15:00	56.7	47.3	73.8	
18:15	15:00	54.9	42.7	73.4	
18:30	15:00	55.8	44.5	71.5	
18:45	15:00	55.9	44.5	75.1	
19:00	15:00	59.1	47.0	77.5	
19:15	15:00	55.5	44.9	73.6	
19:30	15:00	54.9	44.7	68.1	
19:45	15:00	54.0	45.4	68.2	
20:00	15:00	52.6	43.1	66.3	
20:15	15:00	53.6	44.1	67.9	
20:30	15:00	56.6	44.5	78.1	
20:45	15:00	57.2	44.9	80.2	
21:00	15:00	53.0	44.8	71.2	
21:15	15:00	57.0	43.8	79.3	
21:30	15:00	52.0	41.7	65.6	
21:45	15:00	50.8	41.2	65.6	
22:00	15:00	52.2	41.6	65.9	
22:15	15:00	52.8	43.3	65.6	
22:30	15:00	51.3	44.1	67.8	
22:45	15:00	51.9	44.1	73.9	
Log Average 1500-2300		55.6	45.2	65-84	
Average 1500-2300		55.1	44.9	65-84	

Noise Survey Results

Date: Saturday 31st July to Sunday 1st August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 34

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 2 - 3 Wern**

Instrumentation: Cirrus 171A Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	51.1	41.9	65.1	
23:15	15:00	50.6	43.3	67.8	
23:30	15:00	49.1	45.0	61.0	
23:45	15:00	50.8	40.1	71.1	
00:00	15:00	46.8	37.1	61.7	
00:15	15:00	47.0	36.3	61.7	
00:30	15:00	46.6	34.6	61.2	
00:45	15:00	48.4	41.0	65.5	
01:00	15:00	46.1	36.3	61.6	
01:15	15:00	49.5	35.7	71.8	
01:30	15:00	45.5	36.6	62.1	
01:45	15:00	46.8	38.1	70.8	
02:00	15:00	44.3	35.9	62.8	
02:15	15:00	42.5	32.5	65.0	
02:30	15:00	40.6	30.8	61.7	
02:45	15:00	46.7	32.4	63.0	
03:00	15:00	41.5	33.7	61.8	
03:15	15:00	42.2	32.5	59.6	
03:30	15:00	42.1	34.0	63.0	
03:45	15:00	45.2	35.7	64.2	
04:00	15:00	43.0	36.0	58.3	
04:15	15:00	51.2	35.3	76.7	
04:30	15:00	44.2	35.4	62.0	
04:45	15:00	42.0	35.0	63.4	
05:00	15:00	50.5	35.4	74.6	
05:15	15:00	49.7	34.6	71.0	
05:30	15:00	50.2	35.9	64.2	
05:45	15:00	50.3	36.4	68.4	
06:00	15:00	51.8	36.3	65.8	
06:15	15:00	50.5	38.9	65.8	
06:30	15:00	52.0	41.7	66.1	
06:45	15:00	52.2	38.9	73.3	
Log Average 2300-0700		48.4	38.0	58-77	
Average 2300-0700		47.2	36.7	58-77	
Average 0700-2300		56.0	46.9	65-84	

Noise Survey Results

Date: Sunday 1st August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 35

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 2 - 3 Wern**

Instrumentation: Cirrus 171A Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	52.2	41.3	64.1	
07:15	15:00	52.6	43.2	66.4	
07:30	15:00	53.3	40.9	66.8	
07:45	15:00	54.0	44.1	68.8	
08:00	15:00	55.8	44.7	78.5	
08:15	15:00	52.5	45.2	63.9	
08:30	15:00	54.5	44.8	65.6	
08:45	15:00	54.6	45.3	66.5	
09:00	15:00	54.9	44.6	66.6	
09:15	15:00	54.9	45.2	75.0	
09:30	15:00	55.5	45.2	68.2	
09:45	15:00	58.4	47.5	77.7	
10:00	15:00	55.8	44.7	67.0	
10:15	15:00	55.9	48.3	72.9	
10:30	15:00	57.3	50.0	75.6	
10:45	15:00	57.7	47.9	75.3	
11:00	15:00	56.5	48.5	67.4	
11:15	15:00	57.2	48.4	72.8	
11:30	15:00	56.2	46.7	69.6	
11:45	15:00	57.7	50.8	74.5	
12:00	15:00	59.1	49.7	79.6	
12:15	15:00	56.7	49.5	68.7	
12:30	15:00	57.2	49.9	75.1	
12:45	15:00	58.9	47.9	79.2	
13:00	15:00	55.9	46.8	69.5	
13:15	15:00	55.5	48.2	71.2	
13:30	15:00	56.2	45.2	71.0	
13:45	15:00	56.6	48.9	69.5	
14:00	15:00	55.5	47.7	65.5	
14:15	15:00	55.2	46.0	71.4	
14:30	15:00	54.1	42.2	67.2	
14:45	15:00	55.8	45.1	70.6	
Log Average 0700-1500		56.0	47.0	64-80	
Average 0700-1500		55.8	46.4	64-80	

Noise Survey Results

Date: Sunday 1st August 2021

TABLE 36

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 2 - 3 Wern**

Instrumentation: Cirrus 171A Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	56.6	46.8	72.2	
15:15	15:00	54.3	46.4	69.1	
15:30	15:00	58.8	47.0	83.9	
15:45	15:00	55.8	47.8	66.9	
16:00	15:00	54.7	45.2	68.8	
16:15	15:00	55.0	46.0	65.5	
16:30	15:00	55.2	44.7	71.8	
16:45	15:00	56.7	46.2	75.8	
17:00	15:00	63.4	46.4	89.2	
17:15	15:00	57.1	47.0	81.5	
17:30	15:00	54.4	43.0	67.9	
17:45	15:00	55.5	45.2	69.4	
18:00	15:00	55.2	46.2	66.5	
18:15	15:00	54.0	43.2	67.9	
18:30	15:00	56.0	42.8	76.7	
18:45	15:00	57.1	40.7	80.7	
19:00	15:00	55.1	42.2	73.3	
19:15	15:00	53.8	42.3	76.8	
19:30	15:00	53.6	42.8	64.3	
19:45	15:00	53.0	36.7	72.6	
20:00	15:00	54.3	40.3	69.6	
20:15	15:00	59.6	40.0	90.9	
20:30	15:00	52.9	39.3	72.5	
20:45	15:00	52.8	39.8	67.9	
21:00	15:00	51.7	37.8	69.1	
21:15	15:00	50.7	37.2	66.6	
21:30	15:00	50.9	37.6	66.0	
21:45	15:00	50.7	37.5	65.8	
22:00	15:00	50.0	36.9	64.7	
22:15	15:00	46.9	37.0	63.2	
22:30	15:00	49.0	36.4	64.9	
22:45	15:00	50.3	36.1	66.0	
Log Average 1500-2300		55.5	43.5	63-91	
Average 1500-2300		54.2	42.0	63-91	

Noise Survey Results

Date: Sunday 1st to Monday 2nd August 2021
 Location: Kronospan Ltd, Off Holyhead Road, Chirk
 Client: Kronospan Ltd
 Project: **Baseline Sound Survey**
 Data: **Position 2 - 3 Wern**

TABLE 37

Instrumentation: Cirrus 171A Real Time Analyser (G066350)
 Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	49.7	34.9	68.2	
23:15	15:00	43.4	34.9	57.6	
23:30	15:00	50.6	36.9	67.3	
23:45	15:00	47.3	37.9	64.7	
00:00	15:00	41.9	39.0	56.4	
00:15	15:00	46.7	39.5	62.0	
00:30	15:00	43.4	38.2	59.8	
00:45	15:00	42.2	37.5	58.9	
01:00	15:00	42.8	38.0	60.0	
01:15	15:00	43.8	38.9	62.9	
01:30	15:00	43.0	38.0	60.0	
01:45	15:00	41.1	38.1	54.9	
02:00	15:00	43.0	38.1	61.5	
02:15	15:00	43.1	38.4	59.2	
02:30	15:00	50.8	41.8	75.3	
02:45	15:00	47.4	43.9	62.7	
03:00	15:00	49.8	43.2	68.9	
03:15	15:00	48.5	42.6	62.5	
03:30	15:00	48.7	42.2	66.8	
03:45	15:00	43.3	39.9	60.7	
04:00	15:00	47.5	40.9	66.2	
04:15	15:00	49.8	41.1	65.7	
04:30	15:00	48.0	40.9	61.6	
04:45	15:00	50.1	42.9	68.3	
05:00	15:00	54.2	44.9	72.3	
05:15	15:00	52.8	43.6	65.5	
05:30	15:00	53.8	41.5	66.9	
05:45	15:00	53.7	45.5	71.1	
06:00	15:00	57.8	49.8	67.0	
06:15	15:00	55.8	46.9	73.8	
06:30	15:00	56.4	47.5	69.6	
06:45	15:00	57.2	46.6	75.3	
Log Average 2300-0700		51.1	42.7	55-75	
Average 2300-0700		48.4	41.1	55-75	
Average 0700-2300		55.8	45.6	63-91	

Noise Survey Results

Date: Monday 2nd August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 38

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 2 - 3 Wern**

Instrumentation: Cirrus 171A Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	55.4	44.6	67.2	
07:15	15:00	56.4	45.3	76.7	
07:30	15:00	56.6	47.7	68.4	
07:45	15:00	57.2	48.0	67.7	
08:00	15:00	56.9	48.2	70.0	
08:15	15:00	56.2	45.8	68.1	
08:30	15:00	55.3	43.6	68.6	
08:45	15:00	59.8	47.2	85.8	
09:00	15:00	54.7	44.1	68.2	
09:15	15:00	56.9	47.4	70.0	
09:30	15:00	57.3	44.2	74.8	
09:45	15:00	56.6	46.1	68.7	
10:00	15:00	56.4	45.3	71.2	
10:15	15:00	56.0	46.6	72.7	
10:30	15:00	55.9	45.6	73.2	
10:45	15:00	56.0	46.8	69.4	
11:00	15:00	56.2	48.8	67.9	
11:15	15:00	55.5	47.7	67.8	
11:30	15:00	57.1	47.9	72.4	
11:45	15:00	56.8	48.3	77.1	
12:00	15:00	56.0	46.4	72.2	
12:15	15:00	56.3	46.7	68.5	
12:30	15:00	56.2	49.0	69.7	
12:45	15:00	56.0	48.2	68.9	
13:00	15:00	56.2	46.2	69.8	
13:15	15:00	57.5	49.5	72.6	
13:30	15:00	56.2	49.1	64.7	
13:45	15:00	56.3	47.4	71.1	
14:00	15:00	56.3	48.0	67.7	
14:15	15:00	55.8	47.0	65.9	
14:30	15:00	56.0	45.4	70.3	
14:45	15:00	56.5	49.0	67.5	
Log Average 0700-1500		56.4	47.1	65-86	
Average 0700-1500		56.4	46.9	65-86	

Noise Survey Results

Date: Monday 2nd August 2021

TABLE 39

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 2 - 3 Wern**

Instrumentation: Cirrus 171A Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	56.8	47.1	70.2	
15:15	15:00	56.4	47.7	69.1	
15:30	15:00	56.1	48.5	68.3	
15:45	15:00	55.7	44.9	67.7	
16:00	15:00	56.3	46.9	71.9	
16:15	15:00	56.0	47.2	67.7	
16:30	15:00	57.1	49.7	68.7	
16:45	15:00	57.2	50.8	78.3	
17:00	15:00	57.2	50.2	70.7	
17:15	15:00	56.8	49.6	68.9	
17:30	15:00	56.2	48.4	66.0	
17:45	15:00	56.1	46.9	67.0	
18:00	15:00	56.7	48.5	70.2	
18:15	15:00	56.8	47.5	82.1	
18:30	15:00	55.3	44.5	68.2	
18:45	15:00	54.8	43.5	66.1	
19:00	15:00	54.2	41.7	69.2	
19:15	15:00	54.9	43.5	68.8	
19:30	15:00	54.8	39.9	74.9	
19:45	15:00	53.3	39.1	68.3	
20:00	15:00	53.5	39.8	68.9	
20:15	15:00	55.0	40.0	77.4	
20:30	15:00	53.4	40.8	65.6	
20:45	15:00	54.0	41.4	72.3	
21:00	15:00	55.4	41.5	71.0	
21:15	15:00	52.7	39.7	68.3	
21:30	15:00	52.3	40.7	65.8	
21:45	15:00	49.9	38.4	64.9	
22:00	15:00	49.7	37.8	64.8	
22:15	15:00	49.7	36.8	66.0	
22:30	15:00	49.0	36.2	64.2	
22:45	15:00	48.1	36.2	65.7	
Log Average 1500-2300		55.0	45.6	64-82	
Average 1500-2300		54.4	43.6	64-82	

Noise Survey Results

Date: Monday 2nd - Tuesday 3rd August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 2 - 3 Wern**

Instrumentation: Cirrus 171A Real Time Analyser (G066350)

Calibration: 94dB

TABLE 40

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	49.1	41.2	67.6	
23:15	15:00	49.7	40.0	65.9	
23:30	15:00	48.8	41.0	62.2	
23:45	15:00	43.3	39.3	60.5	
00:00	15:00	47.0	36.6	65.6	
00:15	15:00	47.7	37.5	68.8	
00:30	15:00	43.6	36.2	61.6	
00:45	15:00	44.5	37.6	65.6	
01:00	15:00	49.8	43.1	70.6	
01:15	15:00	46.2	42.7	59.3	
01:30	15:00	42.7	37.0	61.7	
01:45	15:00	40.5	35.5	59.6	
02:00	15:00	47.9	38.0	66.1	
02:15	15:00	41.7	38.2	54.0	
02:30	15:00	45.8	41.2	63.8	
02:45	15:00	47.5	41.7	70.2	
03:00	15:00	43.6	39.2	59.9	
03:15	15:00	47.9	37.9	64.9	
03:30	15:00	46.4	39.0	65.0	
03:45	15:00	48.9	41.9	65.6	
04:00	15:00	49.0	41.6	64.2	
04:15	15:00	49.4	41.3	64.2	
04:30	15:00	49.3	41.5	65.8	
04:45	15:00	50.2	42.6	66.9	
05:00	15:00	52.1	40.0	70.3	
05:15	15:00	53.2	43.1	69.4	
05:30	15:00	55.9	44.2	68.5	
05:45	15:00	54.2	43.0	70.4	
06:00	15:00	55.5	42.4	66.1	
06:15	15:00	54.3	43.2	67.4	
06:30	15:00	55.8	45.1	69.0	
06:45	15:00	56.2	43.9	69.4	
Log Average 2300-0700		50.7	41.2	54-71	
Average 2300-0700		48.7	40.5	54-71	
Average 0700-2300		55.8	46.4	64-86	

Noise Survey Results

Date: Tuesday 3rd August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 41

Client: Kronospan Ltd

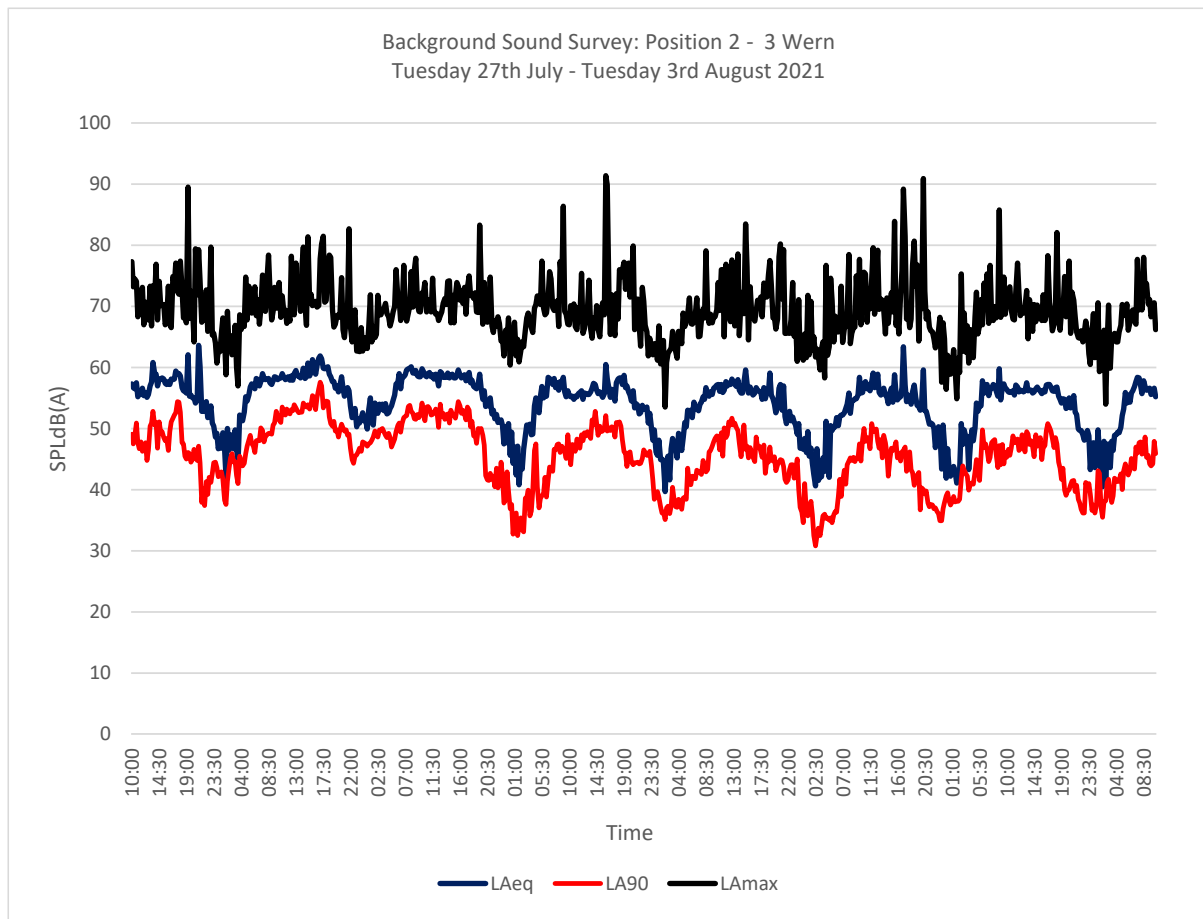
Project: **Baseline Sound Survey**

Data: **Position 2 - 3 Wern**

Instrumentation: Cirrus 171A Real Time Analyser (G066350)

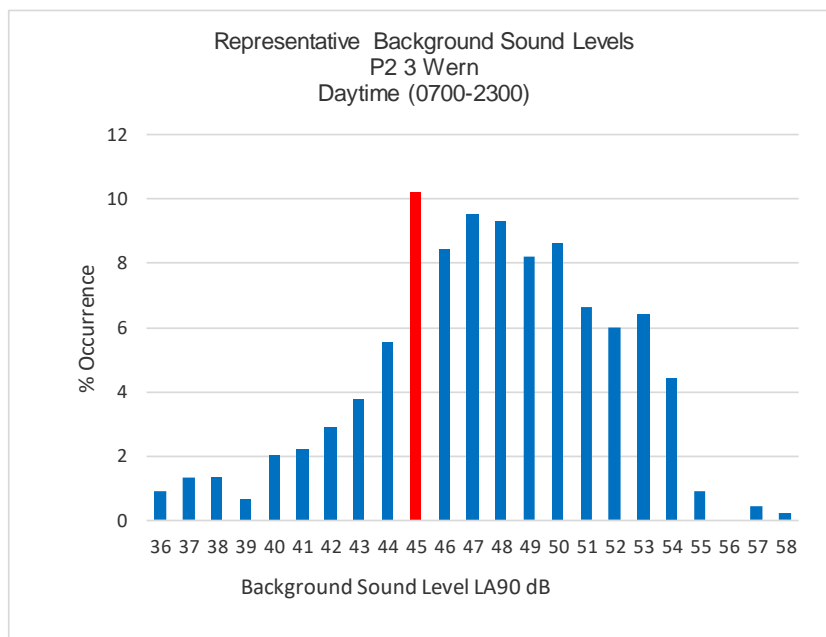
Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	56.9	43.4	67.6	
07:15	15:00	57.7	47.0	67.1	
07:30	15:00	58.4	46.0	77.7	
07:45	15:00	58.3	47.7	69.4	
08:00	15:00	57.1	47.8	73.0	
08:15	15:00	55.7	45.8	69.4	
08:30	15:00	57.8	46.0	78.0	
08:45	15:00	56.9	48.6	72.7	
09:00	15:00	56.3	45.3	73.7	
09:15	15:00	56.4	45.6	70.4	
09:30	15:00	56.6	44.2	71.1	
09:45	15:00	55.6	43.9	68.3	
10:00	15:00	55.9	44.2	69.3	
10:15	15:00	56.6	47.9	70.6	
10:30	15:00	55.2	45.9	66.2	
Log Average 0700-1045		56.8	46.2	66-78	
Average 0700-1045		56.8	46.0	66-78	
Overall Log Average		51.7	43.7	54-80	With Rain
Overall Log Average		56.9	49.1	63-91	With Rain
Overall Log Average		51.7	43.8	54-80	No Rain
Overall Log Average		56.8	49	63-91	No Rain

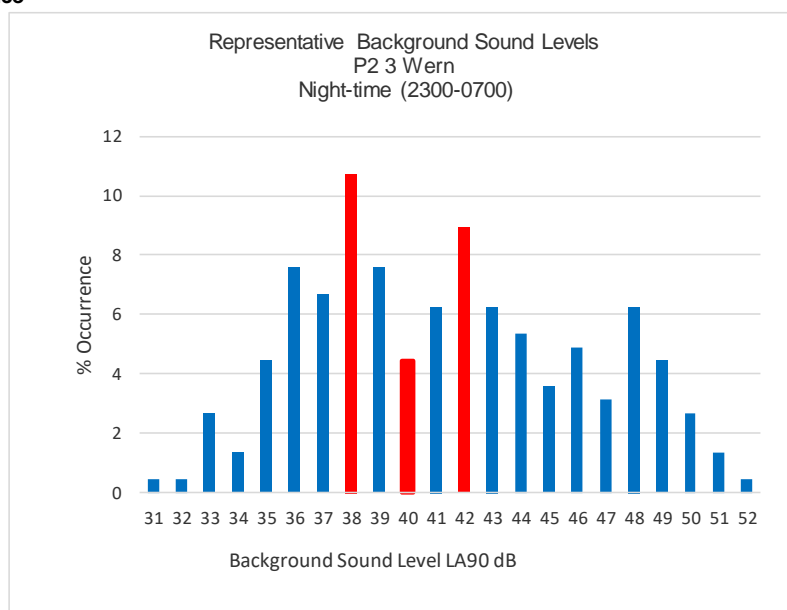


LA90 Representative Levels

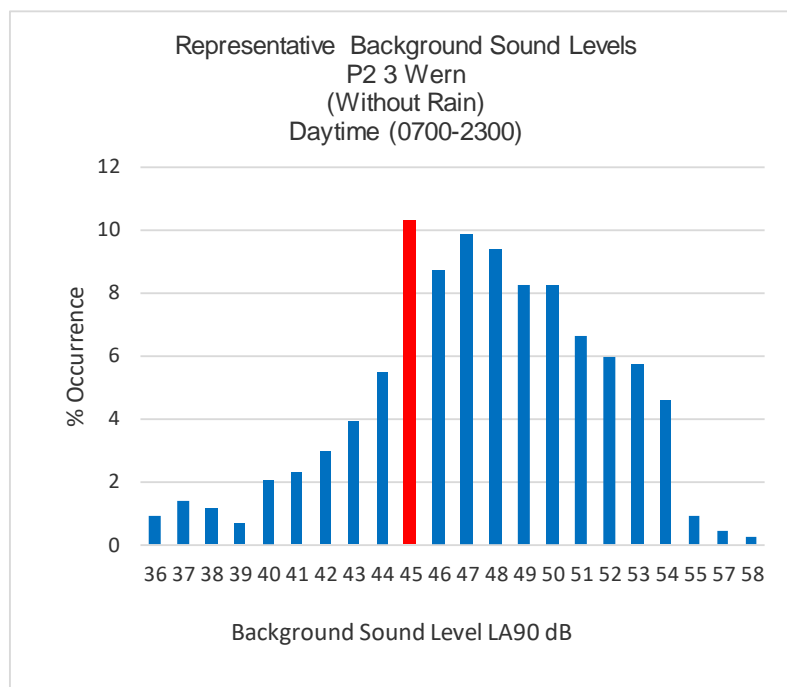
LA90	% Occurrence
36	0.9
37	1.3
38	1.3
39	0.7
40	2.0
41	2.2
42	2.9
43	3.8
44	5.5
45	10.2
46	8.4
47	9.5
48	9.3
49	8.2
50	8.6
51	6.7
52	6.0
53	6.4
54	4.4
55	0.9
56	0.0
57	0.4
58	0.2



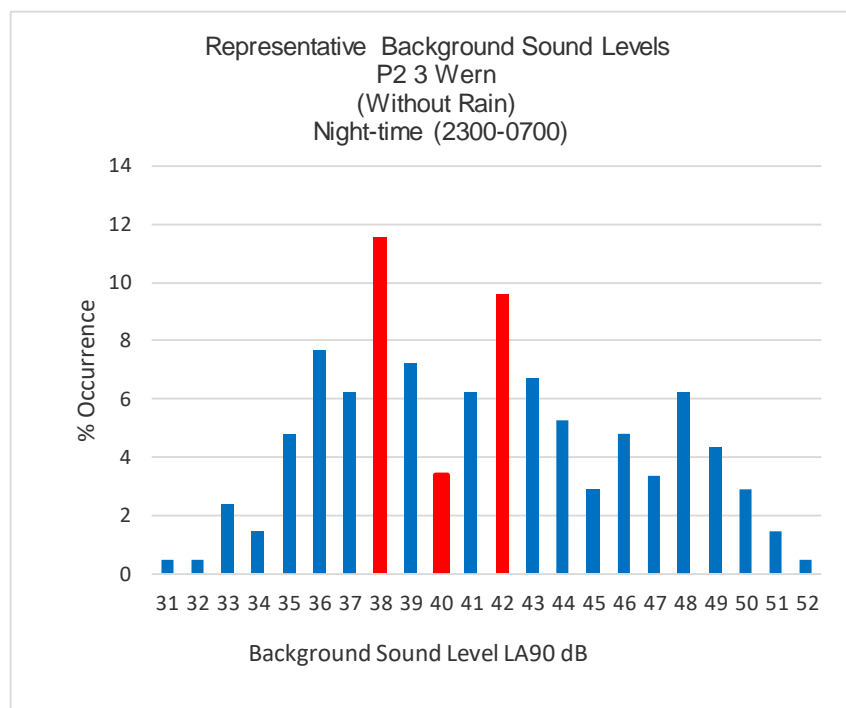
LA90	% Occurrence
31	0.4
32	0.4
33	2.7
34	1.3
35	4.5
36	7.6
37	6.7
38	10.7
39	7.6
40	4.5
41	6.3
42	8.9
43	6.3
44	5.4
45	3.6
46	4.9
47	3.1
48	6.3
49	4.5
50	2.7
51	1.3
52	0.4



LA90	% Occurrence
36	0.9
37	1.4
38	1.1
39	0.7
40	2.1
41	2.3
42	3.0
43	3.9
44	5.5
45	10.3
46	8.7
47	9.8
48	9.4
49	8.2
50	8.2
51	6.6
52	5.9
53	5.7
54	4.6
55	0.9
57	0.5
58	0.2



LA90	% Occurrence
31	0.5
32	0.5
33	2.4
34	1.4
35	4.8
36	7.7
37	6.3
38	11.5
39	7.2
40	3.4
41	6.3
42	9.6
43	6.7
44	5.3
45	2.9
46	4.8
47	3.4
48	6.3
49	4.3
50	2.9
51	1.4
52	0.5



Noise Survey Results

Date: Tuesday 27th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 42

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 3 - 23 George Street (West View Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2506557)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
11:15	15:00	37.9	32.8	56.7	Rain
11:30	15:00	37.6	33.1	60.0	
11:45	15:00	36.2	33.5	53.0	
12:00	15:00	36.1	32.8	55.8	
12:15	15:00	37.7	32.8	62.5	
12:30	15:00	36.3	30.0	57.5	
12:45	15:00	38.6	34.3	56.6	
13:00	15:00	38.7	32.8	58.7	
13:15	15:00	41.0	36.4	60.8	
13:30	15:00	47.2	36.7	70.7	
13:45	15:00	38.3	37.3	50.8	Rain
14:00	15:00	36.8	35.8	51.6	Rain
14:15	15:00	35.6	31.6	57.5	
14:30	15:00	36.8	32.5	60.3	
14:45	15:00	35.2	32.7	55.0	
Log Average 1115-1500		39.4	34.1	51-71	
Average 1115-1500		38.0	33.7	51-71	

Noise Survey Results

Date: Tuesday 27th July 2021

TABLE 43

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 3 - 23 George Street (West View Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2506557)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	37.6	32.4	57.1	Rain
15:15	15:00	38.8	32.6	58.7	
15:30	15:00	36.2	31.8	56.3	Rain
15:45	15:00	38.3	32.0	57.2	
16:00	15:00	37.9	29.6	55.6	
16:15	15:00	36.1	31.8	47.4	
16:30	15:00	36.6	31.8	52.5	
16:45	15:00	37.2	34.6	53.2	
17:00	15:00	36.5	34.2	52.2	
17:15	15:00	37.0	30.7	49.5	Rain
17:30	15:00	40.3	34.6	61.3	
17:45	15:00	36.9	32.4	61.3	
18:00	15:00	37.7	35.3	56.5	
18:15	15:00	39.5	31.5	57.4	
18:30	15:00	36.9	32.9	51.9	
18:45	15:00	37.9	31.7	52.9	
19:00	15:00	36.9	32.1	57.9	
19:15	15:00	36.2	33.5	48.9	
19:30	15:00	35.9	32.7	52.7	
19:45	15:00	35.0	32.6	47.5	
20:00	15:00	37.1	33.3	54.8	
20:15	15:00	36.2	35.4	47.3	
20:30	15:00	38.6	33.5	57.1	
20:45	15:00	37.2	33.5	56.1	
21:00	15:00	53.7	37.5	72.6	
21:15	15:00	47.1	30.8	68.0	Rain
21:30	15:00	31.9	27.2	52.3	
21:45	15:00	33.5	30.2	45.3	
22:00	15:00	31.8	28.5	48.3	
22:15	15:00	33.1	29.8	47.1	
22:30	15:00	34.0	30.2	47.0	
22:45	15:00	33.8	31.4	46.8	
Log Average 1500-2300		41.2	32.7	45-73	
Average 1500-2300		37.3	32.3	45-73	

Noise Survey Results

Date: Tuesday 27th- Wednesday 28th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 44

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 3 - 23 George Street (West View Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2506557)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	33.3	30.7	51.4	
23:15	15:00	33.0	30.8	39.1	
23:30	15:00	34.1	32.6	45.3	
23:45	15:00	34.0	32.9	39.5	
00:00	15:00	34.1	34.0	43.3	
00:15	15:00	32.0	30.6	52.6	
00:30	15:00	32.6	30.3	41.0	
00:45	15:00	32.8	31.4	38.4	
01:00	15:00	32.9	31.6	44.3	
01:15	15:00	31.2	29.8	51.5	
01:30	15:00	30.4	27.9	34.0	
01:45	15:00	33.6	30.5	44.9	
02:00	15:00	33.9	32.8	45.8	
02:15	15:00	36.4	34.1	44.0	
02:30	15:00	36.1	34.2	43.2	
02:45	15:00	34.9	32.9	39.9	Rain
03:00	15:00	35.8	34.4	42.2	Rain
03:15	15:00	34.4	32.8	38.5	
03:30	15:00	33.2	32.1	38.2	
03:45	15:00	36.3	33.8	46.1	
04:00	15:00	35.9	33.5	46.7	
04:15	15:00	36.1	33.1	45.7	
04:30	15:00	36.4	33.5	47.0	
04:45	15:00	37.8	34.6	53.1	
05:00	15:00	38.1	34.4	50.1	
05:15	15:00	39.4	35.0	51.4	
05:30	15:00	39.9	36.9	49.0	
05:45	15:00	39.7	36.2	55.2	
06:00	15:00	38.3	35.9	47.3	
06:15	15:00	38.8	33.4	52.2	
06:30	15:00	42.1	36.2	59.7	
06:45	15:00	40.3	36.3	56.6	
Log Average 2300-0700		36.5	33.5	34-60	
Average 2300-0700		35.5	33.1	34-60	
Average 1115-2300		40.7	33.3	45-73	

Noise Survey Results

Date: Wednesday 28th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 45

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 3 - 23 George Street (West View Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2506557)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	39.1	35.0	49.9	
07:15	15:00	39.5	35.8	56.5	
07:30	15:00	38.7	37.2	55.0	
07:45	15:00	37.8	36.7	48.4	
08:00	15:00	40.1	36.2	58.4	
08:15	15:00	38.4	34.0	57.1	
08:30	15:00	40.2	35.3	60.1	
08:45	15:00	39.5	37.0	56.4	
09:00	15:00	39.5	36.8	50.9	
09:15	15:00	40.3	38.2	59.2	
09:30	15:00	39.7	37.5	54.1	
09:45	15:00	41.7	39.8	52.1	
10:00	15:00	40.6	38.6	52.7	
10:15	15:00	39.7	36.9	50.0	
10:30	15:00	42.4	38.6	62.9	
10:45	15:00	42.9	39.7	56.2	
11:00	15:00	42.5	40.8	53.6	
11:15	15:00	41.6	39.4	51.3	
11:30	15:00	42.0	39.8	54.4	
11:45	15:00	42.3	40.7	54.7	
12:00	15:00	41.4	39.3	52.4	Rain
12:15	15:00	41.6	39.6	62.9	
12:30	15:00	40.4	38.3	46.4	Rain
12:45	15:00	41.7	40.6	49.7	
13:00	15:00	42.4	40.3	54.0	
13:15	15:00	41.7	40.0	53.3	
13:30	15:00	41.8	39.8	55.1	
13:45	15:00	43.5	40.4	62.9	
14:00	15:00	41.4	40.2	55.0	Rain
14:15	15:00	41.7	40.6	53.0	
14:30	15:00	42.2	40.3	53.3	
14:45	15:00	43.2	41.2	57.2	
Log Average 0700-1500		41.2	38.9	46-63	
Average 0700-1500		41.0	38.6	46-83	

Noise Survey Results

Date: Wednesday 28th July 2021

TABLE 46

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 3 - 23 George Street (West View Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2506557)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	43.4	41.4	54.8	
15:15	15:00	42.4	41.1	51.4	
15:30	15:00	41.9	40.2	53.1	
15:45	15:00	43.5	40.2	53.1	
16:00	15:00	43.2	39.8	56.7	
16:15	15:00	42.1	41.3	50.0	
16:30	15:00	42.8	42.4	54.7	
16:45	15:00	43.4	42.9	55.2	
17:00	15:00	44.8	43.4	53.6	
17:15	15:00	42.2	41.9	54.8	
17:30	15:00	40.1	37.0	59.8	
17:45	15:00	40.1	40.5	53.9	
18:00	15:00	42.2	39.2	54.7	
18:15	15:00	43.0	40.6	61.3	
18:30	15:00	42.2	38.8	58.1	
18:45	15:00	42.0	37.4	59.0	
19:00	15:00	40.4	36.9	51.9	Rain
19:15	15:00	41.7	39.0	58.2	
19:30	15:00	40.9	38.0	56.6	
19:45	15:00	40.9	38.5	54.7	
20:00	15:00	39.4	36.1	48.0	
20:15	15:00	39.4	36.4	46.5	
20:30	15:00	41.1	38.5	51.4	
20:45	15:00	40.9	38.8	52.9	
21:00	15:00	40.1	38.8	49.5	
21:15	15:00	40.1	38.5	46.8	
21:30	15:00	42.2	38.3	60.7	
21:45	15:00	40.2	37.5	48.3	
22:00	15:00	38.8	35.3	50.0	
22:15	15:00	37.0	34.8	44.7	
22:30	15:00	35.5	33.6	44.4	
22:45	15:00	36.2	34.3	47.8	
Log Average 1500-2300		41.4	39.4	44-61	
Average 1500-2300		41.1	38.8	44-61	

Noise Survey Results

Date: Wednesday 28th to Thursday 29th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 47

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 3 - 23 George Street (West View Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2506557)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	36.4	34.7	44.2	Rain
23:15	15:00	37.2	34.4	49.1	
23:30	15:00	37.2	35.4	45.6	
23:45	15:00	38.1	35.1	46.5	
00:00	15:00	39.6	36.9	46.1	
00:15	15:00	39.3	37.4	45.9	
00:30	15:00	38.8	36.6	46.9	
00:45	15:00	38.5	36.4	47.3	
01:00	15:00	40.5	36.4	51.5	
01:15	15:00	40.9	37.5	51.9	
01:30	15:00	39.5	36.3	50.8	
01:45	15:00	39.2	37.7	45.8	
02:00	15:00	41.4	37.7	52.7	
02:15	15:00	40.8	38.8	50.7	
02:30	15:00	40.0	38.4	52.1	
02:45	15:00	40.8	39.3	49.3	
03:00	15:00	41.0	39.1	48.1	
03:15	15:00	41.4	38.9	49.6	
03:30	15:00	40.8	38.2	49.4	
03:45	15:00	40.4	38.9	47.2	
04:00	15:00	40.3	39.0	49.7	
04:15	15:00	40.1	38.7	48.8	
04:30	15:00	40.2	37.6	49.0	
04:45	15:00	38.6	35.8	46.1	
05:00	15:00	39.8	36.1	50.3	
05:15	15:00	41.0	37.0	50.4	
05:30	15:00	41.2	37.1	53.0	
05:45	15:00	42.1	38.2	50.1	
06:00	15:00	43.1	40.3	56.2	
06:15	15:00	41.7	38.2	51.6	
06:30	15:00	42.8	38.6	54.6	
06:45	15:00	42.8	40.3	53.0	
Log Average 2300-0700		40.4	37.7	44-56	
Average 2300-0700		40.2	37.5	44-56	
Average 0700-2300		41.3	39.2	44-63	

Noise Survey Results

Date: Thursday 29th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 48

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 3 - 23 George Street (West View Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2506557)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	42.5	38.3	55.0	
07:15	15:00	43.4	41.4	57.1	
07:30	15:00	43.2	39.8	53.2	
07:45	15:00	43.1	41.9	50.6	
08:00	15:00	42.8	39.5	52.6	
08:15	15:00	41.3	40.2	48.9	
08:30	15:00	42.9	41.5	54.5	
08:45	15:00	43.0	38.7	55.8	
09:00	15:00	41.3	38.6	51.3	
09:15	15:00	42.5	39.7	67.1	
09:30	15:00	42.0	39.0	59.5	
09:45	15:00	43.0	40.4	63.4	
10:00	15:00	42.5	39.7	56.5	
10:15	15:00	40.7	36.9	53.0	
10:30	15:00	41.8	36.6	62.0	
10:45	15:00	42.4	39.5	59.8	
11:00	15:00	41.8	39.0	54.3	
11:15	15:00	41.6	39.0	54.1	
11:30	15:00	41.1	38.4	55.6	
11:45	15:00	41.9	39.5	58.7	
12:00	15:00	41.1	38.6	51.1	
12:15	15:00	41.0	39.0	49.0	
12:30	15:00	40.4	38.6	48.0	
12:45	15:00	41.7	39.3	51.1	
13:00	15:00	41.3	39.6	55.0	
13:15	15:00	41.7	39.4	52.1	
13:30	15:00	43.9	38.1	64.0	
13:45	15:00	40.8	38.4	56.1	
14:00	15:00	41.7	37.5	57.9	
14:15	15:00	46.0	37.1	66.9	
14:30	15:00	41.4	38.6	49.9	
14:45	15:00	42.2	39.1	61.2	
Log Average 0700-1500		42.2	39.2	48-67	
Average 0700-1500		42.1	39.1	48-67	

Noise Survey Results

Date: Thursday 29th July 2021

TABLE 49

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 3 - 23 George Street (West View Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2506557)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	40.6	38.7	52.6	
15:15	15:00	44.9	38.4	64.7	
15:30	15:00	41.2	38.2	63.2	
15:45	15:00	42.2	39.4	59.8	
16:00	15:00	41.9	39.2	54.8	
16:15	15:00	41.2	38.8	51.3	
16:30	15:00	40.3	37.1	50.9	
16:45	15:00	40.9	39.0	56.8	
17:00	15:00	39.0	38.0	47.0	
17:15	15:00	40.1	40.1	47.5	
17:30	15:00	43.1	36.7	61.8	
17:45	15:00	44.6	37.5	63.1	
18:00	15:00	38.8	36.8	48.1	
18:15	15:00	38.6	35.9	51.5	
18:30	15:00	39.4	35.7	60.3	
18:45	15:00	40.2	36.7	59.6	
19:00	15:00	40.8	39.2	51.1	
19:15	15:00	40.1	37.2	53.3	
19:30	15:00	40.0	36.7	55.3	
19:45	15:00	41.2	36.2	56.2	
20:00	15:00	39.5	35.7	53.3	
20:15	15:00	35.9	32.4	49.1	
20:30	15:00	36.9	32.6	50.9	
20:45	15:00	35.3	32.0	48.7	
21:00	15:00	35.6	33.3	49.9	
21:15	15:00	38.7	31.7	60.8	
21:30	15:00	33.6	31.0	47.7	
21:45	15:00	34.4	31.1	52.8	
22:00	15:00	34.3	32.0	44.2	
22:15	15:00	32.8	30.1	47.9	
22:30	15:00	33.4	30.8	45.4	
22:45	15:00	34.5	31.7	42.6	
Log Average 1500-2300		39.9	36.5	43-65	
Average 1500-2300		38.9	35.6	43-65	

Noise Survey Results

Date: Thursday 29th to Friday 30th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 50

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 3 - 23 George Street (West View Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2506557)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	34.3	32.4	42.8	
23:15	15:00	32.3	29.9	44.4	
23:30	15:00	33.3	28.8	53.3	
23:45	15:00	37.2	33.0	59.6	
00:00	15:00	32.7	29.0	52.4	Rain
00:15	15:00	30.4	28.6	49.3	Rain
00:30	15:00	33.3	29.5	51.8	
00:45	15:00	28.9	26.5	37.8	Rain
01:00	15:00	31.1	28.9	42.0	
01:15	15:00	29.5	28.0	39.9	
01:30	15:00	29.6	26.0	45.9	
01:45	15:00	28.3	27.3	40.4	
02:00	15:00	29.6	28.3	43.6	
02:15	15:00	28.4	26.3	43.5	
02:30	15:00	30.5	26.5	50.2	
02:45	15:00	35.2	29.8	57.8	
03:00	15:00	34.9	28.5	51.3	Rain
03:15	15:00	38.2	30.0	58.8	Rain
03:30	15:00	32.3	27.0	47.3	Rain
03:45	15:00	33.6	27.1	49.6	Rain
04:00	15:00	36.3	29.0	54.9	Rain
04:15	15:00	41.8	39.1	55.6	Rain
04:30	15:00	42.0	36.7	62.2	Rain
04:45	15:00	38.8	31.5	56.7	Rain
05:00	15:00	31.5	26.5	49.3	
05:15	15:00	33.0	27.6	49.1	
05:30	15:00	35.4	29.3	52.6	Rain
05:45	15:00	35.7	30.4	48.1	
06:00	15:00	38.6	30.1	56.9	
06:15	15:00	34.4	29.1	46.1	
06:30	15:00	35.9	31.7	45.8	
06:45	15:00	36.4	31.7	54.6	Rain
Log Average 2300-0700		35.4	30.8	38-62	
Average 2300-0700		33.8	29.5	38-62	
Average 0700-2300		41.1	37.9	43-67	

Noise Survey Results

Date: Friday 30th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 51

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 3 - 23 George Street (West View Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2506557)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	39.0	31.8	54.8	
07:15	15:00	36.4	31.4	49.4	
07:30	15:00	37.9	34.3	49.4	
07:45	15:00	38.4	32.6	53.0	
08:00	15:00	39.0	35.6	57.2	
08:15	15:00	38.6	34.8	60.3	
08:30	15:00	37.6	34.1	53.8	
08:45	15:00	38.8	34.6	59.2	
09:00	15:00	38.5	35.4	57.0	
09:15	15:00	39.2	34.8	67.2	
09:30	15:00	37.2	34.8	51.6	
09:45	15:00	38.1	34.2	58.2	
10:00	15:00	38.9	34.1	58.5	
10:15	15:00	38.6	32.2	52.3	
10:30	15:00	39.1	32.7	58.0	
10:45	15:00	41.6	33.6	64.6	
11:00	15:00	37.9	34.2	52.5	
11:15	15:00	37.7	34.9	48.1	
11:30	15:00	38.2	34.3	49.4	
11:45	15:00	38.9	35.5	51.2	
12:00	15:00	39.6	36.2	51.8	
12:15	15:00	39.9	36.3	62.8	
12:30	15:00	39.9	36.0	47.2	
12:45	15:00	39.5	35.2	47.5	
13:00	15:00	39.5	36.8	46.7	
13:15	15:00	39.4	36.2	52.2	
13:30	15:00	38.9	36.3	51.4	
13:45	15:00	40.6	37.5	57.5	
14:00	15:00	41.8	36.0	59.6	
14:15	15:00	41.8	36.1	60.5	
14:30	15:00	40.5	37.4	55.1	
14:45	15:00	39.6	35.6	50.8	
Log Average 0700-1500		39.2	35.0	47-67	
Average 0700-1500		39.1	34.8	47-67	

Noise Survey Results

Date: Friday 30th July 2021

TABLE 52

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 3 - 23 George Street (West View Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2506557)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	39.9	38.2	50.9	
15:15	15:00	39.4	36.7	50.3	
15:30	15:00	39.8	36.4	58.4	
15:45	15:00	40.7	38.6	53.8	
16:00	15:00	40.5	37.4	55.1	
16:15	15:00	40.1	36.9	49.4	
16:30	15:00	41.1	36.6	52.5	
16:45	15:00	41.5	36.1	56.0	
17:00	15:00	40.1	37.5	54.5	
17:15	15:00	40.9	34.7	59.8	
17:30	15:00	39.4	36.1	49.6	
17:45	15:00	40.9	36.1	60.7	
18:00	15:00	40.6	35.0	57.4	
18:15	15:00	39.7	34.9	57.2	
18:30	15:00	39.0	35.6	53.9	
18:45	15:00	39.9	32.7	60.3	
19:00	15:00	38.5	34.8	54.7	
19:15	15:00	38.2	33.4	53.8	
19:30	15:00	37.3	31.9	51.8	
19:45	15:00	37.4	33.4	51.6	
20:00	15:00	37.6	33.1	49.5	
20:15	15:00	37.0	33.7	50.5	
20:30	15:00	37.8	32.6	59.0	
20:45	15:00	36.4	33.5	47.2	
21:00	15:00	38.0	34.6	56.6	
21:15	15:00	36.1	35.3	42.5	
21:30	15:00	39.3	32.8	59.5	
21:45	15:00	36.9	34.0	54.2	
22:00	15:00	37.2	33.2	51.3	
22:15	15:00	37.4	34.5	48.2	
22:30	15:00	37.7	34.1	49.8	
22:45	15:00	38.2	34.5	47.9	
Log Average 1500-2300		39.1	35.3	43-61	
Average 1500-2300		38.9	35.0	43-61	

Noise Survey Results

Date: Friday 30th to Saturday 31st July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 53

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 3 - 23 George Street (West View Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2506557)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	37.2	34.4	50.3	
23:15	15:00	37.8	35.3	44.8	
23:30	15:00	37.2	33.1	52.9	
23:45	15:00	35.3	31.2	53.0	
00:00	15:00	32.9	30.1	43.0	
00:15	15:00	32.4	29.8	41.8	
00:30	15:00	32.7	30.1	40.0	
00:45	15:00	33.2	30.2	43.0	
01:00	15:00	31.5	29.6	40.8	
01:15	15:00	30.8	28.9	43.2	
01:30	15:00	31.0	28.5	38.7	
01:45	15:00	29.7	26.8	35.0	
02:00	15:00	31.0	28.8	38.6	
02:15	15:00	31.2	29.2	38.8	
02:30	15:00	30.6	29.3	42.7	
02:45	15:00	32.0	28.9	45.9	
03:00	15:00	34.6	31.6	44.1	
03:15	15:00	33.4	29.5	45.7	
03:30	15:00	32.3	29.8	43.3	
03:45	15:00	32.7	28.7	49.1	
04:00	15:00	33.3	29.8	44.0	
04:15	15:00	33.0	28.8	46.0	
04:30	15:00	31.8	29.5	43.5	
04:45	15:00	33.5	30.9	47.2	
05:00	15:00	33.5	30.8	41.6	
05:15	15:00	34.2	30.3	47.2	
05:30	15:00	37.5	34.5	50.1	
05:45	15:00	36.8	32.3	52.0	
06:00	15:00	37.2	33.1	53.9	
06:15	15:00	35.8	33.0	43.8	
06:30	15:00	36.3	33.0	45.2	
06:45	15:00	39.0	33.7	55.0	
Log Average 2300-0700		34.5	31.2	35-55	
Average 2300-0700		33.8	30.7	35-55	
Average 0700-2300		39.2	35.2	43-67	

Noise Survey Results

Date: Saturday 31st July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 54

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 3 - 23 George Street (West View Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2506557)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	36.5	33.6	53.2	
07:15	15:00	36.2	33.3	48.2	
07:30	15:00	36.5	32.7	51.5	
07:45	15:00	36.6	34.4	49.8	
08:00	15:00	38.9	34.7	57.0	
08:15	15:00	35.8	34.4	47.2	
08:30	15:00	36.0	32.9	52.1	
08:45	15:00	36.9	33.7	56.4	
09:00	15:00	36.8	33.9	46.2	
09:15	15:00	36.8	34.6	48.6	
09:30	15:00	37.1	34.3	54.1	
09:45	15:00	37.5	34.6	51.7	
10:00	15:00	40.9	35.3	58.3	
10:15	15:00	42.3	35.1	59.4	
10:30	15:00	38.4	34.2	57.6	
10:45	15:00	38.2	34.5	56.4	
11:00	15:00	39.1	33.0	57.1	
11:15	15:00	39.3	32.0	59.9	
11:30	15:00	38.9	32.9	60.3	
11:45	15:00	41.2	35.1	59.3	
12:00	15:00	37.2	34.7	54.9	
12:15	15:00	38.0	36.4	46.9	
12:30	15:00	38.5	35.6	47.5	
12:45	15:00	39.5	37.7	51.1	
13:00	15:00	38.9	37.1	46.9	
13:15	15:00	39.9	38.0	57.0	
13:30	15:00	37.5	34.9	48.9	
13:45	15:00	39.0	35.1	51.9	
14:00	15:00	39.2	35.3	57.9	
14:15	15:00	40.4	32.8	57.6	
14:30	15:00	38.1	35.1	60.5	
14:45	15:00	37.6	34.2	52.4	
Log Average 0700-1500		38.5	34.7	46-61	
Average 0700-1500		38.2	34.6	46-61	

Noise Survey Results

Date: Saturday 31st July 2021

TABLE 55

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 3 - 23 George Street (West View Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2506557)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	37.8	33.7	50.5	
15:15	15:00	36.2	32.3	47.9	
15:30	15:00	38.5	32.5	58.2	
15:45	15:00	36.8	34.0	58.2	
16:00	15:00	38.3	33.2	59.1	
16:15	15:00	35.1	30.4	51.2	
16:30	15:00	34.7	30.3	48.5	
16:45	15:00	34.9	32.4	55.1	
17:00	15:00	39.3	32.0	59.1	
17:15	15:00	35.1	32.2	45.7	
17:30	15:00	41.7	32.8	68.9	
17:45	15:00	37.4	33.4	58.4	
18:00	15:00	35.8	34.0	47.9	
18:15	15:00	34.6	33.3	46.8	
18:30	15:00	37.3	34.2	53.7	
18:45	15:00	36.1	32.4	56.2	
19:00	15:00	37.1	35.1	54.5	
19:15	15:00	38.2	35.4	57.3	
19:30	15:00	37.2	34.5	54.1	
19:45	15:00	36.4	33.0	48.0	
20:00	15:00	36.2	32.8	47.9	
20:15	15:00	37.4	32.8	53.4	
20:30	15:00	36.8	34.6	47.6	
20:45	15:00	36.8	34.1	44.4	
21:00	15:00	36.7	34.7	47.3	
21:15	15:00	36.4	33.8	50.1	
21:30	15:00	35.3	32.4	49.5	
21:45	15:00	33.8	32.0	47.3	
22:00	15:00	34.3	31.8	45.1	
22:15	15:00	37.5	32.9	54.9	
22:30	15:00	36.3	34.3	42.7	
22:45	15:00	36.3	34.3	44.6	
Log Average 1500-2300		36.9	33.3	43-69	
Average 1500-2300		36.6	33.2	43-69	

Noise Survey Results

Date: Saturday 31st July to Sunday 1st August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 56

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 3 - 23 George Street (West View Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2506557)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	34.9	32.9	43.3	
23:15	15:00	36.2	32.9	45.0	
23:30	15:00	36.3	33.4	44.0	
23:45	15:00	34.0	30.1	45.1	
00:00	15:00	34.2	28.1	57.2	
00:15	15:00	31.7	28.3	42.5	
00:30	15:00	30.5	26.5	43.5	
00:45	15:00	34.2	31.7	41.8	
01:00	15:00	32.0	30.2	39.4	
01:15	15:00	30.2	27.3	45.1	
01:30	15:00	30.7	28.6	38.9	
01:45	15:00	32.2	28.9	50.2	
02:00	15:00	30.9	28.1	41.6	
02:15	15:00	28.0	26.3	35.2	
02:30	15:00	26.8	24.0	37.4	
02:45	15:00	28.7	25.5	40.0	
03:00	15:00	28.6	25.5	39.6	
03:15	15:00	28.2	26.4	38.4	
03:30	15:00	29.5	27.0	35.4	
03:45	15:00	30.1	28.0	42.3	
04:00	15:00	30.3	28.9	36.3	
04:15	15:00	32.3	26.7	52.8	
04:30	15:00	29.8	27.9	42.5	
04:45	15:00	29.2	27.7	39.7	
05:00	15:00	33.4	28.4	56.3	
05:15	15:00	36.9	27.7	62.1	
05:30	15:00	36.9	28.6	51.6	
05:45	15:00	35.8	29.0	54.9	
06:00	15:00	36.2	28.2	57.3	
06:15	15:00	35.8	29.7	56.7	
06:30	15:00	36.5	32.0	54.9	
06:45	15:00	35.1	30.7	47.5	
Log Average 2300-0700		33.3	29.2	35-62	
Average 2300-0700		32.4	28.6	35-62	
Average 0700-2300		37.8	34.1	43-69	

Noise Survey Results

Date: Sunday 1st August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 57

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 3 - 23 George Street (West View Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2506557)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	40.2	31.0	59.7	
07:15	15:00	36.9	32.3	53.9	
07:30	15:00	37.1	30.4	51.7	
07:45	15:00	36.6	31.7	45.9	
08:00	15:00	39.5	33.7	57.9	
08:15	15:00	43.9	32.9	79.5	
08:30	15:00	39.1	32.6	53.3	
08:45	15:00	37.9	33.4	54.8	
09:00	15:00	39.5	34.0	61.6	
09:15	15:00	37.6	34.8	51.8	
09:30	15:00	36.9	33.5	53.0	
09:45	15:00	39.9	33.4	63.4	
10:00	15:00	39.1	33.5	51.3	
10:15	15:00	39.5	35.1	61.2	
10:30	15:00	45.9	34.7	62.2	
10:45	15:00	39.3	35.9	52.0	
11:00	15:00	37.5	35.3	55.3	
11:15	15:00	37.8	34.3	56.7	
11:30	15:00	39.8	33.5	58.2	
11:45	15:00	44.0	35.5	64.1	
12:00	15:00	38.5	34.2	60.4	
12:15	15:00	41.0	32.9	60.4	
12:30	15:00	37.7	34.1	59.2	
12:45	15:00	38.2	31.9	56.8	
13:00	15:00	35.4	31.2	49.5	
13:15	15:00	40.3	32.0	60.2	
13:30	15:00	37.0	31.8	54.0	
13:45	15:00	39.3	33.6	59.8	
14:00	15:00	38.8	34.1	57.4	
14:15	15:00	37.0	32.4	48.4	
14:30	15:00	35.0	29.7	52.7	
14:45	15:00	39.7	32.8	60.4	
Log Average 0700-1500		39.6	33.4	46-80	
Average 0700-1500		38.9	33.2	46-80	

Noise Survey Results

Date: Sunday 1st August 2021

TABLE 58

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 3 - 23 George Street (West View Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2506557)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	38.6	32.3	56.4	
15:15	15:00	34.5	31.3	56.3	
15:30	15:00	36.1	30.5	55.6	
15:45	15:00	35.6	31.9	49.0	
16:00	15:00	35.4	32.2	46.8	
16:15	15:00	36.3	32.9	46.9	
16:30	15:00	35.8	30.1	52.9	
16:45	15:00	37.0	34.0	53.7	
17:00	15:00	35.6	34.4	47.3	
17:15	15:00	40.3	32.7	57.9	
17:30	15:00	35.9	29.1	47.0	
17:45	15:00	37.1	31.1	58.3	
18:00	15:00	35.2	32.0	51.0	
18:15	15:00	36.1	32.2	52.7	
18:30	15:00	35.8	30.5	50.0	
18:45	15:00	38.9	29.1	55.5	
19:00	15:00	39.6	30.3	54.3	
19:15	15:00	36.9	29.5	52.7	
19:30	15:00	39.6	30.4	61.0	
19:45	15:00	37.1	27.5	53.3	
20:00	15:00	36.5	29.9	51.3	
20:15	15:00	34.5	29.4	46.6	
20:30	15:00	33.9	29.9	45.6	
20:45	15:00	34.0	30.5	45.8	
21:00	15:00	37.4	31.9	57.8	
21:15	15:00	32.9	29.9	47.5	
21:30	15:00	33.6	29.3	46.2	
21:45	15:00	34.0	30.1	48.1	
22:00	15:00	32.3	29.7	46.1	
22:15	15:00	31.8	30.1	54.9	
22:30	15:00	31.9	29.2	44.8	
22:45	15:00	33.4	27.9	48.3	
Log Average 1500-2300		36.2	30.9	45-61	
Average 1500-2300		35.7	30.7	45-61	

Noise Survey Results

Date: Sunday 1st to Monday 2nd August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 59

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 3 - 23 George Street (West View Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2506557)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	31.7	27.8	46.7	
23:15	15:00	30.2	27.3	38.9	
23:30	15:00	34.5	30.3	58.3	
23:45	15:00	31.7	30.2	44.0	
00:00	15:00	31.8	30.2	39.4	
00:15	15:00	32.5	30.6	44.7	
00:30	15:00	31.7	30.3	37.9	
00:45	15:00	30.8	29.8	37.1	
01:00	15:00	30.7	29.6	35.7	
01:15	15:00	31.1	30.6	40.1	
01:30	15:00	31.0	29.8	38.0	
01:45	15:00	31.5	30.0	39.0	
02:00	15:00	31.3	30.0	47.0	
02:15	15:00	31.2	30.3	37.9	
02:30	15:00	35.7	32.4	53.9	
02:45	15:00	34.7	33.9	39.6	
03:00	15:00	34.5	33.0	47.7	
03:15	15:00	34.9	33.5	41.6	
03:30	15:00	34.2	32.5	45.6	
03:45	15:00	32.2	31.5	38.2	
04:00	15:00	33.7	31.3	46.4	
04:15	15:00	34.1	30.8	46.9	
04:30	15:00	32.7	30.8	40.6	
04:45	15:00	34.6	32.8	49.4	
05:00	15:00	36.5	33.2	49.6	
05:15	15:00	38.0	33.2	49.9	
05:30	15:00	37.7	30.0	52.8	
05:45	15:00	39.0	33.0	52.1	
06:00	15:00	41.0	35.8	55.6	
06:15	15:00	38.6	33.5	52.3	
06:30	15:00	37.6	34.5	47.1	
06:45	15:00	37.5	33.4	49.6	
Log Average 2300-0700		35.0	31.8	36-58	
Average 2300-0700		34.0	31.4	36-58	
Average 0700-2300		38.3	32.3	45-80	

Noise Survey Results

Date: Monday 2nd August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 60

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

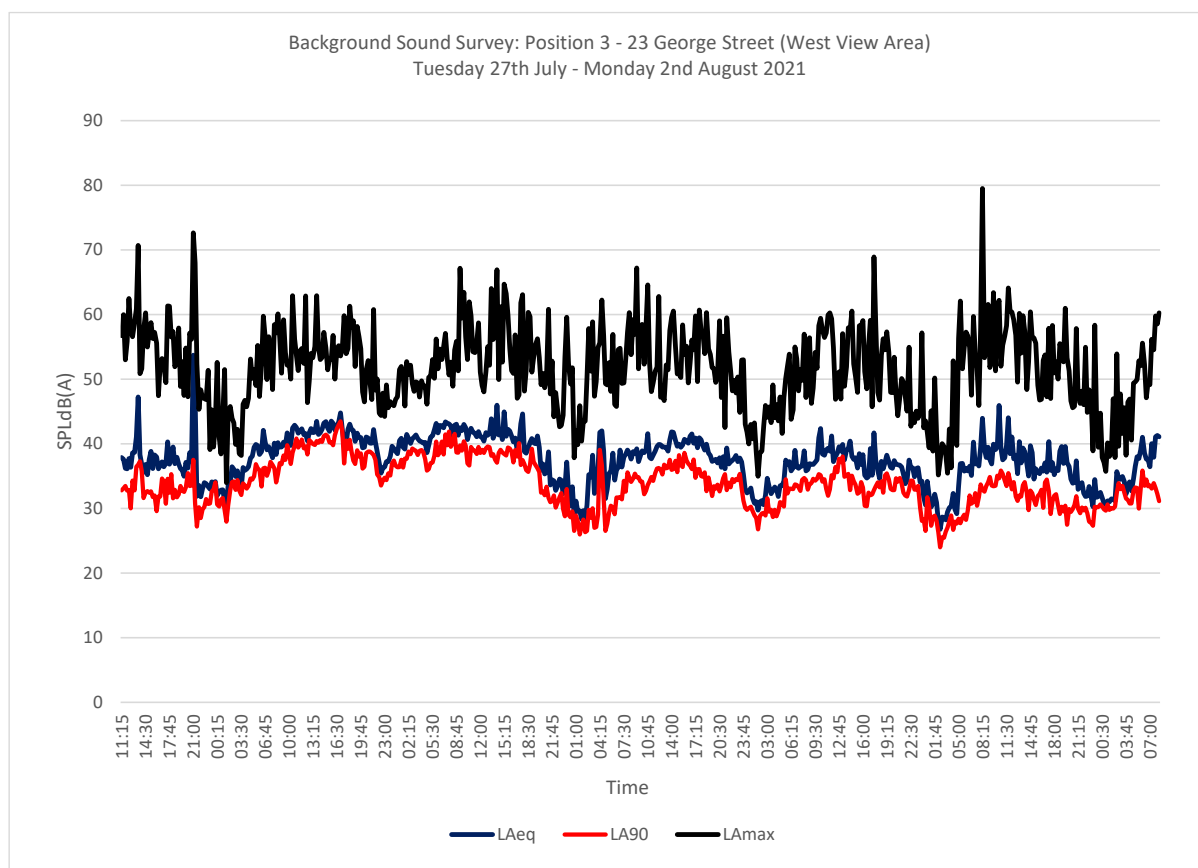
Data: **Position 3 - 23 George Street (West View Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2506557)

Calibration: 94dB

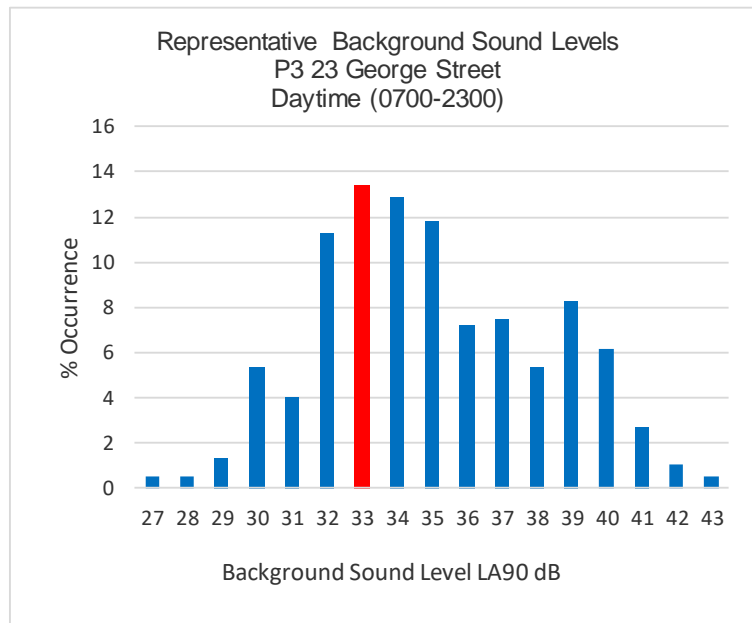
Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmix (dB)	Observations
07:00	15:00	36.4	33.6	49.1	
07:15	15:00	40.0	33.1	56.2	
07:30	15:00	37.9	33.9	54.5	
07:45	15:00	41.1	33.2	59.8	
08:00	15:00	41.3	32.2	58.5	
08:15	15:00	41.1	31.1	60.2	
Log Average 0700-0830		39.9	32.9	65-86	
Average 0700-0830		39.6	32.8	65-86	
Overall Log Average		36.5	33.4	34-62	With Rain
Overall Log Average		39.9	36.1	43-80	With Rain

Overall Log Average	36.6	33.5	34-62	No Rain
Overall Log Average	39.9	36.1	43-80	No Rain

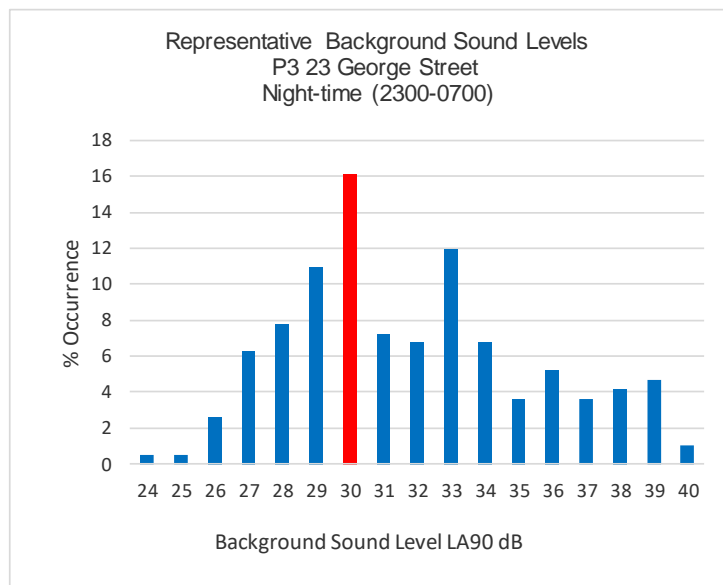


LA90 Representative Levels

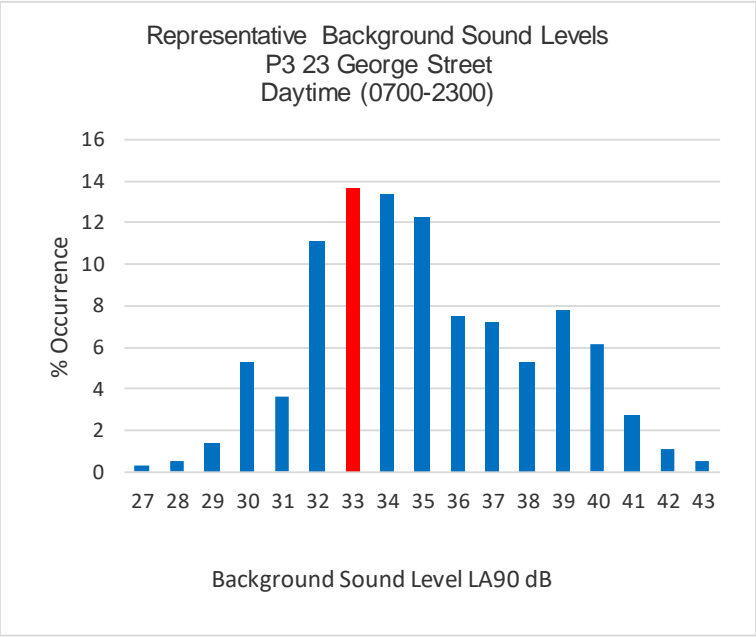
LA90	% Occurrence
27	0.5
28	0.5
29	1.3
30	5.4
31	4.0
32	11.3
33	13.4
34	12.9
35	11.8
36	7.2
37	7.5
38	5.4
39	8.3
40	6.2
41	2.7
42	1.1
43	0.5



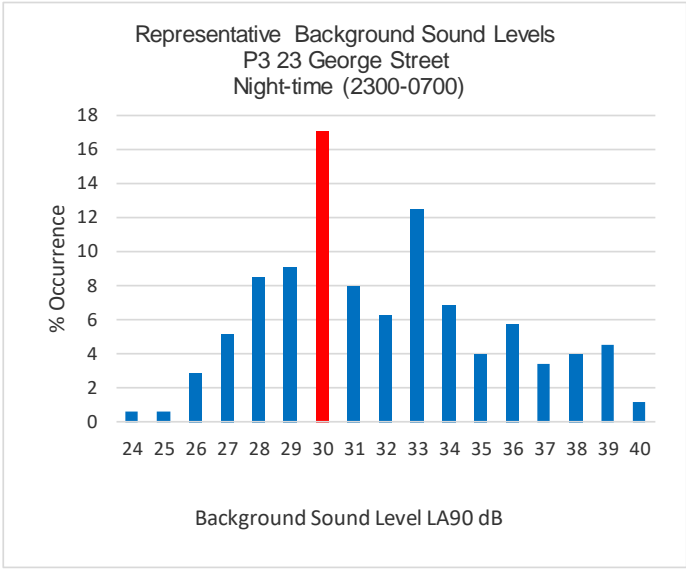
LA90	% Occurrence
24	0.5
25	0.5
26	2.6
27	6.3
28	7.8
29	10.9
30	16.1
31	7.3
32	6.8
33	12.0
34	6.8
35	3.6
36	5.2
37	3.6
38	4.2
39	4.7
40	1.0



LA90	% Occurrence
27	0.3
28	0.6
29	1.4
30	5.3
31	3.6
32	11.1
33	13.6
34	13.4
35	12.3
36	7.5
37	7.2
38	5.3
39	7.8
40	6.1
41	2.8
42	1.1
43	0.6



LA90	% Occurrence
24	0.6
25	0.6
26	2.8
27	5.1
28	8.5
29	9.1
30	17.0
31	8.0
32	6.3
33	12.5
34	6.8
35	4.0
36	5.7
37	3.4
38	4.0
39	4.5
40	1.1



Noise Survey Results

Date: Tuesday 27th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 61

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 4 - Chirk Court (Maes-y-waun Area)**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
11:30	15:00	59.0	48.9	76.0	
11:45	15:00	57.7	44.6	76.3	
12:00	15:00	56.7	45.5	71.8	
12:15	15:00	57.8	47.9	70.9	
12:45	15:00	57.1	48.9	70.3	
13:00	15:00	58.7	51.9	70.6	
13:15	15:00	59.0	51.5	71.7	
13:30	15:00	62.5	54.8	76.8	
13:45	15:00	61.4	52.2	74.2	
14:00	15:00	59.5	47.7	73.8	
14:15	15:00	59.5	48.2	74.1	Rain
14:30	15:00	59.8	48.8	74.7	
14:45	15:00	60.6	48.6	73.1	
Log Average 1130-1500		59.1	49.7	70-77	
Average 1130-1500		55.0	45.7	70-77	

Noise Survey Results

Date: Tuesday 27th July 2021

TABLE 62

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 4 - Chirk Court (Maes-y-waun Area)**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	61.0	51.6	74.3	Rain
15:15	15:00	60.8	52.2	74.8	
15:30	15:00	59.4	48.0	72.9	Rain
15:45	15:00	59.5	48.5	71.8	
16:00	15:00	59.3	48.9	71.2	
16:15	15:00	59.8	49.2	71.1	
16:30	15:00	60.3	50.8	74.4	
16:45	15:00	62.0	54.9	72.4	
17:00	15:00	56.8	51.7	70.5	
17:15	15:00	59.0	51.6	69.9	Rain
17:30	15:00	59.8	51.2	71.5	
17:45	15:00	60.7	52.5	73.9	
18:00	15:00	59.7	50.1	71.0	
18:15	15:00	58.1	47.2	70.7	
18:30	15:00	58.2	44.9	76.0	
18:45	15:00	57.6	44.7	74.8	
19:00	15:00	57.5	44.7	74.4	
19:15	15:00	57.0	44.2	70.9	
19:30	15:00	57.0	42.9	77.8	
19:45	15:00	57.4	43.6	74.1	
20:00	15:00	56.0	43.5	69.8	
20:15	15:00	57.5	44.3	73.0	
20:30	15:00	55.8	43.4	70.6	
20:45	15:00	57.1	43.9	70.9	
21:00	15:00	62.1	46.3	76.2	
21:15	15:00	60.1	49.1	74.1	Rain
21:30	15:00	56.3	44.8	78.6	
21:45	15:00	56.1	46.5	74.2	
22:00	15:00	56.0	43.0	74.0	
22:15	15:00	56.7	42.0	79.0	
22:30	15:00	54.5	44.2	73.8	
22:45	15:00	53.3	43.4	72.2	
Log Average 1500-2300		58.6	48.6	70-79	
Average 1500-2300		58.2	47.1	70-79	

Noise Survey Results

Date: Tuesday 27th- Wednesday 28th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 63

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 4 - Chirk Court (Maes-y-waun Area)**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	51.8	44.1	70.5	
23:15	15:00	55.1	45.2	74.2	
23:30	15:00	55.7	46.3	76.6	
23:45	15:00	52.4	45.5	69.9	
00:00	15:00	53.1	43.6	74.9	
00:15	15:00	49.8	42.4	71.2	
00:30	15:00	48.2	44.0	70.3	
00:45	15:00	48.0	43.8	68.2	
01:00	15:00	49.4	43.3	78.8	
01:15	15:00	49.6	42.4	78.8	
01:30	15:00	43.1	42.3	49.3	
01:45	15:00	50.9	43.2	73.6	
02:00	15:00	50.4	48.2	69.1	
02:15	15:00	48.6	47.2	63.6	
02:30	15:00	51.0	46.9	74.1	
02:45	15:00	52.3	47.2	76.2	Rain
03:00	15:00	49.1	46.7	69.3	Rain
03:15	15:00	53.2	46.6	73.0	
03:30	15:00	49.6	45.7	69.8	
03:45	15:00	52.0	46.3	75.9	
04:00	15:00	50.7	46.2	73.7	
04:15	15:00	52.8	46.7	74.8	
04:30	15:00	52.4	46.4	73.6	
04:45	15:00	52.0	47.0	72.4	
05:00	15:00	54.0	48.1	72.5	
05:15	15:00	53.7	47.7	71.9	
05:30	15:00	56.0	48.3	74.4	
05:45	15:00	56.5	48.9	73.6	
06:00	15:00	58.3	48.5	81.5	
06:15	15:00	57.2	48.7	76.0	
06:30	15:00	57.8	47.6	72.7	
06:45	15:00	58.4	48.7	72.9	
Log Average 2300-0700		53.5	46.4	49-82	
Average 2300-0700		52.3	46.1	49-82	
Average 1130-2300		58.8	49.0	70-79	

Noise Survey Results

Date: Wednesday 28th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 64

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 4 - Chirk Court (Maes-y-waun Area)**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	57.7	49.4	72.5	
07:15	15:00	58.0	47.8	72.0	
07:30	15:00	58.9	49.1	70.7	
07:45	15:00	59.1	47.4	74.2	
08:00	15:00	59.3	48.9	74.5	
08:15	15:00	58.1	48.2	70.1	
08:30	15:00	59.3	48.1	72.9	
08:45	15:00	58.8	49.5	74.6	
09:00	15:00	57.9	47.9	71.4	
09:15	15:00	57.6	48.0	71.9	
09:30	15:00	59.3	49.4	74.2	
09:45	15:00	59.4	50.3	73.8	
10:00	15:00	57.6	49.3	70.9	
10:15	15:00	58.1	50.1	73.7	
10:30	15:00	62.5	51.8	76.0	
10:45	15:00	58.6	50.8	72.9	
11:00	15:00	58.5	50.1	70.6	
11:15	15:00	58.2	50.4	70.6	
11:30	15:00	58.5	50.4	72.9	
11:45	15:00	59.0	50.7	72.8	
12:00	15:00	59.4	50.0	73.1	Rain
12:15	15:00	59.5	50.0	74.6	
12:30	15:00	58.9	50.1	70.8	Rain
12:45	15:00	59.6	50.6	72.9	
13:00	15:00	59.3	51.3	72.2	
13:15	15:00	59.2	50.9	73.1	
13:30	15:00	59.4	51.8	71.7	
13:45	15:00	59.2	51.2	72.8	
14:00	15:00	59.1	50.9	70.6	Rain
14:15	15:00	58.9	51.6	69.6	
14:30	15:00	59.0	52.3	71.8	
14:45	15:00	58.1	51.4	70.6	
Log Average 0700-1500		58.9	50.1	70-76	
Average 0700-1500		58.9	50.0	70-76	

Noise Survey Results

Date: Wednesday 28th July 2021

TABLE 65

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 4 - Chirk Court (Maes-y-waun Area)**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	58.7	52.1	72.2	
15:15	15:00	58.9	52.1	74.6	
15:30	15:00	58.4	51.6	69.7	
15:45	15:00	59.3	52.5	71.0	
16:00	15:00	59.3	53.0	71.0	
16:15	15:00	59.3	52.8	73.2	
16:30	15:00	60.4	53.9	70.8	
16:45	15:00	61.8	55.3	76.6	
17:00	15:00	63.1	57.6	74.6	
17:15	15:00	61.1	55.2	74.9	
17:30	15:00	58.6	53.1	75.5	Rain
17:45	15:00	61.3	52.8	73.8	
18:00	15:00	61.2	53.1	72.0	
18:15	15:00	60.4	52.5	73.4	
18:30	15:00	59.6	51.9	71.6	
18:45	15:00	58.7	49.9	72.3	
19:00	15:00	59.0	50.9	72.2	
19:15	15:00	57.7	50.5	71.0	
19:30	15:00	58.2	50.1	70.8	
19:45	15:00	57.5	47.6	71.9	
20:00	15:00	57.1	46.9	72.8	
20:15	15:00	56.8	47.7	71.8	
20:30	15:00	58.4	49.4	72.9	
20:45	15:00	59.4	49.7	75.9	Rain
21:00	15:00	57.5	48.5	71.8	Rain
21:15	15:00	57.4	48.6	72.7	
21:30	15:00	56.6	49.3	74.5	
21:45	15:00	55.7	49.3	73.6	
22:00	15:00	55.9	48.4	72.8	
22:15	15:00	54.7	47.4	70.2	
22:30	15:00	53.3	46.2	70.2	
22:45	15:00	54.9	45.2	74.0	
Log Average 1500-2300		58.9	51.7	70-77	
Average 1500-2300		58.4	50.8	70-77	

Noise Survey Results

Date: Wednesday 28th to Thursday 29th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 66

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 4 - Chirk Court (Maes-y-waun Area)**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	51.9	46.5	69.8	Rain
23:15	15:00	52.6	48.3	69.4	
23:30	15:00	53.6	48.7	71.1	
23:45	15:00	52.8	48.7	74.3	
00:00	15:00	53.4	48.7	70.5	
00:15	15:00	52.2	49.0	71.0	
00:30	15:00	53.3	49.3	70.8	
00:45	15:00	50.9	49.1	68.9	
01:00	15:00	52.6	49.3	70.0	
01:15	15:00	52.7	49.8	70.8	
01:30	15:00	52.0	49.8	67.9	
01:45	15:00	52.0	48.8	69.7	
02:00	15:00	53.8	50.5	67.6	
02:15	15:00	53.4	51.4	66.0	
02:30	15:00	52.3	50.5	67.1	
02:45	15:00	53.9	51.1	70.0	
03:00	15:00	52.9	49.7	74.6	
03:15	15:00	55.4	51.6	71.6	
03:30	15:00	53.2	50.4	68.9	
03:45	15:00	53.9	50.8	73.8	
04:00	15:00	53.9	49.8	71.3	
04:15	15:00	54.9	50.5	73.5	
04:30	15:00	54.0	47.5	73.1	
04:45	15:00	52.8	46.8	73.2	
05:00	15:00	53.2	48.5	70.7	
05:15	15:00	55.8	49.8	73.5	
05:30	15:00	57.3	50.0	77.0	
05:45	15:00	56.5	50.5	74.9	
06:00	15:00	57.7	52.2	72.1	
06:15	15:00	57.2	49.7	77.9	
06:30	15:00	57.2	50.5	75.1	
06:45	15:00	58.8	50.7	72.6	
Log Average 2300-0700		54.4	49.8	66-78	
Average 2300-0700		54.0	49.6	66-78	
Average 0700-2300		58.9	51.0	70-77	

Noise Survey Results

Date: Thursday 29th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 67

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 4 - Chirk Court (Maes-y-waun Area)**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	58.5	51.4	72.9	
07:15	15:00	59.1	51.3	72.7	
07:30	15:00	60.0	51.1	73.3	
07:45	15:00	60.4	52.5	74.5	
08:00	15:00	60.6	52.2	76.4	
08:15	15:00	59.0	51.0	71.4	
08:30	15:00	58.5	51.1	71.5	
08:45	15:00	59.4	52.0	72.1	
09:00	15:00	58.6	51.5	72.5	
09:15	15:00	58.7	51.6	73.5	
09:30	15:00	58.7	51.8	72.2	
09:45	15:00	58.6	52.3	71.0	
10:00	15:00	58.9	51.6	74.4	
10:15	15:00	58.2	50.9	72.8	
10:30	15:00	59.0	51.4	75.0	
10:45	15:00	59.5	51.5	74.1	
11:00	15:00	58.3	51.8	69.0	
11:15	15:00	59.0	52.0	81.0	
11:30	15:00	59.0	52.6	70.1	
11:45	15:00	59.1	51.7	80.6	
12:00	15:00	58.5	51.3	72.7	
12:15	15:00	58.1	50.3	69.5	
12:30	15:00	59.0	51.4	74.5	
12:45	15:00	61.4	51.8	78.2	
13:00	15:00	58.3	51.9	71.2	
13:15	15:00	58.4	50.7	71.1	
13:30	15:00	58.9	51.2	73.6	
13:45	15:00	58.7	51.7	77.0	
14:00	15:00	58.5	51.9	71.4	
14:15	15:00	58.8	50.9	71.5	
14:30	15:00	58.5	51.4	70.3	
14:45	15:00	58.9	51.7	71.1	
Log Average 0700-1500		59.0	51.5	69-81	
Average 0700-1500		59.0	51.5	69-81	

Noise Survey Results

Date: Thursday 29th July 2021

TABLE 68

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 4 - Chirk Court (Maes-y-waun Area)**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	59.1	51.9	77.1	
15:15	15:00	58.9	51.2	71.8	
15:30	15:00	58.6	50.8	69.6	
15:45	15:00	58.8	51.0	72.0	
16:00	15:00	59.2	51.6	72.3	
16:15	15:00	58.3	50.6	70.1	
16:30	15:00	59.2	50.9	73.3	
16:45	15:00	59.0	51.1	71.7	
17:00	15:00	59.2	51.4	72.9	
17:15	15:00	60.0	51.8	73.1	
17:30	15:00	58.7	51.0	68.6	
17:45	15:00	59.0	49.8	71.2	
18:00	15:00	59.1	50.8	70.0	
18:15	15:00	58.1	48.8	68.7	
18:30	15:00	58.3	48.6	76.9	
18:45	15:00	58.7	48.4	82.0	
19:00	15:00	58.1	48.7	69.4	
19:15	15:00	62.8	47.4	92.3	
19:30	15:00	57.2	46.6	73.0	
19:45	15:00	55.8	46.5	68.8	
20:00	15:00	57.6	48.0	74.2	
20:15	15:00	55.6	46.6	70.2	
20:30	15:00	55.2	46.6	73.2	
20:45	15:00	55.7	44.5	70.7	
21:00	15:00	55.9	43.7	71.7	
21:15	15:00	57.9	44.7	81.2	
21:30	15:00	54.6	45.1	70.7	
21:45	15:00	52.6	44.7	69.1	
22:00	15:00	53.7	46.0	70.9	
22:15	15:00	53.5	44.2	73.1	
22:30	15:00	55.1	43.8	77.5	
22:45	15:00	52.7	46.0	75.8	
Log Average 1500-2300		57.9	48.9	69-92	
Average 1500-2300		57.4	48.2	69-92	

Noise Survey Results

Date: Thursday 29th to Friday 30th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 69

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 4 - Chirk Court (Maes-y-waun Area)**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	50.8	44.5	70.3	
23:15	15:00	49.1	42.4	69.9	
23:30	15:00	51.1	42.7	70.2	
23:45	15:00	52.5	48.0	73.4	
00:00	15:00	50.8	43.9	69.8	Rain
00:15	15:00	49.9	44.0	72.9	Rain
00:30	15:00	51.4	46.0	71.7	
00:45	15:00	50.1	44.8	75.4	Rain
01:00	15:00	49.3	44.8	72.2	
01:15	15:00	48.5	44.9	72.2	
01:30	15:00	47.1	44.2	71.1	
01:45	15:00	48.5	44.9	71.8	
02:00	15:00	46.3	43.5	70.1	
02:15	15:00	45.2	42.4	69.3	
02:30	15:00	48.7	42.6	72.5	
02:45	15:00	50.4	45.3	72.0	
03:00	15:00	54.3	45.3	77.9	Rain
03:15	15:00	52.3	44.5	74.3	Rain
03:30	15:00	54.4	43.5	77.6	Rain
03:45	15:00	50.3	44.8	76.0	Rain
04:00	15:00	53.8	47.0	76.2	Rain
04:15	15:00	54.8	52.4	73.5	Rain
04:30	15:00	55.9	53.0	76.8	Rain
04:45	15:00	53.4	47.1	71.8	Rain
05:00	15:00	51.5	44.1	69.6	
05:15	15:00	54.8	44.8	75.7	
05:30	15:00	56.5	44.8	72.8	Rain
05:45	15:00	55.4	43.7	75.4	
06:00	15:00	56.4	44.8	74.6	
06:15	15:00	57.7	45.7	74.9	
06:30	15:00	58.5	46.2	76.7	
06:45	15:00	58.5	45.9	75.0	Rain
Log Average 2300-0700		53.4	46.1	69-78	
Average 2300-0700		52.1	45.2	69-78	
Average 0700-2300		58.4	50.5	69-92	

Noise Survey Results

Date: Friday 30th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 70

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 4 - Chirk Court (Maes-y-waun Area)**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	58.6	47.3	76.3	
07:15	15:00	58.1	47.9	71.8	
07:30	15:00	58.6	48.9	73.2	
07:45	15:00	59.0	48.2	74.1	
08:00	15:00	58.9	49.6	72.8	
08:15	15:00	58.6	48.2	70.9	
08:30	15:00	59.3	49.2	78.9	
08:45	15:00	58.9	50.0	72.0	
09:00	15:00	59.9	49.3	76.5	
09:15	15:00	58.5	48.2	73.4	
09:30	15:00	58.7	49.3	70.9	
09:45	15:00	65.1	50.7	91.4	
10:00	15:00	59.4	51.0	71.4	
10:15	15:00	59.4	51.4	70.8	
10:30	15:00	59.4	50.5	75.3	
10:45	15:00	60.4	51.1	74.6	
11:00	15:00	59.5	51.5	70.3	
11:15	15:00	60.2	52.5	76.5	
11:30	15:00	59.9	52.5	72.4	
11:45	15:00	60.8	52.9	75.8	
12:00	15:00	60.8	54.1	71.5	
12:15	15:00	60.3	53.0	70.8	
12:30	15:00	60.5	54.3	71.6	
12:45	15:00	61.1	54.1	70.3	
13:00	15:00	61.1	54.4	71.4	
13:15	15:00	60.2	53.6	73.1	
13:30	15:00	60.9	53.9	72.9	
13:45	15:00	61.3	55.0	70.7	
14:00	15:00	62.0	55.0	74.6	
14:15	15:00	61.1	54.4	69.6	
14:30	15:00	61.2	55.1	73.1	
14:45	15:00	60.7	53.9	70.5	
Log Average 0700-1500		60.3	52.2	70-91	
Average 0700-1500		60.1	51.6	70-91	

Noise Survey Results

Date: Friday 30th July 2021

TABLE 71

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 4 - Chirk Court (Maes-y-waun Area)**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	61.2	55.1	76.7	
15:15	15:00	60.8	53.1	71.6	
15:30	15:00	61.3	55.3	71.1	
15:45	15:00	61.8	56.1	71.0	
16:00	15:00	61.0	54.2	72.3	
16:15	15:00	61.4	54.3	72.5	
16:30	15:00	61.6	56.0	72.0	
16:45	15:00	61.7	55.3	72.2	
17:00	15:00	59.2	53.6	74.2	
17:15	15:00	60.6	55.2	69.3	
17:30	15:00	60.7	53.9	70.2	
17:45	15:00	61.5	55.1	71.1	
18:00	15:00	60.9	53.7	70.9	
18:15	15:00	60.4	52.9	76.3	
18:30	15:00	59.9	52.7	72.1	
18:45	15:00	59.6	51.8	71.4	
19:00	15:00	59.1	51.6	70.4	
19:15	15:00	58.5	50.3	71.5	
19:30	15:00	58.1	49.4	72.5	
19:45	15:00	57.0	49.1	72.0	
20:00	15:00	58.1	51.2	76.9	
20:15	15:00	57.3	51.1	72.5	
20:30	15:00	56.7	50.4	73.9	
20:45	15:00	56.2	50.7	71.2	
21:00	15:00	56.4	49.6	71.6	
21:15	15:00	56.1	49.4	71.1	
21:30	15:00	54.8	48.5	69.7	
21:45	15:00	56.3	49.1	71.2	
22:00	15:00	56.4	50.4	77.2	
22:15	15:00	56.3	51.1	70.7	
22:30	15:00	56.5	51.8	75.9	
22:45	15:00	55.4	50.9	70.5	
Log Average 1500-2300		59.3	52.8	69-77	
Average 1500-2300		58.8	52.3	69-77	

Noise Survey Results

Date: Friday 30th to Saturday 31st July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 72

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 4 - Chirk Court (Maes-y-waun Area)**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	55.7	50.8	75.8	
23:15	15:00	54.2	50.3	69.3	
23:30	15:00	53.4	50.4	70.3	
23:45	15:00	53.5	49.8	71.5	
00:00	15:00	53.0	47.9	71.0	
00:15	15:00	51.9	47.4	71.3	
00:30	15:00	50.2	46.9	67.6	
00:45	15:00	51.3	46.9	76.4	
01:00	15:00	50.1	46.8	69.8	
01:15	15:00	49.2	46.3	67.3	
01:30	15:00	47.0	45.9	54.9	
01:45	15:00	49.0	45.5	69.1	
02:00	15:00	47.9	45.5	68.3	
02:15	15:00	49.6	46.4	68.9	
02:30	15:00	47.5	45.1	65.6	
02:45	15:00	50.4	47.0	73.2	
03:00	15:00	49.5	46.7	70.3	
03:15	15:00	51.7	46.8	70.3	
03:30	15:00	52.2	47.9	72.0	
03:45	15:00	50.4	48.3	69.1	
04:00	15:00	50.8	47.7	71.0	
04:15	15:00	50.0	46.9	67.9	
04:30	15:00	50.5	47.4	69.0	
04:45	15:00	48.7	47.3	57.1	
05:00	15:00	52.7	48.0	70.7	
05:15	15:00	51.1	46.5	69.3	
05:30	15:00	54.3	47.9	71.1	
05:45	15:00	52.7	48.4	70.8	
06:00	15:00	55.0	48.9	78.0	
06:15	15:00	54.1	48.1	71.0	
06:30	15:00	54.3	48.2	71.2	
06:45	15:00	55.4	48.0	72.3	
Log Average 2300-0700		52.0	47.7	55-78	
Average 2300-0700		51.5	47.6	55-78	
Average 0700-2300		59.8	52.5	69-91	

Noise Survey Results

Date: Saturday 31st July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 73

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 4 - Chirk Court (Maes-y-waun Area)**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	55.2	48.1	72.3	
07:15	15:00	54.7	48.0	72.5	
07:30	15:00	56.1	49.0	71.1	
07:45	15:00	55.9	49.1	71.9	
08:00	15:00	57.6	49.5	74.0	
08:15	15:00	56.5	48.1	73.0	
08:30	15:00	56.4	48.1	70.9	
08:45	15:00	58.1	48.9	75.3	
09:00	15:00	57.8	47.4	72.2	
09:15	15:00	57.4	48.5	72.2	
09:30	15:00	57.4	48.8	70.0	
09:45	15:00	59.8	49.8	81.4	
10:00	15:00	58.7	50.5	71.5	
10:15	15:00	58.9	49.7	71.9	
10:30	15:00	59.1	50.7	72.3	
10:45	15:00	59.1	49.4	73.1	
11:00	15:00	58.3	49.5	70.0	
11:15	15:00	59.1	49.1	75.1	
11:30	15:00	58.9	51.4	68.4	
11:45	15:00	60.2	52.3	75.3	
12:00	15:00	59.5	49.5	80.7	
12:15	15:00	59.3	51.0	69.9	
12:30	15:00	58.9	49.5	70.0	
12:45	15:00	59.7	51.3	69.1	
13:00	15:00	58.9	50.2	74.1	
13:15	15:00	58.9	50.5	71.6	
13:30	15:00	59.0	51.0	72.5	
13:45	15:00	59.2	50.6	71.2	
14:00	15:00	58.7	50.7	69.6	
14:15	15:00	58.3	48.5	71.0	
14:30	15:00	58.8	49.8	69.2	
14:45	15:00	59.6	50.6	77.2	
Log Average 0700-1500		58.4	49.8	68-81	
Average 0700-1500		58.3	49.7	68-81	

Noise Survey Results

Date: Saturday 31st July 2021

TABLE 74

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 4 - Chirk Court (Maes-y-waun Area)**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	59.1	50.5	69.9	
15:15	15:00	59.3	49.3	74.1	
15:30	15:00	58.3	48.9	69.1	
15:45	15:00	58.9	50.2	73.7	
16:00	15:00	58.2	49.1	70.0	
16:15	15:00	57.9	47.1	69.7	
16:30	15:00	58.3	47.0	73.2	
16:45	15:00	58.7	48.2	75.4	
17:00	15:00	58.5	48.5	69.7	
17:15	15:00	58.3	48.6	69.4	
17:30	15:00	58.8	46.6	80.2	
17:45	15:00	57.6	47.4	70.8	
18:00	15:00	59.6	47.7	82.8	
18:15	15:00	58.7	47.8	78.5	
18:30	15:00	58.2	47.1	71.6	
18:45	15:00	58.1	48.0	70.1	
19:00	15:00	58.2	48.3	71.2	
19:15	15:00	56.8	46.3	70.0	
19:30	15:00	56.4	47.6	70.4	
19:45	15:00	56.0	47.4	72.6	
20:00	15:00	56.0	47.2	73.3	
20:15	15:00	57.3	47.3	81.7	
20:30	15:00	56.3	47.3	74.4	
20:45	15:00	56.8	47.3	79.4	
21:00	15:00	54.4	46.5	70.9	
21:15	15:00	54.6	47.0	69.2	
21:30	15:00	54.4	47.7	70.8	
21:45	15:00	54.2	48.1	70.8	
22:00	15:00	54.8	46.9	74.1	
22:15	15:00	53.8	46.6	70.1	
22:30	15:00	53.3	47.0	70.0	
22:45	15:00	53.0	47.4	71.0	
Log Average 1500-2300		57.3	47.8	69-83	
Average 1500-2300		57.0	47.7	69-83	

Noise Survey Results

Date: Saturday 31st July to Sunday 1st August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 75

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 4 - Chirk Court (Maes-y-waun Area)**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	51.8	46.6	70.2	
23:15	15:00	51.8	46.8	70.1	
23:30	15:00	52.2	47.0	69.9	
23:45	15:00	51.2	45.9	70.6	
00:00	15:00	51.2	42.6	69.9	
00:15	15:00	49.8	43.1	69.3	
00:30	15:00	49.2	42.0	69.7	
00:45	15:00	49.5	43.9	70.6	
01:00	15:00	52.5	47.4	71.8	
01:15	15:00	51.8	45.1	77.6	
01:30	15:00	49.7	46.6	64.2	
01:45	15:00	47.9	45.6	68.9	
02:00	15:00	51.6	47.5	72.3	
02:15	15:00	47.6	45.0	68.9	
02:30	15:00	47.9	44.9	66.8	
02:45	15:00	50.0	44.8	74.1	
03:00	15:00	49.5	46.3	69.8	
03:15	15:00	48.4	45.0	68.8	
03:30	15:00	47.5	45.2	66.5	
03:45	15:00	49.4	43.0	71.5	
04:00	15:00	48.4	45.0	69.0	
04:15	15:00	47.8	45.2	65.6	
04:30	15:00	48.3	45.5	67.5	
04:45	15:00	47.0	44.7	65.0	
05:00	15:00	58.5	45.2	88.7	
05:15	15:00	48.8	44.9	69.8	
05:30	15:00	52.5	44.4	72.8	
05:45	15:00	52.1	44.5	71.1	
06:00	15:00	53.7	46.2	70.0	
06:15	15:00	51.9	46.8	68.3	
06:30	15:00	53.7	46.6	71.8	
06:45	15:00	54.5	47.2	72.4	
Log Average 2300-0700		51.4	45.5	64-89	
Average 2300-0700		50.6	45.3	64-89	
Average 0700-2300		57.9	48.9	68-83	

Noise Survey Results

Date: Sunday 1st August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 76

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 4 - Chirk Court (Maes-y-waun Area)**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	54.9	48.1	71.2	
07:15	15:00	55.7	49.0	71.8	
07:30	15:00	55.5	49.5	70.6	
07:45	15:00	56.2	49.7	74.0	
08:00	15:00	55.5	50.2	71.6	
08:15	15:00	54.5	49.8	69.5	
08:30	15:00	56.6	50.2	74.5	
08:45	15:00	56.1	49.7	69.9	
09:00	15:00	56.8	48.5	69.7	
09:15	15:00	57.0	48.7	70.1	
09:30	15:00	57.3	49.1	70.3	
09:45	15:00	59.5	49.3	77.6	
10:00	15:00	58.0	49.8	70.9	
10:15	15:00	57.9	49.3	71.1	
10:30	15:00	58.8	50.8	70.8	
10:45	15:00	58.9	51.6	69.6	
11:00	15:00	59.6	52.0	74.0	
11:15	15:00	59.3	52.1	72.9	
11:30	15:00	59.3	51.3	73.9	
11:45	15:00	59.8	49.7	73.2	
12:00	15:00	60.8	52.6	79.8	
12:15	15:00	59.5	50.9	74.2	
12:30	15:00	59.6	51.0	71.6	
12:45	15:00	59.8	50.9	78.1	
13:00	15:00	58.3	49.2	71.6	
13:15	15:00	58.5	48.9	68.4	
13:30	15:00	59.0	49.0	75.2	
13:45	15:00	59.0	50.3	75.2	
14:00	15:00	59.1	50.0	79.9	
14:15	15:00	57.8	49.3	71.9	
14:30	15:00	57.5	46.5	75.4	
14:45	15:00	58.4	49.4	71.3	
Log Average 0700-1500		58.2	50.0	68-80	
Average 0700-1500		58.0	49.9	68-80	

Noise Survey Results

Date: Sunday 1st August 2021

TABLE 77

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 4 - Chirk Court (Maes-y-waun Area)**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	57.8	47.7	70.8	
15:15	15:00	57.6	48.4	71.7	
15:30	15:00	62.3	47.9	86.4	
15:45	15:00	59.1	48.2	74.4	
16:00	15:00	58.0	49.4	69.2	
16:15	15:00	58.5	49.8	69.3	
16:30	15:00	57.8	46.8	70.8	
16:45	15:00	59.0	49.0	76.2	
17:00	15:00	59.3	51.2	71.4	
17:15	15:00	59.0	49.3	74.6	
17:30	15:00	57.1	48.0	69.0	
17:45	15:00	58.6	48.6	75.7	
18:00	15:00	57.9	48.9	70.9	
18:15	15:00	58.5	48.8	77.0	
18:30	15:00	56.9	47.4	70.6	
18:45	15:00	57.7	46.9	75.1	
19:00	15:00	57.3	47.2	72.5	
19:15	15:00	56.0	46.4	71.0	
19:30	15:00	56.4	46.9	72.4	
19:45	15:00	56.7	47.1	72.1	
20:00	15:00	57.3	47.1	76.0	
20:15	15:00	56.9	47.3	75.4	
20:30	15:00	55.0	47.3	71.0	
20:45	15:00	55.5	47.9	70.9	
21:00	15:00	55.4	48.0	72.0	
21:15	15:00	54.0	47.7	69.3	
21:30	15:00	56.3	48.1	80.0	
21:45	15:00	54.2	48.7	69.9	
22:00	15:00	54.7	48.4	74.8	
22:15	15:00	53.1	47.4	72.3	
22:30	15:00	51.3	46.8	68.8	
22:45	15:00	51.7	47.1	70.4	
Log Average 1500-2300		57.3	48.1	69-86	
Average 1500-2300		56.8	48.0	69-86	

Noise Survey Results

Date: Sunday 1st to Monday 2nd August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 78

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 4 - Chirk Court (Maes-y-waun Area)**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	52.0	46.6	73.4	
23:15	15:00	50.5	45.8	72.2	
23:30	15:00	60.2	45.9	89.4	
23:45	15:00	50.0	45.7	71.7	
00:00	15:00	49.1	45.6	69.3	
00:15	15:00	50.0	46.8	69.2	
00:30	15:00	48.5	46.1	69.2	
00:45	15:00	47.8	45.5	67.5	
01:00	15:00	48.6	45.0	67.4	
01:15	15:00	47.2	46.3	52.9	
01:30	15:00	48.6	46.7	65.1	
01:45	15:00	49.3	46.4	69.4	
02:00	15:00	48.1	47.1	54.7	
02:15	15:00	48.6	46.3	71.2	
02:30	15:00	48.7	46.6	71.2	
02:45	15:00	49.4	47.1	69.6	
03:00	15:00	52.8	48.0	72.9	
03:15	15:00	51.8	47.2	73.3	
03:30	15:00	50.3	46.8	70.4	
03:45	15:00	49.5	47.2	68.1	
04:00	15:00	49.2	46.2	67.9	
04:15	15:00	48.6	45.6	66.5	
04:30	15:00	50.2	46.3	71.3	
04:45	15:00	51.2	46.7	70.7	
05:00	15:00	51.7	47.4	68.7	
05:15	15:00	53.3	47.4	70.6	
05:30	15:00	54.2	47.4	68.6	
05:45	15:00	53.7	46.9	70.9	
06:00	15:00	56.9	47.9	75.2	
06:15	15:00	55.1	48.4	73.0	
06:30	15:00	56.2	48.0	70.0	
06:45	15:00	57.1	49.2	75.7	
Log Average 2300-0700		52.6	46.8	53-89	
Average 2300-0700		51.2	46.8	53-89	
Average 0700-2300		57.8	49.2	68-86	

Noise Survey Results

Date: Monday 2nd August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 79

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 4 - Chirk Court (Maes-y-waun Area)**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	57.0	48.7	72.1	
07:15	15:00	57.7	49.1	73.7	
07:30	15:00	58.4	49.6	76.7	
07:45	15:00	58.2	50.5	70.9	
08:00	15:00	57.8	49.0	70.1	
08:15	15:00	58.0	48.4	72.5	
08:30	15:00	56.3	45.6	71.1	
08:45	15:00	56.6	46.0	70.7	
09:00	15:00	57.0	47.1	68.9	
09:15	15:00	57.4	48.3	70.5	
09:30	15:00	57.3	48.2	70.9	
09:45	15:00	57.8	48.7	71.3	
10:00	15:00	57.3	47.2	71.5	
10:15	15:00	57.6	47.1	69.3	
10:30	15:00	57.2	46.9	68.6	
10:45	15:00	60.1	47.4	80.7	
11:00	15:00	59.5	47.6	79.1	
11:15	15:00	57.1	47.7	68.6	
11:30	15:00	58.2	48.6	74.0	
11:45	15:00	58.4	49.6	71.2	
12:00	15:00	57.9	47.6	75.6	
12:15	15:00	58.0	48.4	69.5	
12:30	15:00	57.5	49.3	71.3	
12:45	15:00	57.7	47.1	72.0	
13:00	15:00	57.5	48.1	71.2	
13:15	15:00	58.4	48.2	71.4	
13:30	15:00	58.0	48.0	68.6	
13:45	15:00	57.5	48.2	70.4	
14:00	15:00	57.7	47.8	70.4	
14:15	15:00	57.7	47.0	72.1	
14:30	15:00	56.9	45.9	84.3	
14:45	15:00	58.2	49.2	71.1	
Log Average 0700-1500		57.8	48.1	69-84	
Average 0700-1500		57.7	48.0	69-84	

Noise Survey Results

Date: Monday 2nd August 2021

TABLE 80

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 4 - Chirk Court (Maes-y-waun Area)**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	57.4	49.8	69.3	
15:15	15:00	58.1	48.4	72.2	
15:30	15:00	57.8	48.2	71.3	
15:45	15:00	58.3	46.9	75.3	
16:00	15:00	58.5	47.6	70.7	
16:15	15:00	58.6	47.4	68.4	
16:30	15:00	59.3	49.3	77.4	
16:45	15:00	58.4	48.5	69.5	
17:00	15:00	59.4	50.8	71.0	
17:15	15:00	59.5	51.3	73.6	
17:30	15:00	60.2	51.8	83.7	
17:45	15:00	58.7	49.7	68.3	
18:00	15:00	59.4	49.3	72.0	
18:15	15:00	59.5	49.4	75.4	
18:30	15:00	57.7	47.2	70.0	
18:45	15:00	57.3	46.7	68.9	
19:00	15:00	57.2	46.3	73.3	
19:15	15:00	56.6	46.0	71.8	
19:30	15:00	56.8	46.1	72.9	
19:45	15:00	56.9	47.1	74.3	
20:00	15:00	56.1	46.9	70.4	
20:15	15:00	56.6	47.1	72.5	
20:30	15:00	55.7	47.6	72.5	
20:45	15:00	55.8	48.3	72.7	
21:00	15:00	55.3	48.8	70.9	
21:15	15:00	55.1	47.8	69.3	
21:30	15:00	55.5	48.4	71.3	
21:45	15:00	53.6	46.6	69.3	
22:00	15:00	53.3	45.5	72.8	
22:15	15:00	53.3	44.3	73.3	
22:30	15:00	51.6	43.4	69.1	
22:45	15:00	50.5	43.8	68.8	
Log Average 1500-2300		57.3	48.1	68-84	
Average 1500-2300		56.8	47.7	68-84	

Noise Survey Results

Date: Monday 2nd - Tuesday 3rd August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 81

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 4 - Chirk Court (Maes-y-waun Area)**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	49.7	41.7	70.3	
23:15	15:00	50.5	43.0	73.1	
23:30	15:00	49.2	41.3	69.8	
23:45	15:00	48.8	44.3	71.9	
00:00	15:00	48.9	42.4	73.7	
00:15	15:00	45.9	42.1	67.6	
00:30	15:00	47.1	41.4	67.1	
00:45	15:00	43.4	40.9	65.0	
01:00	15:00	46.4	43.6	64.4	
01:15	15:00	48.6	45.6	65.7	
01:30	15:00	47.3	45.4	68.8	
01:45	15:00	46.1	44.6	63.1	
02:00	15:00	48.1	44.7	72.1	
02:15	15:00	47.0	43.9	66.6	
02:30	15:00	47.2	44.3	67.7	
02:45	15:00	48.0	45.4	67.6	
03:00	15:00	46.4	44.2	62.9	
03:15	15:00	51.2	44.5	71.5	
03:30	15:00	45.6	44.0	65.2	
03:45	15:00	47.5	43.6	70.4	
04:00	15:00	49.9	45.4	70.3	
04:15	15:00	49.3	45.4	69.3	
04:30	15:00	48.5	45.2	71.9	
04:45	15:00	56.2	44.7	92.5	
05:00	15:00	54.5	44.4	75.1	
05:15	15:00	53.1	46.2	70.1	
05:30	15:00	54.8	46.5	69.4	
05:45	15:00	54.4	44.8	72.5	
06:00	15:00	55.8	45.8	72.1	
06:15	15:00	55.5	46.3	70.4	
06:30	15:00	56.5	48.0	71.2	
06:45	15:00	56.4	45.7	70.8	
Log Average 2300-0700		51.5	44.6	63-93	
Average 2300-0700		49.9	44.4	63-93	
Average 0700-2300		57.5	48.1	68-84	

Noise Survey Results

Date: Tuesday 3rd August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 82

Client: Kronospan Ltd

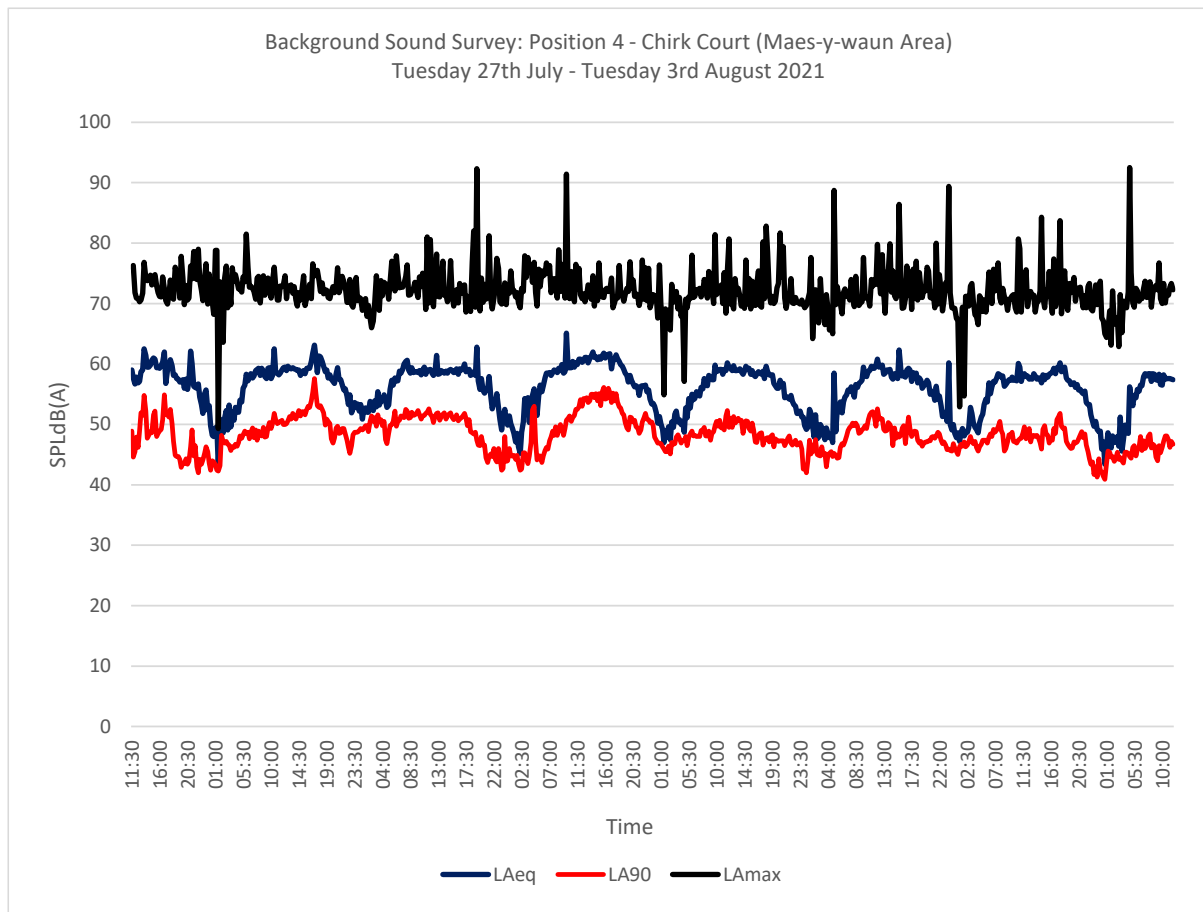
Project: **Baseline Sound Survey**

Data: **Position 4 - Chirk Court (Maes-y-waun Area)**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

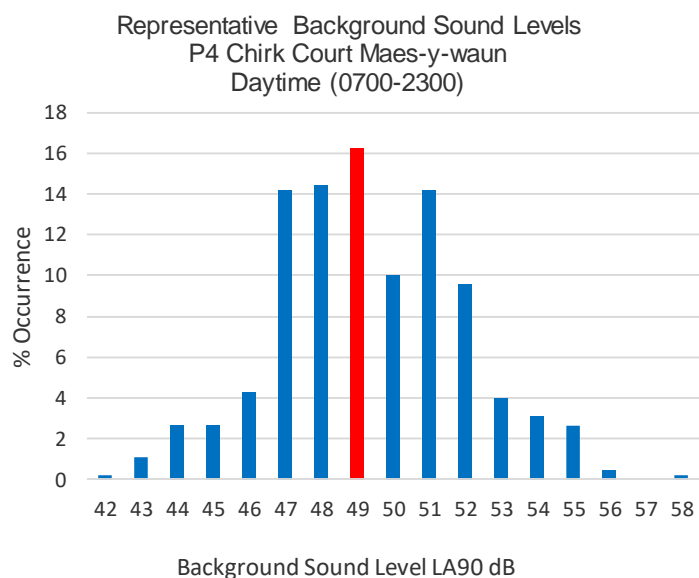
Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	57.9	47.3	72.5	
07:15	15:00	58.4	46.0	73.7	
07:30	15:00	58.0	46.6	71.0	
07:45	15:00	58.4	48.0	72.0	
08:00	15:00	58.4	48.4	73.6	
08:15	15:00	57.1	46.1	69.4	
08:30	15:00	58.4	46.7	71.7	
08:45	15:00	58.3	46.5	72.7	
09:00	15:00	57.4	44.6	73.0	
09:15	15:00	57.3	44.0	72.3	
09:30	15:00	58.3	46.5	76.7	
09:45	15:00	56.6	45.3	70.8	
10:00	15:00	56.5	46.2	70.0	
10:15	15:00	58.2	47.2	73.3	
10:30	15:00	57.5	48.1	70.1	
10:45	15:00	57.6	48.1	72.0	
11:00	15:00	57.6	47.5	71.4	
11:15	15:00	57.6	46.2	72.7	
11:30	15:00	57.5	47.2	73.3	
11:45	15:00	57.4	46.7	72.3	
Log Average 0700-1200		57.7	46.7	69-77	
Average 0700-1200		57.7	46.7	69-77	
Overall Log Average		52.8	47	49-93	With Rain
Overall Log Average		58.5	49.7	68-92	With Rain
Overall Log Average		52.8	47	49-93	No Rain
Overall Log Average		58.5	50	68-92	No Rain

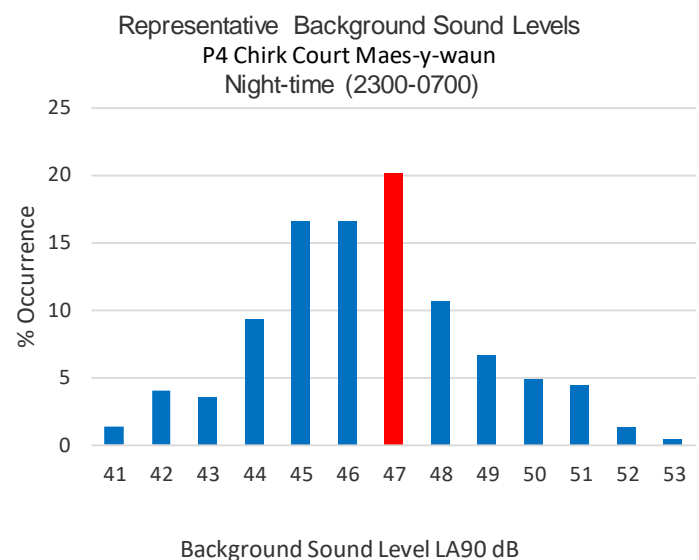


LA90 Representative Levels

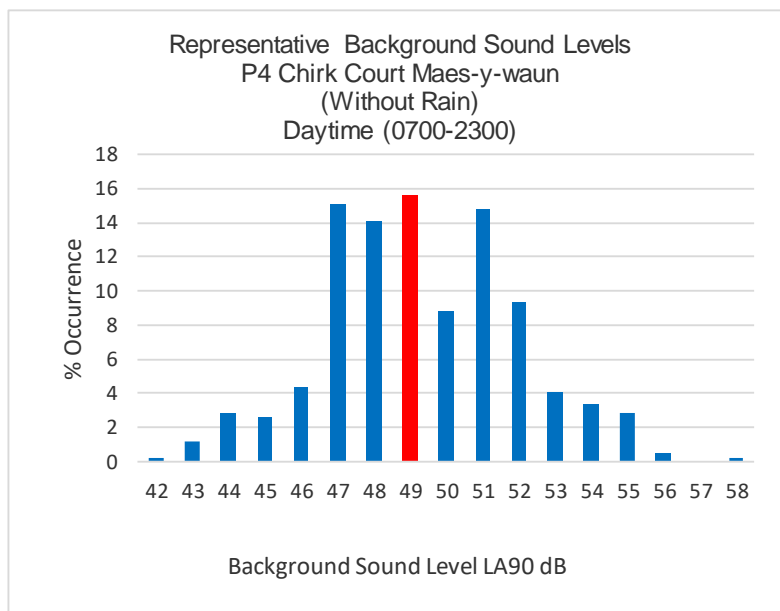
LA90	% Occurrence
42	0.2
43	1.1
44	2.7
45	2.7
46	4.2
47	14.2
48	14.4
49	16.2
50	10.0
51	14.2
52	9.6
53	4.0
54	3.1
55	2.7
56	0.4
57	0.0
58	0.2



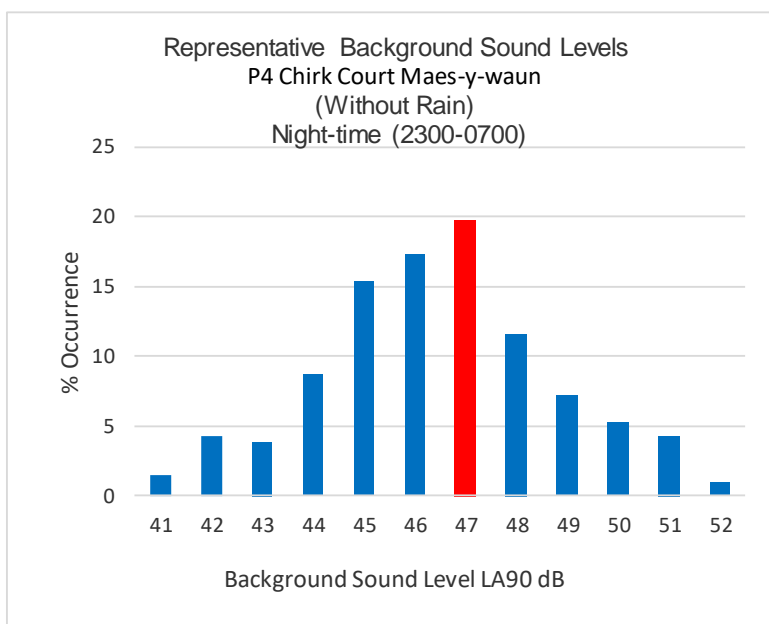
LA90	% Occurrence
41	1.3
42	4.0
43	3.6
44	9.4
45	16.5
46	16.5
47	20.1
48	10.7
49	6.7
50	4.9
51	4.5
52	1.3
53	0.4



LA90	% Occurrence
42	0.2
43	1.2
44	2.9
45	2.6
46	4.3
47	15.1
48	14.1
49	15.6
50	8.9
51	14.8
52	9.3
53	4.1
54	3.3
55	2.9
56	0.5
57	0.0
58	0.2



LA90	% Occurrence
41	1.4
42	4.3
43	3.8
44	8.7
45	15.4
46	17.3
47	19.7
48	11.5
49	7.2
50	5.3
51	4.3
52	1.0



Noise Survey Results

Date: Tuesday 27th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 83

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 5 - 2 Hadley Close (Shepherds Lane Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2630261)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
11:00	15:00	55.6	41.2	81.5	Rain
11:15	15:00	50.2	40.6	73.8	
11:30	15:00	49.1	39.8	65.8	
11:45	15:00	52.1	39.9	76.4	
12:00	15:00	49.0	45.9	63.9	
12:15	15:00	55.6	45.1	80.4	
12:30	15:00	55.1	46.5	69.9	
12:45	15:00	52.3	44.7	67.3	
13:00	15:00	55.2	38.0	77.3	
13:15	15:00	50.8	38.2	67.7	
13:30	15:00	55.1	43.7	77.2	Rain
13:45	15:00	52.6	47.6	74.4	
14:00	15:00	55.8	40.3	77.1	
14:15	15:00	56.6	42.0	75.3	
14:30	15:00	53.5	39.7	73.6	Rain
14:45	15:00	49.1	37.5	66.0	
Log Average 1100-1500		53.6	43.0	64-82	
Average 1100-1500		53.0	41.9	64-82	

Noise Survey Results

Date: Tuesday 27th July 2021

TABLE 84

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 5 - 2 Hadley Close (Shepherds Lane Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2630261)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	53.7	38.7	75.1	Rain
15:15	15:00	51.2	37.1	68.2	
15:30	15:00	52.0	35.7	76.7	Rain
15:45	15:00	54.1	38.0	69.9	
16:00	15:00	53.4	37.3	70.0	
16:15	15:00	53.8	35.9	70.4	
16:30	15:00	51.8	36.0	76.4	
16:45	15:00	56.7	35.4	80.3	
17:00	15:00	52.8	34.6	73.4	
17:15	15:00	50.3	34.5	66.6	Rain
17:30	15:00	51.2	35.0	67.8	
17:45	15:00	52.1	36.5	74.0	
18:00	15:00	57.1	36.2	90.2	
18:15	15:00	49.8	36.1	69.3	
18:30	15:00	48.1	34.7	68.8	
18:45	15:00	48.7	34.6	66.1	
19:00	15:00	48.3	33.3	67.4	
19:15	15:00	48.8	35.5	67.4	
19:30	15:00	48.9	34.1	67.5	
19:45	15:00	46.0	33.8	67.7	
20:00	15:00	58.7	36.1	70.1	
20:15	15:00	56.7	44.7	71.8	
20:30	15:00	49.4	38.9	68.6	
20:45	15:00	48.7	36.7	66.7	
21:00	15:00	45.1	38.1	66.6	Rain
21:15	15:00	44.2	34.3	65.4	
21:30	15:00	44.7	33.5	66.3	
21:45	15:00	41.1	34.2	69.9	
22:00	15:00	45.0	34.7	72.4	
22:15	15:00	40.6	34.6	63.5	
22:30	15:00	48.4	36.6	71.8	
22:45	15:00	44.8	38.2	67.1	
Log Average 1500-2300		51.9	36.8	64-90	
Average 1500-2300		49.9	36.0	64-90	

Noise Survey Results

Date: Tuesday 27th- Wednesday 28th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 85

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 5 - 2 Hadley Close (Shepherds Lane Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2630261)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	43.9	35.2	65.0	
23:15	15:00	41.7	33.8	67.5	
23:30	15:00	40.1	35.6	61.9	
23:45	15:00	40.5	37.8	46.6	
00:00	15:00	42.7	38.9	66.0	
00:15	15:00	38.5	35.4	43.9	
00:30	15:00	35.3	34.1	40.7	
00:45	15:00	40.3	35.5	46.3	
01:00	15:00	43.1	39.0	51.0	
01:15	15:00	41.8	38.6	47.0	
01:30	15:00	44.2	39.4	61.5	
01:45	15:00	44.2	41.4	59.6	
02:00	15:00	43.1	38.7	61.6	
02:15	15:00	42.1	39.7	48.6	
02:30	15:00	41.1	39.2	49.6	
02:45	15:00	40.4	37.3	50.1	Rain
03:00	15:00	42.5	38.7	61.7	Rain
03:15	15:00	42.4	40.4	57.0	
03:30	15:00	43.9	39.7	66.5	
03:45	15:00	42.2	39.7	46.6	
04:00	15:00	45.5	40.3	63.4	
04:15	15:00	47.4	40.3	67.4	
04:30	15:00	47.2	40.7	68.9	
04:45	15:00	47.7	41.2	65.6	
05:00	15:00	52.8	40.8	76.5	
05:15	15:00	47.0	40.8	64.0	
05:30	15:00	48.1	39.5	64.1	
05:45	15:00	46.7	39.7	65.7	
06:00	15:00	49.5	39.3	67.6	
06:15	15:00	51.2	36.1	69.0	
06:30	15:00	51.3	35.8	68.4	
06:45	15:00	50.0	35.8	72.3	
Log Average 2300-0700		46.2	38.8	41-77	
Average 2300-0700		44.3	38.4	41-77	
Average 1100-2300		52.7	40.2	64-90	

Noise Survey Results

Date: Wednesday 28th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 86

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 5 - 2 Hadley Close (Shepherds Lane Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2630261)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	50.7	34.8	66.9	
07:15	15:00	50.5	36.0	69.5	
07:30	15:00	50.5	37.1	69.6	
07:45	15:00	51.0	38.0	69.9	
08:00	15:00	51.6	39.9	68.7	
08:15	15:00	50.8	38.3	67.3	
08:30	15:00	50.7	38.8	68.9	
08:45	15:00	49.3	41.0	64.9	
09:00	15:00	49.8	38.4	65.9	
09:15	15:00	50.3	40.9	66.2	
09:30	15:00	50.1	43.1	65.8	
09:45	15:00	50.0	42.0	74.0	
10:00	15:00	51.2	42.6	67.0	
10:15	15:00	49.7	41.7	66.7	
10:30	15:00	50.3	43.2	66.2	
10:45	15:00	54.2	40.3	74.1	
11:00	15:00	55.6	42.0	87.0	
11:15	15:00	51.9	41.3	69.9	
11:30	15:00	55.2	41.7	76.1	
11:45	15:00	52.1	41.9	69.1	
12:00	15:00	50.9	42.8	65.7	Rain
12:15	15:00	50.6	41.6	68.2	
12:30	15:00	51.6	42.9	67.5	
12:45	15:00	51.1	43.4	68.2	
13:00	15:00	49.9	42.0	66.6	
13:15	15:00	52.3	43.7	68.0	
13:30	15:00	52.3	44.8	65.9	
13:45	15:00	50.0	44.1	66.0	
14:00	15:00	51.4	44.7	66.4	Rain
14:15	15:00	54.8	44.7	76.9	
14:30	15:00	53.6	42.3	74.2	
14:45	15:00	54.9	45.3	70.3	
Log Average 0700-1500		51.9	42.0	65-87	
Average 0700-1500		51.5	41.4	65-87	

Noise Survey Results

Date: Wednesday 28th July 2021

TABLE 87

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 5 - 2 Hadley Close (Shepherds Lane Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2630261)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	55.6	45.8	76.8	
15:15	15:00	52.3	45.8	70.2	
15:30	15:00	54.2	47.4	69.4	
15:45	15:00	53.1	46.6	67.1	
16:00	15:00	58.6	50.0	75.6	
16:15	15:00	55.8	46.3	72.0	
16:30	15:00	53.8	42.4	67.5	
16:45	15:00	55.1	41.8	74.9	
17:00	15:00	53.8	45.1	71.1	
17:15	15:00	51.9	45.5	73.4	
17:30	15:00	52.2	43.8	67.7	
17:45	15:00	52.4	44.1	71.3	
18:00	15:00	51.7	44.5	66.5	
18:15	15:00	50.3	43.2	68.0	
18:30	15:00	52.8	44.4	83.4	
18:45	15:00	49.3	39.6	65.4	
19:00	15:00	48.6	39.2	64.1	Rain
19:15	15:00	48.4	38.4	64.5	
19:30	15:00	50.7	41.0	66.7	
19:45	15:00	52.6	44.6	69.6	
20:00	15:00	50.5	40.8	69.2	
20:15	15:00	46.4	41.6	65.8	
20:30	15:00	48.2	41.5	64.4	
20:45	15:00	47.4	42.9	66.4	
21:00	15:00	49.4	41.0	68.8	
21:15	15:00	47.0	39.7	66.7	
21:30	15:00	46.0	37.4	65.5	
21:45	15:00	45.8	35.0	65.8	
22:00	15:00	45.3	35.2	66.0	
22:15	15:00	44.4	38.0	63.5	
22:30	15:00	45.0	40.0	63.9	
22:45	15:00	45.8	39.2	61.7	
Log Average 1500-2300		51.9	43.5	62-84	
Average 1500-2300		50.4	42.2	62-84	

Noise Survey Results

Date: Wednesday 28th to Thursday 29th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 88

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 5 - 2 Hadley Close (Shepherds Lane Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2630261)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	45.0	40.7	60.9	
23:15	15:00	44.1	41.2	55.8	
23:30	15:00	44.3	41.1	53.1	
23:45	15:00	43.8	41.7	50.9	
00:00	15:00	44.3	41.3	54.7	
00:15	15:00	45.1	42.0	54.2	
00:30	15:00	44.8	41.2	53.2	
00:45	15:00	44.6	41.2	54.4	
01:00	15:00	45.8	42.2	59.0	
01:15	15:00	48.8	43.8	62.9	
01:30	15:00	46.1	43.3	54.0	
01:45	15:00	46.8	44.0	59.3	
02:00	15:00	46.7	43.0	59.7	
02:15	15:00	46.0	42.1	58.7	
02:30	15:00	48.0	44.5	59.9	Rain
02:45	15:00	48.6	42.3	62.4	Rain
03:00	15:00	46.8	39.2	63.8	
03:15	15:00	45.8	42.4	60.8	
03:30	15:00	47.6	41.7	67.2	
03:45	15:00	41.5	38.9	52.5	
04:00	15:00	44.2	42.1	60.7	
04:15	15:00	46.3	43.4	62.2	
04:30	15:00	49.7	42.1	68.2	
04:45	15:00	50.3	43.5	72.3	
05:00	15:00	48.3	42.3	66.7	
05:15	15:00	47.6	42.3	66.3	
05:30	15:00	48.9	43.2	67.7	
05:45	15:00	50.3	43.8	65.4	
06:00	15:00	51.1	43.4	68.6	
06:15	15:00	53.0	44.1	67.9	
06:30	15:00	51.8	43.7	68.3	
06:45	15:00	51.6	43.4	70.3	
Log Average 2300-0700		47.9	42.5	51-72	
Average 2300-0700		47.1	42.3	51-72	
Average 0700-2300		51.9	42.8	62-87	

Noise Survey Results

Date: Thursday 29th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 89

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 5 - 2 Hadley Close (Shepherds Lane Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2630261)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	50.7	43.9	68.3	
07:15	15:00	51.0	43.2	68.2	
07:30	15:00	52.4	43.2	67.3	
07:45	15:00	52.0	45.9	67.0	
08:00	15:00	52.9	45.1	67.4	
08:15	15:00	51.5	45.4	66.3	
08:30	15:00	52.1	45.7	67.8	
08:45	15:00	50.9	44.5	67.1	
09:00	15:00	52.2	42.9	69.0	
09:15	15:00	51.9	45.1	66.1	
09:30	15:00	51.7	44.7	68.6	
09:45	15:00	52.9	43.7	67.1	
10:00	15:00	49.6	44.0	64.6	
10:15	15:00	51.6	44.5	64.4	
10:30	15:00	50.5	44.6	64.6	
10:45	15:00	51.2	44.6	66.2	
11:00	15:00	50.7	44.9	65.1	
11:15	15:00	51.1	45.2	67.4	
11:30	15:00	50.2	43.2	66.3	
11:45	15:00	51.2	44.0	70.3	
12:00	15:00	54.3	44.7	77.0	
12:15	15:00	50.9	41.8	64.3	
12:30	15:00	50.0	43.7	65.3	
12:45	15:00	50.9	43.4	62.2	
13:00	15:00	50.0	45.2	64.2	
13:15	15:00	52.3	43.4	71.0	
13:30	15:00	50.7	41.4	65.2	
13:45	15:00	49.9	43.5	65.6	
14:00	15:00	50.1	41.9	65.7	
14:15	15:00	53.8	43.1	73.2	
14:30	15:00	50.4	44.2	67.1	
14:45	15:00	53.7	43.6	78.7	
Log Average 0700-1500		51.5	44.1	62-79	
Average 0700-1500		51.4	44.0	62-79	

Noise Survey Results

Date: Thursday 29th July 2021

TABLE 90

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 5 - 2 Hadley Close (Shepherds Lane Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2630261)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	51.2	45.8	66.6	
15:15	15:00	52.0	43.5	72.4	
15:30	15:00	50.9	43.9	67.1	
15:45	15:00	60.7	43.6	89.5	
16:00	15:00	48.3	40.5	63.6	
16:15	15:00	52.6	42.5	73.3	
16:30	15:00	50.4	41.5	66.3	
16:45	15:00	49.8	40.4	66.5	
17:00	15:00	53.0	42.5	74.3	
17:15	15:00	50.2	41.7	68.9	
17:30	15:00	49.2	39.5	65.9	
17:45	15:00	51.5	40.8	70.2	
18:00	15:00	49.1	40.6	66.9	
18:15	15:00	49.5	40.4	65.5	
18:30	15:00	54.1	38.7	79.8	
18:45	15:00	47.8	39.1	65.3	
19:00	15:00	54.4	40.0	81.6	
19:15	15:00	47.8	38.1	69.2	
19:30	15:00	47.7	37.6	64.7	
19:45	15:00	47.4	33.6	64.8	
20:00	15:00	46.0	34.0	73.7	
20:15	15:00	47.2	33.7	71.4	
20:30	15:00	44.9	34.2	65.2	
20:45	15:00	48.5	35.3	70.7	
21:00	15:00	44.3	35.9	63.6	
21:15	15:00	44.1	35.7	61.5	
21:30	15:00	45.1	35.2	67.6	
21:45	15:00	45.3	37.4	65.1	
22:00	15:00	44.1	38.2	64.5	
22:15	15:00	40.2	34.2	64.7	
22:30	15:00	43.2	33.9	62.9	
22:45	15:00	47.3	44.1	62.6	
Log Average 1500-2300		50.8	40.2	62-90	
Average 1500-2300		48.7	38.9	62-90	

Noise Survey Results

Date: Thursday 29th to Friday 30th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 91

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 5 - 2 Hadley Close (Shepherds Lane Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2630261)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	44.7	35.8	66.9	
23:15	15:00	40.4	34.5	63.7	
23:30	15:00	44.8	37.7	65.4	
23:45	15:00	38.2	35.5	47.9	
00:00	15:00	37.5	35.8	46.2	Rain
00:15	15:00	36.3	34.7	43.4	Rain
00:30	15:00	44.6	33.1	72.4	
00:45	15:00	36.4	34.4	44.4	Rain
01:00	15:00	35.2	33.2	45.8	
01:15	15:00	38.3	31.2	63.8	
01:30	15:00	38.8	32.2	49.7	
01:45	15:00	47.4	42.4	64.2	
02:00	15:00	47.2	43.2	63.9	
02:15	15:00	49.2	42.8	55.9	
02:30	15:00	44.7	37.7	57.6	
02:45	15:00	47.1	41.1	54.7	
03:00	15:00	51.3	45.1	64.8	Rain
03:15	15:00	53.9	49.6	58.9	Rain
03:30	15:00	53.9	52.8	61.1	Rain
03:45	15:00	50.9	45.3	63.3	Rain
04:00	15:00	43.5	39.3	53.1	Rain
04:15	15:00	46.4	41.9	70.0	Rain
04:30	15:00	48.7	38.5	68.1	Rain
04:45	15:00	47.5	40.8	68.7	Rain
05:00	15:00	49.5	38.6	69.4	
05:15	15:00	46.2	38.4	64.8	
05:30	15:00	48.1	40.5	68.6	Rain
05:45	15:00	47.6	39.2	66.2	
06:00	15:00	49.6	39.9	67.1	
06:15	15:00	53.0	41.4	71.7	
06:30	15:00	51.6	42.5	68.0	
06:45	15:00	52.4	43.9	70.3	Rain
Log Average 2300-0700		48.4	42.7	43-72	
Average 2300-0700		45.8	39.5	43-72	
Average 0700-2300		52.4	42.2	62-90	

Noise Survey Results

Date: Friday 30th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 92

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 5 - 2 Hadley Close (Shepherds Lane Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2630261)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	52.0	44.4	68.3	
07:15	15:00	51.2	43.0	66.7	
07:30	15:00	50.6	44.6	68.5	
07:45	15:00	49.8	44.2	67.2	
08:00	15:00	53.2	43.6	74.3	
08:15	15:00	54.2	44.5	69.8	
08:30	15:00	54.3	45.1	78.7	
08:45	15:00	51.1	45.7	65.9	
09:00	15:00	51.9	44.4	68.2	
09:15	15:00	55.5	45.3	78.3	
09:30	15:00	51.9	45.2	68.2	
09:45	15:00	51.9	45.8	65.9	
10:00	15:00	52.1	44.5	68.4	
10:15	15:00	52.6	46.0	69.5	
10:30	15:00	52.7	44.9	67.2	
10:45	15:00	51.6	46.7	68.5	
11:00	15:00	53.5	46.8	69.7	
11:15	15:00	56.0	45.6	75.8	
11:30	15:00	52.9	46.7	71.2	
11:45	15:00	52.4	45.7	68.8	
12:00	15:00	51.8	47.0	66.2	
12:15	15:00	50.9	45.7	66.2	
12:30	15:00	52.3	45.8	69.1	
12:45	15:00	54.3	45.7	76.6	
13:00	15:00	54.1	46.3	74.5	
13:15	15:00	53.3	47.5	71.1	
13:30	15:00	56.2	46.2	75.2	
13:45	15:00	50.8	44.4	69.5	
14:00	15:00	51.2	45.6	69.8	
14:15	15:00	52.4	46.0	69.4	
14:30	15:00	53.3	46.6	71.0	
14:45	15:00	53.8	48.1	76.6	
Log Average 0700-1500		52.9	45.6	66-79	
Average 0700-1500		52.7	45.5	66-79	

Noise Survey Results

Date: Friday 30th July 2021

TABLE 93

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 5 - 2 Hadley Close (Shepherds Lane Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2630261)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	51.6	46.5	65.4	
15:15	15:00	51.9	45.5	66.5	
15:30	15:00	53.6	47.2	69.2	
15:45	15:00	52.4	46.9	68.1	
16:00	15:00	55.5	45.1	79.6	
16:15	15:00	56.6	45.0	83.7	
16:30	15:00	53.0	45.8	70.4	
16:45	15:00	51.8	45.4	65.6	
17:00	15:00	62.9	45.8	91.1	
17:15	15:00	72.4	45.6	105.8	
17:30	15:00	52.0	45.9	69.7	
17:45	15:00	53.1	44.7	79.1	
18:00	15:00	52.4	43.3	72.7	
18:15	15:00	51.7	43.5	68.4	
18:30	15:00	49.4	41.3	70.6	
18:45	15:00	49.9	44.1	78.1	
19:00	15:00	50.1	44.8	74.9	
19:15	15:00	49.4	43.8	65.8	
19:30	15:00	47.7	43.2	66.4	
19:45	15:00	49.5	43.8	65.2	
20:00	15:00	48.9	42.4	67.1	
20:15	15:00	47.7	42.0	65.7	
20:30	15:00	46.4	42.1	66.1	
20:45	15:00	47.9	41.6	67.6	
21:00	15:00	47.6	44.5	65.1	
21:15	15:00	48.7	43.7	66.0	
21:30	15:00	49.3	44.2	67.1	
21:45	15:00	48.8	44.8	64.1	
22:00	15:00	48.9	43.3	66.3	
22:15	15:00	48.7	44.1	64.2	
22:30	15:00	46.6	44.1	64.8	
22:45	15:00	46.6	42.9	65.4	
Log Average 1500-2300		58.6	44.5	64-106	
Average 1500-2300		51.3	44.3	64-106	

Noise Survey Results

Date: Friday 30th to Saturday 31st July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 94

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 5 - 2 Hadley Close (Shepherds Lane Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2630261)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	47.8	41.1	66.4	
23:15	15:00	50.3	38.4	72.9	
23:30	15:00	49.0	39.5	66.6	
23:45	15:00	48.0	38.4	67.9	
00:00	15:00	47.8	38.7	70.5	
00:15	15:00	48.9	39.8	70.0	
00:30	15:00	48.9	39.7	68.7	
00:45	15:00	50.0	39.7	66.6	
01:00	15:00	53.0	40.6	75.5	
01:15	15:00	50.4	41.1	71.9	
01:30	15:00	51.2	40.7	70.1	
01:45	15:00	49.4	40.5	65.5	
02:00	15:00	50.5	41.8	64.9	
02:15	15:00	50.8	40.8	65.5	
02:30	15:00	50.3	41.7	67.6	
02:45	15:00	50.8	41.7	71.6	
03:00	15:00	50.1	41.1	64.8	
03:15	15:00	50.9	40.3	73.1	
03:30	15:00	50.2	41.2	67.8	
03:45	15:00	50.4	39.7	69.0	
04:00	15:00	50.2	41.9	65.1	
04:15	15:00	49.1	41.3	64.7	
04:30	15:00	49.7	43.6	64.6	
04:45	15:00	49.7	41.6	66.6	
05:00	15:00	50.6	42.9	69.7	
05:15	15:00	50.3	40.6	70.2	
05:30	15:00	53.9	38.7	82.4	
05:45	15:00	49.0	39.9	68.0	
06:00	15:00	51.0	41.2	67.1	
06:15	15:00	48.0	43.0	63.9	
06:30	15:00	52.0	40.5	71.2	
06:45	15:00	48.8	40.5	65.5	
Log Average 2300-0700		50.2	40.8	64-82	
Average 2300-0700		50.0	40.7	64-82	
Average 0700-2300		56.6	45.1	64-106	

Noise Survey Results

Date: Saturday 31st July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 95

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 5 - 2 Hadley Close (Shepherds Lane Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2630261)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	47.8	41.1	66.4	
07:15	15:00	50.3	38.4	72.9	
07:30	15:00	49.0	39.5	66.6	
07:45	15:00	48.0	38.4	67.9	
08:00	15:00	47.8	38.7	70.5	
08:15	15:00	48.9	39.8	70.0	
08:30	15:00	48.9	39.7	68.7	
08:45	15:00	50.0	39.7	66.6	
09:00	15:00	53.0	40.6	75.5	
09:15	15:00	50.4	41.1	71.9	
09:30	15:00	51.2	40.7	70.1	
09:45	15:00	49.4	40.5	65.5	
10:00	15:00	50.5	41.8	64.9	
10:15	15:00	50.8	40.8	65.5	
10:30	15:00	50.3	41.7	67.6	
10:45	15:00	50.8	41.7	71.6	
11:00	15:00	50.1	41.1	64.8	
11:15	15:00	50.9	40.3	73.1	
11:30	15:00	50.2	41.2	67.8	
11:45	15:00	50.4	39.7	69.0	
12:00	15:00	50.2	41.9	65.1	
12:15	15:00	49.1	41.3	64.7	
12:30	15:00	49.7	43.6	64.6	
12:45	15:00	49.7	41.6	66.6	
13:00	15:00	50.6	42.9	69.7	
13:15	15:00	50.3	40.6	70.2	
13:30	15:00	53.9	38.7	82.4	
13:45	15:00	49.0	39.9	68.0	
14:00	15:00	51.0	41.2	67.1	
14:15	15:00	48.0	43.0	63.9	
14:30	15:00	52.0	40.5	71.2	
14:45	15:00	48.8	40.5	65.5	
Log Average 0700-1500		50.2	40.8	64-82	
Average 0700-1500		50.0	40.7	64-82	

Noise Survey Results

Date: Saturday 31st July 2021

TABLE 96

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 5 - 2 Hadley Close (Shepherds Lane Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2630261)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	48.6	42.3	63.1	
15:15	15:00	49.1	38.8	70.3	
15:30	15:00	50.0	37.1	65.7	
15:45	15:00	52.3	39.0	78.6	
16:00	15:00	48.8	38.4	65.6	
16:15	15:00	49.1	40.0	64.9	
16:30	15:00	50.1	39.8	71.6	
16:45	15:00	50.0	37.5	70.6	
17:00	15:00	49.7	37.8	69.3	
17:15	15:00	50.9	37.6	70.7	
17:30	15:00	50.4	37.3	66.5	
17:45	15:00	48.6	37.7	67.4	
18:00	15:00	52.3	37.1	77.9	
18:15	15:00	57.3	38.0	81.2	
18:30	15:00	48.8	38.1	74.1	
18:45	15:00	46.5	41.8	64.4	
19:00	15:00	47.3	39.3	71.7	
19:15	15:00	45.1	40.2	63.4	
19:30	15:00	49.2	40.4	73.7	
19:45	15:00	47.2	40.3	64.4	
20:00	15:00	48.0	39.2	66.0	
20:15	15:00	47.2	40.8	64.3	
20:30	15:00	45.6	39.7	64.3	
20:45	15:00	45.7	39.6	65.3	
21:00	15:00	48.2	40.4	68.7	
21:15	15:00	47.8	39.7	66.2	
21:30	15:00	46.3	40.8	63.8	
21:45	15:00	44.0	39.5	62.2	
22:00	15:00	47.3	40.1	67.5	
22:15	15:00	49.7	40.5	71.2	
22:30	15:00	44.9	40.6	63.3	
22:45	15:00	45.8	39.8	70.9	
Log Average 1500-2300		49.4	39.5	62-81	
Average 1500-2300		48.5	39.3	62-81	

Noise Survey Results

Date: Saturday 31st July to Sunday 1st August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 97

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 5 - 2 Hadley Close (Shepherds Lane Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2630261)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	46.0	37.8	64.3	
23:15	15:00	41.5	37.0	62.7	
23:30	15:00	40.2	34.6	60.5	
23:45	15:00	43.6	36.7	66.3	
00:00	15:00	42.0	37.3	62.2	
00:15	15:00	42.3	37.1	61.9	
00:30	15:00	40.2	38.0	55.6	
00:45	15:00	40.5	37.7	64.1	
01:00	15:00	41.5	39.1	51.4	
01:15	15:00	40.7	36.8	46.3	
01:30	15:00	40.8	37.2	60.7	
01:45	15:00	40.6	37.2	58.7	
02:00	15:00	44.0	38.8	67.9	
02:15	15:00	43.7	36.9	63.5	
02:30	15:00	43.0	38.5	64.4	
02:45	15:00	42.5	36.6	62.8	
03:00	15:00	42.7	37.4	67.8	
03:15	15:00	39.7	35.5	44.9	
03:30	15:00	41.6	38.7	47.2	
03:45	15:00	40.6	36.6	53.7	
04:00	15:00	42.9	36.9	63.8	
04:15	15:00	41.4	35.5	63.2	
04:30	15:00	44.5	35.9	64.8	
04:45	15:00	45.3	36.8	67.8	
05:00	15:00	44.3	37.5	65.5	
05:15	15:00	43.3	39.0	63.5	
05:30	15:00	41.2	37.3	63.1	
05:45	15:00	44.7	39.9	61.8	
06:00	15:00	46.8	40.2	64.0	
06:15	15:00	45.3	40.5	62.5	
06:30	15:00	45.4	41.8	61.7	
06:45	15:00	47.1	42.9	63.2	
Log Average 2300-0700		43.2	38.2	45-68	
Average 2300-0700		42.8	37.8	45-68	
Average 0700-2300		49.8	40.2	62-82	

Noise Survey Results

Date: Sunday 1st August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 98

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 5 - 2 Hadley Close (Shepherds Lane Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2630261)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	45.6	43.0	61.0	
07:15	15:00	46.6	42.4	64.7	
07:30	15:00	48.1	41.9	64.5	
07:45	15:00	47.8	42.4	66.2	
08:00	15:00	48.6	40.8	69.2	
08:15	15:00	49.6	40.0	65.7	
08:30	15:00	50.2	39.0	66.6	
08:45	15:00	49.1	40.3	66.8	
09:00	15:00	50.6	41.3	74.0	
09:15	15:00	47.6	41.4	64.7	
09:30	15:00	50.7	42.2	71.8	Local noise
09:45	15:00	54.1	42.8	75.0	Local noise
10:00	15:00	53.0	42.9	74.0	Local noise
10:15	15:00	52.6	42.7	75.7	Local noise
10:30	15:00	49.9	41.2	68.1	Local noise
10:45	15:00	52.7	40.5	75.7	Local noise
11:00	15:00	54.8	38.3	85.8	Local noise
11:15	15:00	53.3	39.8	73.2	Local noise
11:30	15:00	51.2	40.8	71.3	Local noise
11:45	15:00	50.8	42.5	78.0	Local noise
12:00	15:00	50.7	40.5	67.1	
12:15	15:00	48.2	41.7	66.4	
12:30	15:00	54.1	40.0	77.3	
12:45	15:00	49.4	41.5	66.0	
13:00	15:00	50.0	41.4	66.4	
13:15	15:00	53.4	41.7	75.6	
13:30	15:00	48.6	39.2	63.7	
13:45	15:00	48.4	39.6	66.1	
14:00	15:00	49.1	41.9	68.1	
14:15	15:00	50.8	40.8	79.5	
14:30	15:00	50.7	42.8	70.3	
14:45	15:00	47.8	41.3	65.8	
Log Average 0700-1500		50.8	41.3	61-86	
Average 0700-1500		50.3	41.2	61-86	

Noise Survey Results

Date: Sunday 1st August 2021

TABLE 99

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 5 - 2 Hadley Close (Shepherds Lane Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2630261)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	54.4	42.7	78.6	
15:15	15:00	49.3	41.0	69.4	
15:30	15:00	49.0	37.8	68.5	
15:45	15:00	49.2	39.5	71.2	
16:00	15:00	47.6	42.6	67.0	
16:15	15:00	48.4	42.8	63.1	
16:30	15:00	53.7	43.9	77.1	
16:45	15:00	50.1	43.6	69.2	
17:00	15:00	49.2	42.6	71.8	
17:15	15:00	48.7	42.2	69.3	
17:30	15:00	47.5	43.9	65.1	
17:45	15:00	58.2	43.1	83.4	
18:00	15:00	54.6	43.4	70.6	
18:15	15:00	46.8	42.1	66.2	
18:30	15:00	47.3	41.8	67.4	
18:45	15:00	48.4	41.7	64.5	
19:00	15:00	48.9	41.4	68.3	
19:15	15:00	48.1	41.7	66.6	
19:30	15:00	44.8	41.2	68.4	
19:45	15:00	47.5	42.3	65.4	
20:00	15:00	47.6	41.9	63.9	
20:15	15:00	48.5	41.4	67.4	
20:30	15:00	46.1	40.8	63.4	
20:45	15:00	46.7	42.3	64.0	
21:00	15:00	46.2	40.4	64.2	
21:15	15:00	46.2	41.6	64.9	
21:30	15:00	45.8	40.6	65.6	
21:45	15:00	44.3	41.5	62.8	
22:00	15:00	44.6	41.0	63.5	
22:15	15:00	43.3	39.9	66.0	
22:30	15:00	43.8	38.7	66.7	
22:45	15:00	41.2	38.4	58.8	
Log Average 1500-2300		49.7	41.7	59-83	
Average 1500-2300		48.0	41.5	59-83	

Noise Survey Results

Date: Sunday 1st to Monday 2nd August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 100

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 5 - 2 Hadley Close (Shepherds Lane Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2630261)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	41.7	39.1	54.9	
23:15	15:00	42.3	39.0	58.9	
23:30	15:00	42.5	39.2	64.9	
23:45	15:00	40.7	38.8	60.3	
00:00	15:00	39.8	37.9	45.5	
00:15	15:00	39.8	38.1	44.1	
00:30	15:00	41.4	38.7	48.2	
00:45	15:00	42.3	40.3	48.5	
01:00	15:00	41.5	39.4	51.4	
01:15	15:00	42.0	38.4	60.8	
01:30	15:00	41.1	39.0	46.7	
01:45	15:00	41.9	40.3	50.3	
02:00	15:00	43.1	40.0	66.4	
02:15	15:00	42.4	39.4	59.6	
02:30	15:00	41.3	39.4	53.7	
02:45	15:00	40.4	38.4	55.7	
03:00	15:00	41.0	38.8	46.8	
03:15	15:00	40.6	38.8	47.7	
03:30	15:00	40.3	38.2	45.3	
03:45	15:00	42.1	38.9	55.8	
04:00	15:00	43.0	41.1	51.4	
04:15	15:00	46.3	40.5	66.2	
04:30	15:00	46.4	40.7	63.7	
04:45	15:00	48.5	42.0	66.4	
05:00	15:00	46.0	41.2	63.8	
05:15	15:00	46.0	42.8	64.2	
05:30	15:00	46.7	41.9	63.5	
05:45	15:00	45.5	42.0	65.4	
06:00	15:00	48.6	42.0	66.8	
06:15	15:00	50.7	41.9	73.9	
06:30	15:00	50.0	41.7	66.2	
06:45	15:00	51.5	41.2	68.7	
Log Average 2300-0700		45.1	40.1	44-74	
Average 2300-0700		43.7	40.0	44-74	
Average 0700-2300		50.3	41.5	59-86	

Noise Survey Results

Date: Monday 2nd August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 101

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 5 - 2 Hadley Close (Shepherds Lane Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2630261)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	50.9	39.7	70.2	
07:15	15:00	49.0	37.8	67.5	
07:30	15:00	48.8	35.8	64.6	
07:45	15:00	47.6	34.2	65.3	
08:00	15:00	58.8	34.4	85.1	
08:15	15:00	51.0	38.5	68.5	
08:30	15:00	49.8	37.9	69.4	
08:45	15:00	49.3	39.5	65.9	
09:00	15:00	46.0	35.7	65.2	
09:15	15:00	47.3	35.2	65.2	
09:30	15:00	48.4	34.1	66.2	
09:45	15:00	50.9	34.9	74.1	
10:00	15:00	51.6	36.8	68.4	
10:15	15:00	62.4	38.8	80.8	
10:30	15:00	50.0	40.1	67.2	
10:45	15:00	62.7	41.9	71.9	
11:00	15:00	63.0	40.0	74.6	
11:15	15:00	51.5	38.2	76.9	
11:30	15:00	50.7	36.1	67.1	
11:45	15:00	48.5	35.7	66.9	
12:00	15:00	48.5	38.2	68.1	
12:15	15:00	50.2	37.1	68.5	
12:30	15:00	52.2	38.5	66.9	
12:45	15:00	46.9	36.5	64.7	
13:00	15:00	49.1	36.9	67.2	
13:15	15:00	48.1	35.7	65.8	
13:30	15:00	48.7	38.8	66.0	
13:45	15:00	51.1	40.5	72.9	
14:00	15:00	48.5	40.5	65.9	
14:15	15:00	51.5	38.7	72.1	
14:30	15:00	51.6	39.5	78.3	
14:45	15:00	47.0	39.4	64.6	
Log Average 0700-1500		54.4	38.1	65-85	
Average 0700-1500		51.0	37.7	65-85	

Noise Survey Results

Date: Monday 2nd August 2021

TABLE 102

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

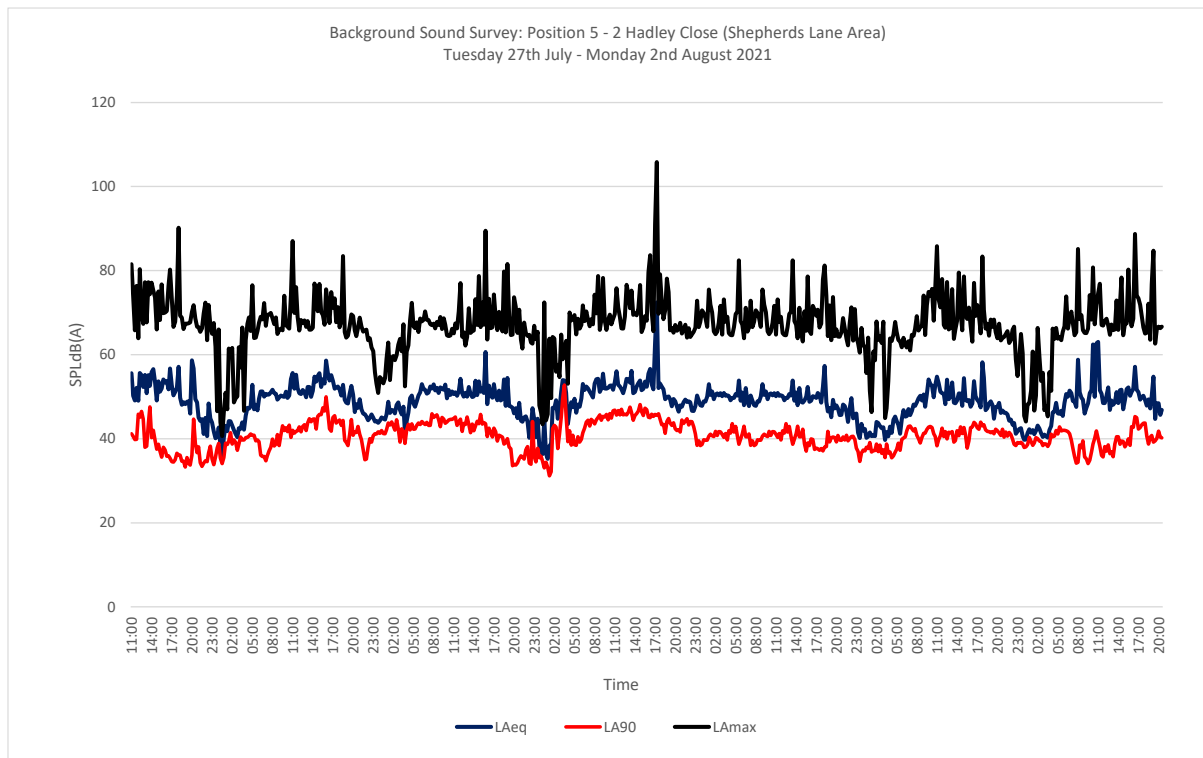
Project: **Baseline Sound Survey**

Data: **Position 5 - 2 Hadley Close (Shepherds Lane Area)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2630261)

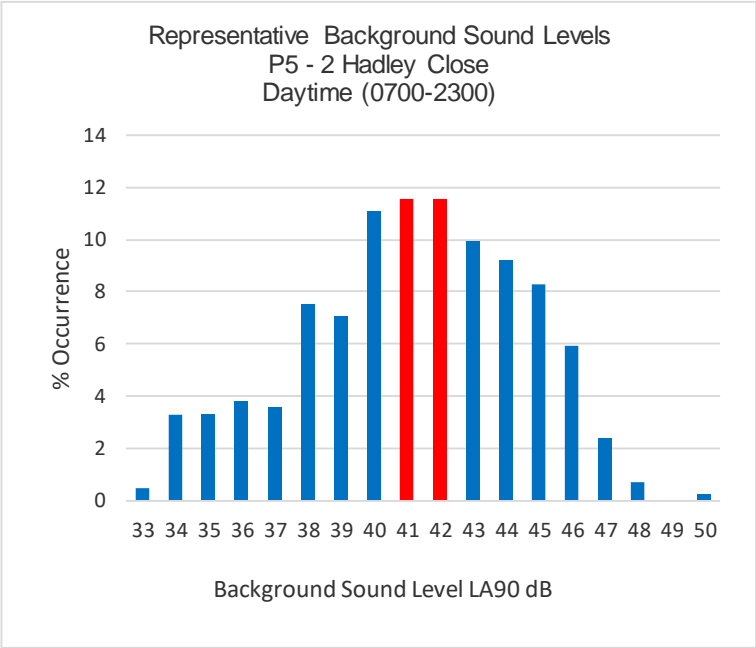
Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	49.2	38.1	67.4	
15:15	15:00	51.8	38.8	67.4	
15:30	15:00	52.2	40.0	80.2	
15:45	15:00	50.2	38.4	68.8	
16:00	15:00	51.2	42.9	66.8	
16:15	15:00	51.9	42.7	68.6	
16:30	15:00	57.1	45.3	88.7	
16:45	15:00	51.7	45.0	74.1	
17:00	15:00	51.1	42.3	73.4	
17:15	15:00	49.3	42.7	71.9	
17:30	15:00	49.9	43.3	69.4	
17:45	15:00	50.2	43.7	66.5	
18:00	15:00	49.2	43.8	65.0	
18:15	15:00	47.9	40.6	65.2	
18:30	15:00	49.4	38.8	72.1	
18:45	15:00	47.2	40.4	63.6	
19:00	15:00	50.1	40.8	76.7	
19:15	15:00	54.8	39.2	84.7	
19:30	15:00	44.7	39.5	62.6	
19:45	15:00	48.4	40.1	66.2	
20:00	15:00	48.4	41.8	66.6	
20:15	15:00	45.7	40.4	66.3	
20:30	15:00	46.9	40.2	66.7	
Log Average 1500-2045		50.8	41.7	63-89	
Average 1500-2045		49.9	41.2	63-89	
Average 0700-2300		40.8	0.0	63-89	
Overall Log Average		47.4	40.8	41-82	With Rain
Overall Log Average		52.8	42.2	59-106	With Rain
Overall Log Average		47.3	40.7	41-82	No Rain
Overall Log Average		47.4	40	47-86	No Rain

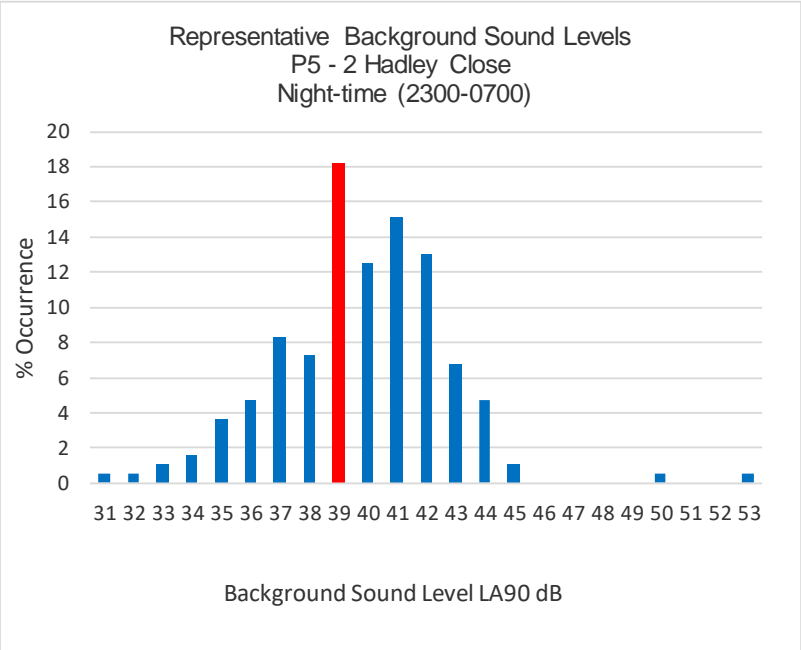


LA90 Representative Levels

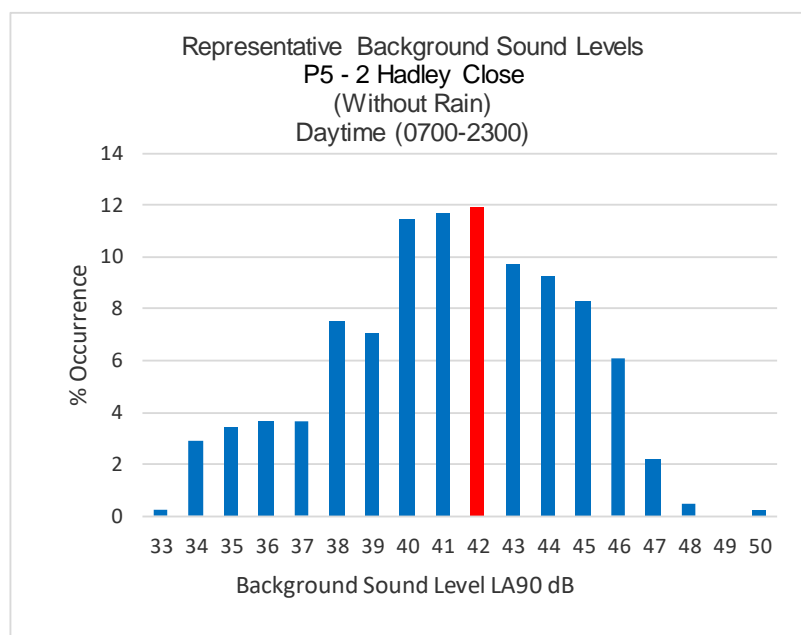
LA90	% Occurrence
33	0.5
34	3.3
35	3.3
36	3.8
37	3.5
38	7.6
39	7.1
40	11.1
41	11.6
42	11.6
43	9.9
44	9.2
45	8.3
46	5.9
47	2.4
48	0.7
49	0.0
50	0.2



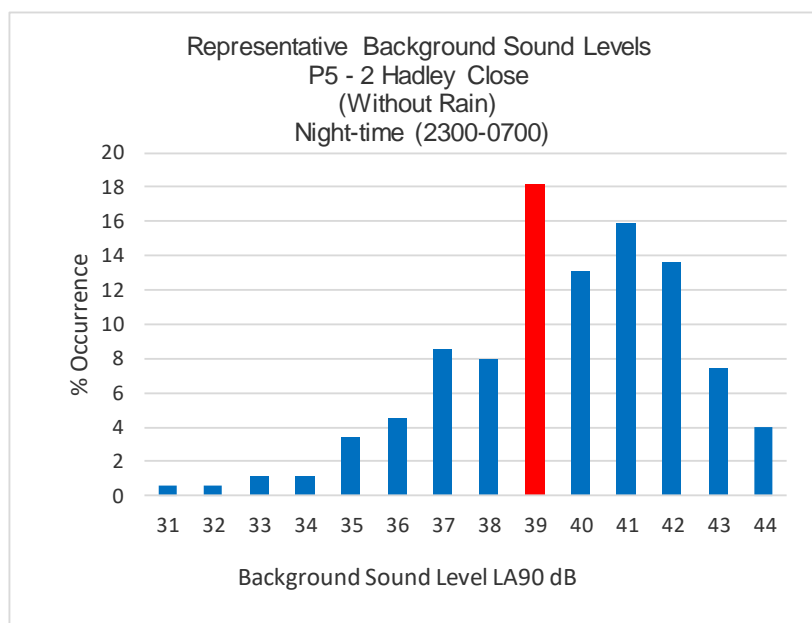
LA90	% Occurrence
31	0.5
32	0.5
33	1.0
34	1.6
35	3.6
36	4.7
37	8.3
38	7.3
39	18.2
40	12.5
41	15.1
42	13.0
43	6.8
44	4.7
45	1.0
46	0.0
47	0.0
48	0.0
49	0.0
50	0.5
51	0.0
52	0.0
53	0.5



LA90	% Occurrence
33	0.2
34	2.9
35	3.4
36	3.7
37	3.7
38	7.6
39	7.1
40	11.5
41	11.7
42	12.0
43	9.8
44	9.3
45	8.3
46	6.1
47	2.2
48	0.5
49	0.0
50	0.2



LA90	% Occurrence
31	0.6
32	0.6
33	1.1
34	1.1
35	3.4
36	4.5
37	8.5
38	8.0
39	18.2
40	13.1
41	15.9
42	13.6
43	7.4
44	4.0



Noise Survey Results

Date: Tuesday 27th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 103

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 6 - Tall Trees, Station Avenue (Mondelez)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590403)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
11:30	15:00	52.8	43.8	82.8	Rain
11:45	15:00	48.0	43.9	59.4	
12:00	15:00	49.7	47.7	58.8	
12:15	15:00	49.7	47.4	67.3	
12:30	15:00	56.9	51.8	63.8	
12:45	15:00	51.4	46.9	64.3	
13:00	15:00	48.5	44.8	61.4	
13:15	15:00	48.4	45.1	60.4	
13:30	15:00	49.6	45.9	65.4	
13:45	15:00	48.6	47.2	54.9	
14:00	15:00	48.7	47.0	60.2	Rain
14:15	15:00	48.9	47.3	54.6	
14:30	15:00	47.1	45.5	52.7	
14:45	15:00	46.7	45.2	64.0	
Log Average 1130-1500		50.6	46.9	53-83	
Average 1130-1500		49.6	46.4	53-83	

Noise Survey Results

Date: Tuesday 27th July 2021

TABLE 104

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 6 - Tall Trees, Station Avenue (Mondelez)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590403)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	47.1	45.2	60.3	Rain
15:15	15:00	47.3	45.7	58.7	
15:30	15:00	47.2	45.7	58.3	
15:45	15:00	47.7	46.1	55.1	
16:00	15:00	49.0	45.1	61.6	
16:15	15:00	47.5	45.1	55.1	
16:30	15:00	47.0	45.0	54.0	
16:45	15:00	46.7	44.3	58.2	
17:00	15:00	46.8	44.0	59.9	Rain
17:15	15:00	45.3	43.4	60.8	
17:30	15:00	46.4	43.3	61.2	
17:45	15:00	47.0	43.5	60.8	
18:00	15:00	46.4	43.1	61.6	
18:15	15:00	46.6	43.1	60.9	
18:30	15:00	46.7	44.1	62.5	
18:45	15:00	46.2	44.5	54.8	
19:00	15:00	46.4	44.3	58.2	
19:15	15:00	45.2	43.3	61.8	
19:30	15:00	45.2	43.5	58.0	
19:45	15:00	45.5	44.4	54.7	
20:00	15:00	56.5	44.9	70.4	
20:15	15:00	55.0	50.3	67.4	
20:30	15:00	47.7	46.0	59.3	
20:45	15:00	46.5	45.8	52.6	
21:00	15:00	47.1	44.4	50.6	
21:15	15:00	45.4	44.7	49.8	Rain
21:30	15:00	46.2	45.3	52.1	
21:45	15:00	45.6	44.6	51.9	
22:00	15:00	46.6	44.8	63.5	
22:15	15:00	46.4	45.6	50.9	
22:30	15:00	46.8	46.1	51.8	
22:45	15:00	46.5	45.9	48.4	
Log Average 1500-2300		48.2	45.1	48-70	
Average 1500-2300		47.2	44.8	48-70	

Noise Survey Results

Date: Tuesday 27th- Wednesday 28th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 105

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 6 - Tall Trees, Station Avenue (Mondelez)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590403)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	46.6	45.6	53.2	
23:15	15:00	46.0	45.1	49.0	
23:30	15:00	45.8	45.2	51.4	
23:45	15:00	47.0	46.2	50.1	
00:00	15:00	46.7	46.1	51.7	
00:15	15:00	46.5	45.9	48.6	
00:30	15:00	46.7	45.9	50.3	
00:45	15:00	46.7	46.0	51.0	
01:00	15:00	45.9	45.1	49.0	
01:15	15:00	45.9	45.1	48.3	
01:30	15:00	47.6	45.6	51.6	
01:45	15:00	47.8	46.5	52.9	
02:00	15:00	46.4	45.8	48.5	
02:15	15:00	46.9	45.8	49.7	
02:30	15:00	46.6	45.4	53.0	
02:45	15:00	47.9	44.8	62.6	Rain
03:00	15:00	45.9	44.5	56.7	Rain
03:15	15:00	46.0	45.1	55.0	
03:30	15:00	46.5	44.7	57.9	
03:45	15:00	45.7	44.4	55.7	
04:00	15:00	46.4	45.2	53.5	
04:15	15:00	46.9	45.1	63.2	
04:30	15:00	46.1	44.7	52.1	
04:45	15:00	47.2	45.1	57.9	
05:00	15:00	46.6	44.8	55.0	
05:15	15:00	47.6	45.2	59.8	
05:30	15:00	48.2	44.9	61.9	
05:45	15:00	46.5	44.1	58.0	
06:00	15:00	45.9	44.0	57.1	
06:15	15:00	47.2	44.5	60.7	
06:30	15:00	47.5	45.1	60.7	
06:45	15:00	47.4	45.2	61.0	
Log Average 2300-0700		46.7	45.2	48-63	
Average 2300-0700		46.7	45.2	48-63	
Average 1130-2300		49.3	45.8	48-83	

Noise Survey Results

Date: Wednesday 28th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 106

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 6 - Tall Trees, Station Avenue (Mondelez)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590403)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	47.9	45.3	59.3	
07:15	15:00	46.6	44.7	59.7	
07:30	15:00	46.1	44.4	53.1	
07:45	15:00	49.5	44.9	58.8	
08:00	15:00	47.6	44.8	66.5	
08:15	15:00	47.1	44.3	56.3	
08:30	15:00	47.5	44.8	58.8	
08:45	15:00	47.7	44.9	58.7	
09:00	15:00	48.0	45.4	65.8	
09:15	15:00	48.3	45.3	60.3	
09:30	15:00	48.5	45.5	57.4	
09:45	15:00	48.9	44.9	61.8	
10:00	15:00	51.6	46.1	62.0	
10:15	15:00	48.3	44.5	59.7	
10:30	15:00	48.2	44.7	58.9	
10:45	15:00	51.6	46.5	60.2	
11:00	15:00	47.1	44.4	60.9	
11:15	15:00	51.0	45.2	65.5	
11:30	15:00	47.6	44.8	61.1	
11:45	15:00	50.3	45.1	70.4	
12:00	15:00	49.6	46.7	59.0	Rain
12:15	15:00	50.0	45.3	60.0	
12:30	15:00	50.4	45.6	62.4	Rain
12:45	15:00	49.2	45.9	56.2	
13:00	15:00	47.7	44.9	59.3	
13:15	15:00	51.8	47.1	61.2	
13:30	15:00	51.8	47.0	62.4	
13:45	15:00	53.4	46.6	67.7	
14:00	15:00	53.6	47.3	65.0	Rain
14:15	15:00	50.2	45.9	59.7	
14:30	15:00	49.7	45.5	61.3	
14:45	15:00	53.0	47.5	64.4	
Log Average 0700-1500		49.8	45.5	53-70	
Average 0700-1500		49.4	45.5	53-70	

Noise Survey Results

Date: Wednesday 28th July 2021

TABLE 107

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 6 - Tall Trees, Station Avenue (Mondelez)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590403)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	52.8	48.2	63.1	Rain
15:15	15:00	49.3	46.6	58.3	
15:30	15:00	50.0	47.5	58.2	
15:45	15:00	50.5	47.0	73.1	
16:00	15:00	54.3	49.6	66.4	
16:15	15:00	49.7	46.5	65.5	
16:30	15:00	47.7	45.3	55.7	
16:45	15:00	47.3	44.3	57.5	
17:00	15:00	48.6	45.4	63.6	
17:15	15:00	48.2	45.5	59.1	
17:30	15:00	48.3	45.5	63.1	
17:45	15:00	46.7	44.1	58.9	
18:00	15:00	49.1	45.1	60.1	
18:15	15:00	48.1	46.0	61.6	
18:30	15:00	48.4	45.4	64.5	
18:45	15:00	45.6	44.2	56.0	
19:00	15:00	46.6	44.1	63.8	
19:15	15:00	46.9	44.2	65.1	Rain
19:30	15:00	48.3	44.6	59.0	
19:45	15:00	52.2	47.9	60.1	
20:00	15:00	46.3	44.7	52.5	
20:15	15:00	45.6	44.3	51.3	
20:30	15:00	49.5	46.1	62.6	
20:45	15:00	47.2	45.6	58.3	
21:00	15:00	46.5	45.4	51.7	
21:15	15:00	46.1	45.1	52.6	
21:30	15:00	46.0	45.3	52.1	
21:45	15:00	45.5	44.5	56.1	
22:00	15:00	44.5	43.7	49.9	
22:15	15:00	45.3	44.4	52.5	
22:30	15:00	45.9	44.8	52.3	
22:45	15:00	46.9	45.1	53.9	
Log Average 1500-2300		48.6	45.7	50-73	
Average 1500-2300		47.9	45.5	50-73	

Noise Survey Results

Date: Wednesday 28th to Thursday 29th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 108

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 6 - Tall Trees, Station Avenue (Mondelez)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590403)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	45.8	44.3	50.3	Rain
23:15	15:00	46.0	43.8	54.7	
23:30	15:00	46.4	44.9	52.6	
23:45	15:00	46.3	45.3	50.9	
00:00	15:00	47.8	45.4	59.6	
00:15	15:00	49.0	45.5	64.8	
00:30	15:00	47.0	45.8	56.9	
00:45	15:00	46.3	45.0	50.6	
01:00	15:00	47.6	45.8	56.1	
01:15	15:00	48.6	46.4	55.0	
01:30	15:00	47.1	45.8	54.0	
01:45	15:00	48.7	46.5	56.6	
02:00	15:00	47.5	45.4	52.4	
02:15	15:00	46.9	45.3	52.9	
02:30	15:00	48.0	45.6	55.1	
02:45	15:00	48.0	44.6	58.0	
03:00	15:00	46.6	43.0	59.9	
03:15	15:00	46.1	44.4	51.8	
03:30	15:00	46.5	44.1	58.6	
03:45	15:00	44.2	42.6	52.9	
04:00	15:00	46.0	44.7	52.2	
04:15	15:00	47.8	45.6	64.5	
04:30	15:00	47.0	45.7	54.4	
04:45	15:00	46.9	45.3	59.0	
05:00	15:00	47.6	45.3	59.3	
05:15	15:00	47.9	45.3	61.2	
05:30	15:00	48.9	45.9	62.0	
05:45	15:00	49.5	46.8	60.1	
06:00	15:00	48.7	45.5	61.5	
06:15	15:00	50.4	46.0	61.4	
06:30	15:00	50.2	46.6	58.7	
06:45	15:00	50.5	45.7	60.8	
Log Average 2300-0700		47.8	45.3	50-65	
Average 2300-0700		47.6	45.2	50-65	
Average 0700-2300		49.2	45.6	50-73	

Noise Survey Results

Date: Thursday 29th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 109

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 6 - Tall Trees, Station Avenue (Mondelez)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590403)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	50.1	45.4	66.0	
07:15	15:00	50.3	45.7	61.8	
07:30	15:00	49.1	46.0	63.4	
07:45	15:00	50.5	46.7	61.4	
08:00	15:00	50.9	47.9	62.4	
08:15	15:00	51.3	47.1	64.1	
08:30	15:00	50.8	46.8	63.2	
08:45	15:00	51.1	46.7	64.0	
09:00	15:00	50.3	46.8	61.8	
09:15	15:00	52.3	46.7	77.9	
09:30	15:00	50.7	47.0	59.9	
09:45	15:00	52.6	47.8	63.7	
10:00	15:00	49.4	45.9	62.6	
10:15	15:00	49.7	46.2	58.7	
10:30	15:00	49.0	46.2	58.3	
10:45	15:00	50.5	47.0	67.4	
11:00	15:00	52.8	47.3	70.0	
11:15	15:00	49.6	46.3	58.5	
11:30	15:00	48.6	44.7	75.1	
11:45	15:00	49.5	45.7	58.6	
12:00	15:00	48.7	46.0	58.7	
12:15	15:00	48.9	44.3	66.8	
12:30	15:00	48.3	46.0	56.9	
12:45	15:00	49.4	46.4	58.0	
13:00	15:00	48.2	46.1	57.3	
13:15	15:00	53.8	46.1	75.5	
13:30	15:00	48.8	45.8	67.4	
13:45	15:00	49.8	45.7	64.3	
14:00	15:00	48.3	46.0	60.5	
14:15	15:00	50.0	45.6	64.8	
14:30	15:00	47.8	44.8	62.5	
14:45	15:00	51.0	45.7	61.4	
Log Average 0700-1500		50.3	46.2	57-78	
Average 0700-1500		50.1	46.2	57-78	

Noise Survey Results

Date: Thursday 29th July 2021

TABLE 110

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 6 - Tall Trees, Station Avenue (Mondelez)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590403)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	47.8	45.3	59.7	
15:15	15:00	46.8	44.4	59.8	
15:30	15:00	47.3	44.0	59.9	
15:45	15:00	47.1	44.9	58.0	
16:00	15:00	46.5	44.1	56.0	
16:15	15:00	47.3	43.9	62.4	
16:30	15:00	46.7	44.4	59.8	
16:45	15:00	45.7	43.5	57.3	
17:00	15:00	45.4	43.0	58.8	
17:15	15:00	46.2	43.2	57.2	
17:30	15:00	44.9	43.0	58.5	
17:45	15:00	45.0	43.2	56.8	
18:00	15:00	45.9	43.3	61.6	
18:15	15:00	45.3	44.0	53.1	
18:30	15:00	45.0	43.5	60.7	
18:45	15:00	45.9	43.8	63.2	
19:00	15:00	45.3	43.8	63.5	
19:15	15:00	45.8	44.7	51.9	
19:30	15:00	49.0	45.9	66.5	
19:45	15:00	46.7	44.2	63.3	
20:00	15:00	45.9	44.0	55.5	
20:15	15:00	46.7	44.2	60.6	
20:30	15:00	47.7	45.0	63.1	
20:45	15:00	45.7	45.0	51.1	
21:00	15:00	46.4	45.5	50.2	
21:15	15:00	46.8	46.0	50.7	
21:30	15:00	46.1	45.4	49.5	
21:45	15:00	46.6	45.7	51.9	
22:00	15:00	46.5	45.9	52.6	
22:15	15:00	46.5	45.6	53.2	
22:30	15:00	46.9	46.0	53.6	
22:45	15:00	50.5	49.2	55.2	
Log Average 1500-2300		46.6	44.8	50-67	
Average 1500-2300		46.5	44.6	50-67	

Noise Survey Results

Date: Thursday 29th to Friday 30th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 111

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 6 - Tall Trees, Station Avenue (Mondelez)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590403)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	48.4	47.1	52.2	
23:15	15:00	47.4	46.4	50.4	
23:30	15:00	48.4	47.5	55.9	
23:45	15:00	47.3	46.7	49.4	
00:00	15:00	47.1	46.4	56.3	Rain
00:15	15:00	48.0	46.6	51.1	Rain
00:30	15:00	47.9	46.6	51.1	
00:45	15:00	46.4	45.6	52.0	Rain
01:00	15:00	45.6	44.9	53.5	
01:15	15:00	46.0	44.9	48.0	
01:30	15:00	46.8	46.2	48.5	
01:45	15:00	49.8	47.5	53.3	
02:00	15:00	51.0	49.8	58.9	
02:15	15:00	52.4	49.8	56.8	
02:30	15:00	49.2	47.3	55.3	
02:45	15:00	51.9	49.5	56.2	
03:00	15:00	54.2	52.2	58.8	Rain
03:15	15:00	56.6	53.4	59.3	Rain
03:30	15:00	57.7	56.7	61.6	Rain
03:45	15:00	55.2	52.7	59.8	Rain
04:00	15:00	50.1	48.8	55.4	Rain
04:15	15:00	49.6	48.7	56.9	Rain
04:30	15:00	48.7	47.4	57.6	Rain
04:45	15:00	48.6	47.1	56.2	Rain
05:00	15:00	49.4	47.0	61.6	
05:15	15:00	48.7	47.1	56.0	
05:30	15:00	49.5	47.5	57.3	Rain
05:45	15:00	49.0	47.5	63.0	
06:00	15:00	48.1	47.1	55.4	
06:15	15:00	49.2	47.7	56.6	
06:30	15:00	50.0	48.3	61.8	
06:45	15:00	50.9	48.6	60.0	Rain
Log Average 2300-0700		50.8	49.1	48-63	
Average 2300-0700		49.7	48.1	48-63	
Average 0700-2300		49.3	45.2	50-78	

Noise Survey Results

Date: Friday 30th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 112

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 6 - Tall Trees, Station Avenue (Mondelez)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590403)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	50.6	48.9	61.1	
07:15	15:00	49.6	48.6	59.6	
07:30	15:00	50.0	48.9	60.5	
07:45	15:00	51.0	49.7	64.0	
08:00	15:00	51.0	49.4	57.3	
08:15	15:00	50.4	49.2	58.9	
08:30	15:00	50.5	49.2	58.9	
08:45	15:00	53.1	49.0	83.7	
09:00	15:00	50.3	48.6	63.1	
09:15	15:00	51.7	49.1	63.0	
09:30	15:00	50.2	49.1	53.9	
09:45	15:00	51.3	49.7	59.4	
10:00	15:00	52.0	50.3	61.9	
10:15	15:00	51.7	50.4	63.5	
10:30	15:00	51.4	50.1	60.5	
10:45	15:00	51.2	50.1	55.1	
11:00	15:00	51.5	50.0	59.2	
11:15	15:00	51.1	49.8	60.5	
11:30	15:00	52.3	50.7	60.7	
11:45	15:00	51.3	49.8	65.1	
12:00	15:00	51.6	49.5	60.0	
12:15	15:00	52.0	50.1	60.4	
12:30	15:00	51.8	50.0	66.0	
12:45	15:00	51.4	50.0	55.1	
13:00	15:00	53.4	50.8	62.0	
13:15	15:00	51.9	50.2	59.0	
13:30	15:00	51.2	49.1	60.5	
13:45	15:00	52.0	49.9	61.1	
14:00	15:00	50.8	48.7	72.5	
14:15	15:00	50.1	48.4	60.0	
14:30	15:00	50.1	48.2	61.6	
14:45	15:00	51.9	49.3	64.5	
Log Average 0700-1500		51.3	49.5	54-84	
Average 0700-1500		51.3	49.5	54-84	

Noise Survey Results

Date: Friday 30th July 2021

TABLE 113

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 6 - Tall Trees, Station Avenue (Mondelez)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590403)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	50.7	49.3	55.7	
15:15	15:00	49.7	48.0	58.0	
15:30	15:00	52.7	48.8	79.4	
15:45	15:00	50.0	47.8	60.9	
16:00	15:00	51.6	48.5	63.6	
16:15	15:00	50.5	48.5	58.7	
16:30	15:00	50.5	48.5	62.6	
16:45	15:00	50.9	48.7	61.1	
17:00	15:00	51.0	48.5	59.3	
17:15	15:00	50.2	48.3	58.0	
17:30	15:00	50.5	48.5	60.1	
17:45	15:00	49.7	48.2	58.7	
18:00	15:00	49.2	47.4	62.6	
18:15	15:00	48.3	47.0	59.3	
18:30	15:00	48.3	46.9	65.6	
18:45	15:00	48.2	46.9	53.3	
19:00	15:00	48.9	47.7	59.8	
19:15	15:00	48.5	47.4	57.6	
19:30	15:00	48.6	47.5	56.3	
19:45	15:00	49.0	46.9	66.1	
20:00	15:00	48.2	46.2	63.0	
20:15	15:00	48.8	45.9	67.4	
20:30	15:00	47.0	45.7	51.7	
20:45	15:00	47.5	46.3	53.9	
21:00	15:00	48.8	46.9	54.3	
21:15	15:00	49.1	47.2	55.9	
21:30	15:00	49.8	47.7	58.9	
21:45	15:00	50.4	47.9	59.3	
22:00	15:00	51.3	48.4	63.3	
22:15	15:00	49.9	47.4	59.0	
22:30	15:00	48.5	47.0	56.8	
22:45	15:00	48.6	47.0	54.0	
Log Average 1500-2300		49.7	47.6	52-79	
Average 1500-2300		49.5	47.6	52-79	

Noise Survey Results

Date: Friday 30th to Saturday 31st July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 114

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 6 - Tall Trees, Station Avenue (Mondelez)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590403)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	47.1	46.1	51.3	
23:15	15:00	46.8	45.7	49.9	
23:30	15:00	46.9	45.3	54.0	
23:45	15:00	45.9	45.0	48.9	
00:00	15:00	46.9	45.9	53.2	
00:15	15:00	46.1	45.2	49.0	
00:30	15:00	46.0	45.3	48.9	
00:45	15:00	46.0	45.2	48.9	
01:00	15:00	46.1	45.0	50.4	
01:15	15:00	45.8	44.9	51.2	
01:30	15:00	45.8	44.9	48.3	
01:45	15:00	45.8	45.2	48.1	
02:00	15:00	45.6	44.9	48.0	
02:15	15:00	46.4	45.1	49.7	
02:30	15:00	47.0	46.0	54.2	
02:45	15:00	47.4	46.4	53.6	
03:00	15:00	47.5	46.5	50.8	
03:15	15:00	46.5	45.7	49.2	
03:30	15:00	46.8	46.0	51.2	
03:45	15:00	46.4	45.5	48.7	
04:00	15:00	47.0	46.2	50.8	
04:15	15:00	46.8	45.8	57.0	
04:30	15:00	47.8	45.9	66.9	
04:45	15:00	47.6	46.5	56.7	
05:00	15:00	47.5	46.5	53.6	
05:15	15:00	47.1	45.7	56.8	
05:30	15:00	47.6	46.0	56.9	
05:45	15:00	46.8	45.7	53.7	
06:00	15:00	47.4	45.7	58.6	
06:15	15:00	46.5	45.3	52.3	
06:30	15:00	46.6	45.7	50.9	
06:45	15:00	47.1	46.0	60.3	
Log Average 2300-0700		46.7	45.6	48-67	
Average 2300-0700		46.7	45.6	48-67	
Average 0700-2300		50.6	48.7	52-84	

Noise Survey Results

Date: Saturday 31st July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 115

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 6 - Tall Trees, Station Avenue (Mondelez)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590403)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	47.4	45.8	59.0	
07:15	15:00	46.2	44.4	68.6	
07:30	15:00	46.5	45.0	64.3	
07:45	15:00	47.5	45.4	61.3	
08:00	15:00	46.6	45.3	55.9	
08:15	15:00	47.6	46.3	60.8	
08:30	15:00	47.2	46.1	53.8	
08:45	15:00	47.6	46.3	61.0	
09:00	15:00	48.2	46.1	58.1	
09:15	15:00	48.1	45.6	58.0	
09:30	15:00	47.9	45.9	63.9	
09:45	15:00	48.1	46.7	61.1	
10:00	15:00	47.8	46.3	61.7	
10:15	15:00	48.4	46.8	61.1	
10:30	15:00	49.2	48.1	57.7	
10:45	15:00	49.1	47.3	66.8	
11:00	15:00	48.2	45.7	60.4	
11:15	15:00	46.4	45.0	58.4	
11:30	15:00	46.1	44.5	58.2	
11:45	15:00	46.9	44.8	54.9	
12:00	15:00	46.8	44.9	63.9	
12:15	15:00	46.9	45.5	52.3	
12:30	15:00	46.9	45.5	54.5	
12:45	15:00	47.3	45.7	59.9	
13:00	15:00	48.2	47.0	52.8	
13:15	15:00	47.3	46.1	53.9	
13:30	15:00	46.7	45.4	52.8	
13:45	15:00	46.9	45.2	52.0	
14:00	15:00	48.5	46.8	61.0	
14:15	15:00	47.9	46.3	61.4	
14:30	15:00	47.7	45.9	62.8	
14:45	15:00	47.5	45.9	65.9	
Log Average 0700-1500		47.5	45.9	52-69	
Average 0700-1500		47.5	45.9	52-69	

Noise Survey Results

Date: Saturday 31st July 2021

TABLE 116

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 6 - Tall Trees, Station Avenue (Mondelez)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590403)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	47.7	46.3	59.9	
15:15	15:00	47.2	45.9	57.0	
15:30	15:00	48.1	45.7	59.2	
15:45	15:00	47.7	45.5	60.6	
16:00	15:00	47.9	46.1	59.4	
16:15	15:00	47.7	46.6	55.2	
16:30	15:00	47.1	45.8	61.6	
16:45	15:00	46.4	45.5	54.5	
17:00	15:00	46.7	45.6	53.4	
17:15	15:00	47.1	45.9	57.7	
17:30	15:00	48.9	45.8	68.1	
17:45	15:00	46.8	44.8	54.4	
18:00	15:00	46.9	44.8	63.0	
18:15	15:00	46.0	44.6	55.6	
18:30	15:00	47.1	45.7	60.4	
18:45	15:00	45.6	44.4	54.5	
19:00	15:00	45.4	43.8	52.4	
19:15	15:00	46.1	44.6	61.0	
19:30	15:00	46.5	45.0	63.7	
19:45	15:00	48.4	44.7	65.7	
20:00	15:00	46.4	45.0	54.3	
20:15	15:00	47.1	45.3	53.1	
20:30	15:00	46.4	44.9	50.8	
20:45	15:00	46.9	45.0	56.7	
21:00	15:00	45.3	44.2	49.5	
21:15	15:00	45.7	44.0	58.3	
21:30	15:00	45.1	44.2	52.3	
21:45	15:00	45.3	44.4	51.2	
22:00	15:00	45.9	44.8	50.1	
22:15	15:00	45.3	44.1	49.2	
22:30	15:00	45.2	44.0	51.4	
22:45	15:00	46.0	44.9	51.0	
Log Average 1500-2300		46.7	45.1	49-68	
Average 1500-2300		46.6	45.1	49-68	

Noise Survey Results

Date: Saturday 31st July to Sunday 1st August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 117

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 6 - Tall Trees, Station Avenue (Mondelez)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590403)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	46.1	45.0	53.8	
23:15	15:00	46.0	45.1	49.4	
23:30	15:00	45.5	44.7	50.1	
23:45	15:00	45.9	45.1	51.2	
00:00	15:00	45.9	45.0	50.0	
00:15	15:00	46.1	45.5	47.7	
00:30	15:00	46.2	45.6	47.8	
00:45	15:00	45.4	44.8	47.5	
01:00	15:00	46.7	45.6	49.9	
01:15	15:00	46.2	45.4	48.7	
01:30	15:00	46.8	46.1	50.1	
01:45	15:00	46.3	45.5	48.9	
02:00	15:00	46.2	45.2	49.9	
02:15	15:00	45.7	44.9	48.3	
02:30	15:00	45.0	43.6	47.4	
02:45	15:00	44.9	43.6	51.8	
03:00	15:00	45.2	43.8	48.3	
03:15	15:00	45.4	44.4	48.2	
03:30	15:00	45.8	45.0	49.3	
03:45	15:00	45.6	44.8	50.1	
04:00	15:00	46.1	44.9	60.9	
04:15	15:00	46.3	45.4	55.5	
04:30	15:00	46.4	44.9	65.5	
04:45	15:00	46.6	44.7	65.0	
05:00	15:00	46.6	45.0	65.6	
05:15	15:00	46.0	44.6	55.9	
05:30	15:00	47.0	45.5	53.2	
05:45	15:00	47.1	45.5	53.1	
06:00	15:00	46.8	45.6	55.1	
06:15	15:00	46.7	45.2	56.3	
06:30	15:00	47.3	45.8	57.8	
06:45	15:00	48.4	46.7	60.4	
Log Average 2300-0700		46.2	45.1	47-66	
Average 2300-0700		46.2	45.1	47-66	
Average 0700-2300		47.1	45.5	49-69	

Noise Survey Results

Date: Sunday 1st August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 118

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 6 - Tall Trees, Station Avenue (Mondelez)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590403)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	48.6	47.0	65.5	
07:15	15:00	48.1	46.5	57.1	
07:30	15:00	47.7	46.1	55.7	
07:45	15:00	47.7	46.4	52.4	
08:00	15:00	47.5	45.9	59.5	
08:15	15:00	46.6	45.1	60.5	
08:30	15:00	46.4	45.1	58.5	
08:45	15:00	46.7	45.1	56.2	
09:00	15:00	47.1	45.3	69.5	
09:15	15:00	47.7	45.1	62.1	
09:30	15:00	47.0	45.4	53.6	
09:45	15:00	47.0	45.7	55.3	
10:00	15:00	46.9	45.0	64.9	
10:15	15:00	46.3	45.0	58.7	
10:30	15:00	47.9	46.1	66.3	
10:45	15:00	46.8	45.2	61.7	
11:00	15:00	47.5	46.2	55.0	
11:15	15:00	48.1	46.9	57.3	
11:30	15:00	48.1	46.0	60.9	
11:45	15:00	48.5	46.7	64.1	
12:00	15:00	46.9	45.8	52.9	
12:15	15:00	47.6	46.1	54.7	
12:30	15:00	47.6	46.1	60.4	
12:45	15:00	46.8	45.3	55.4	
13:00	15:00	47.0	45.4	55.6	
13:15	15:00	46.7	45.2	63.2	
13:30	15:00	46.6	45.4	56.3	
13:45	15:00	47.9	46.1	59.5	
14:00	15:00	48.4	47.0	58.6	
14:15	15:00	49.1	47.6	60.0	
14:30	15:00	49.1	47.6	67.8	
14:45	15:00	48.7	47.2	57.0	
Log Average 0700-1500		47.5	46.0	52-70	
Average 0700-1500		47.5	45.9	52-70	

Noise Survey Results

Date: Sunday 1st August 2021

TABLE 119

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 6 - Tall Trees, Station Avenue (Mondelez)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590403)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	48.5	47.2	57.6	
15:15	15:00	48.7	47.5	59.5	
15:30	15:00	48.5	46.8	56.7	
15:45	15:00	47.8	45.5	53.7	
16:00	15:00	48.7	47.6	58.8	
16:15	15:00	48.6	47.1	58.9	
16:30	15:00	48.1	46.7	55.9	
16:45	15:00	48.3	46.8	57.9	
17:00	15:00	48.5	46.8	59.6	
17:15	15:00	48.3	47.0	55.5	
17:30	15:00	47.9	46.7	59.1	
17:45	15:00	47.6	46.2	54.9	
18:00	15:00	48.2	46.8	58.5	
18:15	15:00	47.6	46.2	58.4	
18:30	15:00	47.7	46.5	54.3	
18:45	15:00	48.7	46.9	60.4	
19:00	15:00	48.1	46.6	64.5	
19:15	15:00	47.7	46.7	56.6	
19:30	15:00	48.0	46.9	58.3	
19:45	15:00	48.3	47.1	56.7	
20:00	15:00	49.1	47.0	63.5	
20:15	15:00	48.7	46.9	63.9	
20:30	15:00	47.9	47.0	56.1	
20:45	15:00	48.0	47.1	53.9	
21:00	15:00	47.6	46.8	50.6	
21:15	15:00	47.8	46.6	50.6	
21:30	15:00	47.1	46.3	49.6	
21:45	15:00	47.1	46.0	50.0	
22:00	15:00	47.9	46.3	54.9	
22:15	15:00	47.1	46.0	50.6	
22:30	15:00	46.1	45.3	52.9	
22:45	15:00	45.7	44.9	48.7	
Log Average 1500-2300		47.9	46.6	49-65	
Average 1500-2300		47.9	46.6	49-65	

Noise Survey Results

Date: Sunday 1st to Monday 2nd August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 120

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 6 - Tall Trees, Station Avenue (Mondelez)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590403)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	46.1	45.4	48.1	
23:15	15:00	46.4	45.8	48.2	
23:30	15:00	46.4	45.5	48.9	
23:45	15:00	45.7	44.9	48.4	
00:00	15:00	46.2	45.2	49.0	
00:15	15:00	45.9	45.1	49.0	
00:30	15:00	46.0	45.2	48.6	
00:45	15:00	46.3	45.5	49.4	
01:00	15:00	45.5	44.8	47.9	
01:15	15:00	45.0	44.3	47.1	
01:30	15:00	46.3	44.7	53.0	
01:45	15:00	46.4	45.6	49.1	
02:00	15:00	46.7	45.7	56.4	
02:15	15:00	46.3	45.4	49.8	
02:30	15:00	46.0	44.9	52.8	
02:45	15:00	45.6	44.7	49.2	
03:00	15:00	45.0	44.4	46.8	
03:15	15:00	45.0	44.4	47.2	
03:30	15:00	45.3	44.4	53.8	
03:45	15:00	45.4	44.5	50.1	
04:00	15:00	46.2	44.8	64.2	
04:15	15:00	47.1	44.8	60.5	
04:30	15:00	45.6	44.8	53.2	
04:45	15:00	46.7	45.4	58.2	
05:00	15:00	46.8	45.6	57.5	
05:15	15:00	47.0	45.0	58.7	
05:30	15:00	47.4	45.1	60.3	
05:45	15:00	47.4	45.4	60.5	
06:00	15:00	46.6	44.9	57.2	
06:15	15:00	47.5	45.2	63.4	
06:30	15:00	47.2	45.2	58.9	
06:45	15:00	47.1	45.4	57.0	
Log Average 2300-0700		46.3	45.0	47-64	
Average 2300-0700		46.2	45.0	47-64	
Average 0700-2300		47.7	46.3	49-70	

Noise Survey Results

Date: Monday 2nd August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 121

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 6 - Tall Trees, Station Avenue (Mondelez)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590403)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	46.9	45.2	59.3	
07:15	15:00	46.9	45.2	56.7	
07:30	15:00	47.4	45.0	61.6	
07:45	15:00	46.2	44.3	55.7	
08:00	15:00	46.2	44.3	64.7	
08:15	15:00	46.3	44.6	54.5	
08:30	15:00	50.0	44.7	65.4	
08:45	15:00	50.3	45.8	74.4	
09:00	15:00	50.8	44.8	77.9	
09:15	15:00	50.3	43.5	74.0	
09:30	15:00	47.3	43.2	67.3	
09:45	15:00	48.8	43.7	63.2	
10:00	15:00	46.1	43.3	63.2	
10:15	15:00	47.5	44.6	59.0	
10:30	15:00	47.9	45.6	59.0	
10:45	15:00	47.2	45.4	63.3	
11:00	15:00	47.9	45.4	67.9	
11:15	15:00	54.4	45.6	77.7	
11:30	15:00	52.2	45.8	77.0	
11:45	15:00	47.5	45.6	57.2	
12:00	15:00	47.4	45.1	59.5	
12:15	15:00	48.0	45.3	62.8	
12:30	15:00	47.5	45.2	72.6	
12:45	15:00	47.7	46.2	68.2	
13:00	15:00	47.7	46.5	57.3	
13:15	15:00	48.0	46.6	57.6	
13:30	15:00	47.5	46.3	54.1	
13:45	15:00	48.9	47.2	65.2	
14:00	15:00	48.6	47.3	56.6	
14:15	15:00	48.6	47.2	57.8	
14:30	15:00	47.9	46.4	53.9	
14:45	15:00	47.6	46.5	58.3	
Log Average 0700-1500		48.6	45.4	54-78	
Average 0700-1500		48.2	45.4	54-78	

Noise Survey Results

Date: Monday 2nd August 2021

TABLE 122

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

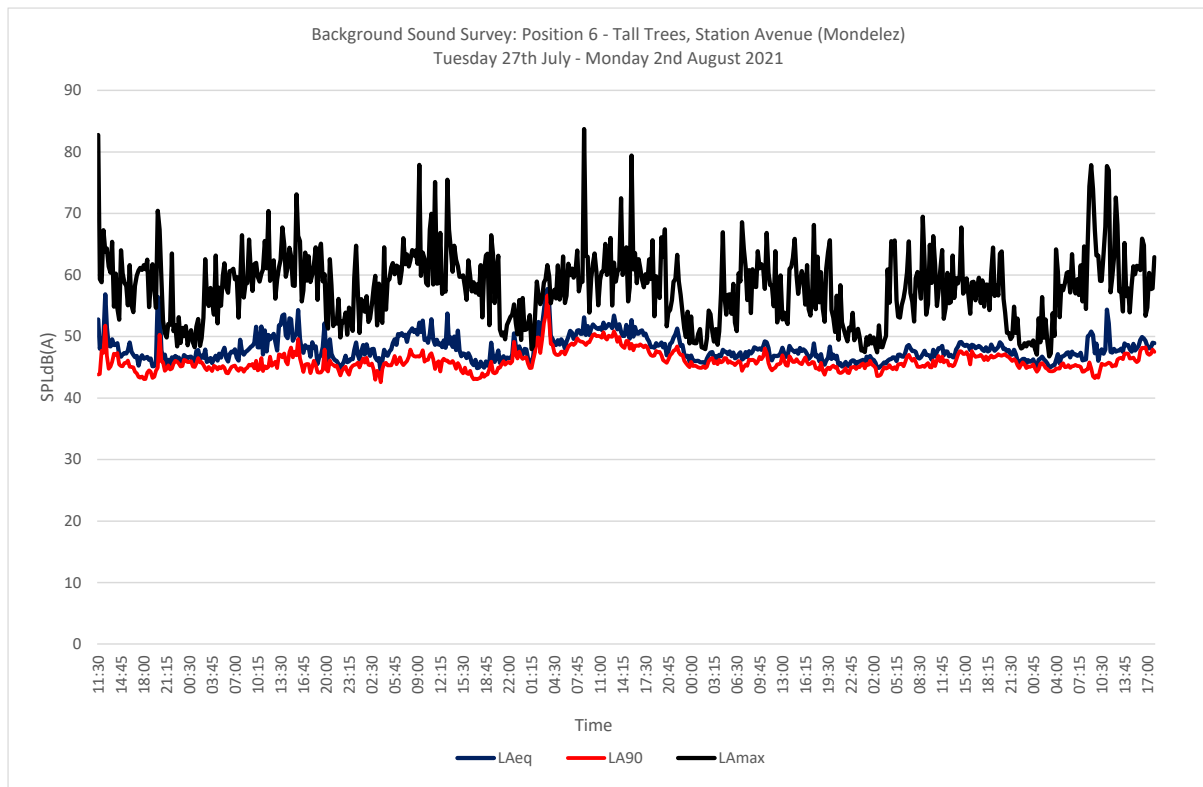
Project: **Baseline Sound Survey**

Data: **Position 6 - Tall Trees, Station Avenue (Mondelez)**

Instrumentation: Bruel & Kjaer 2250 (Serial No. 2590403)

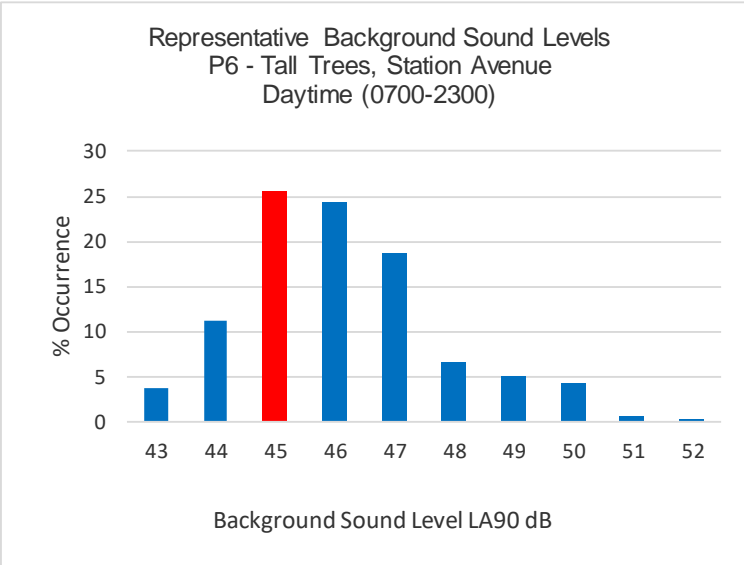
Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	48.8	46.6	61.4	
15:15	15:00	47.7	46.2	60.1	
15:30	15:00	48.1	45.9	61.5	
15:45	15:00	48.5	46.1	61.4	
16:00	15:00	49.4	47.7	60.8	
16:15	15:00	49.9	48.2	65.9	
16:30	15:00	49.6	48.1	64.8	
16:45	15:00	49.3	48.3	53.4	
17:00	15:00	48.4	47.3	54.7	
17:15	15:00	48.1	47.0	60.3	
17:30	15:00	48.2	47.2	57.7	
17:45	15:00	49.0	47.9	57.8	
18:00	15:00	48.9	47.5	62.9	
Log Average 1500-1845		48.8	47.2	63-89	
Average 1500-1845		48.8	47.2	63-89	
Average 0700-2300		46.2	0.0	63-89	
Overall Log Average		47.8	46.2	47-67	With Rain
Overall Log Average		48.9	46.4	48-84	With Rain
Overall Log Average		47.4	45.9	47-67	No Rain
Overall Log Average		48.8	46.4	48-84	No Rain

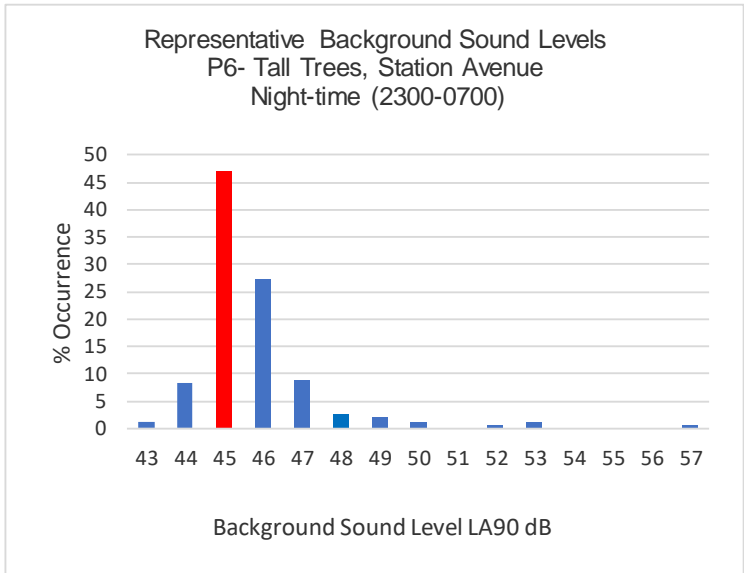


LA90 Representative Levels

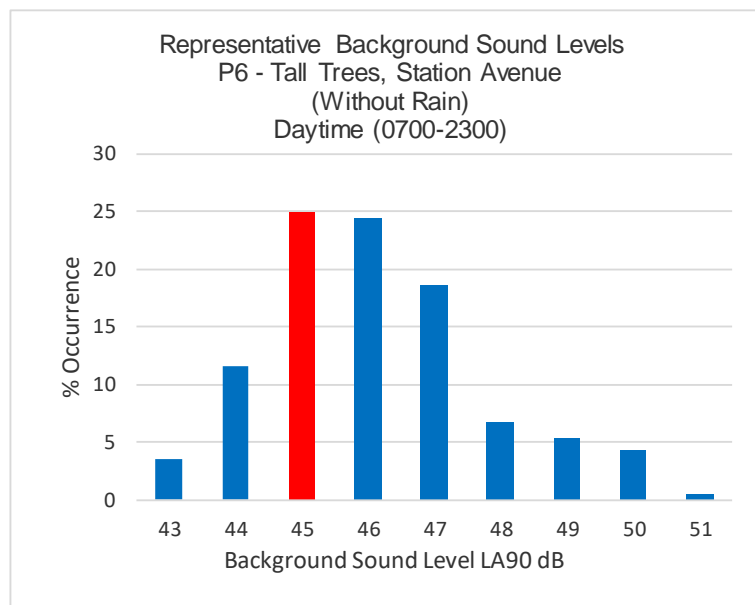
LA90	% Occurrence
43	3.6
44	11.2
45	25.5
46	24.3
47	18.7
48	6.6
49	5.1
50	4.1
51	0.5
52	0.2



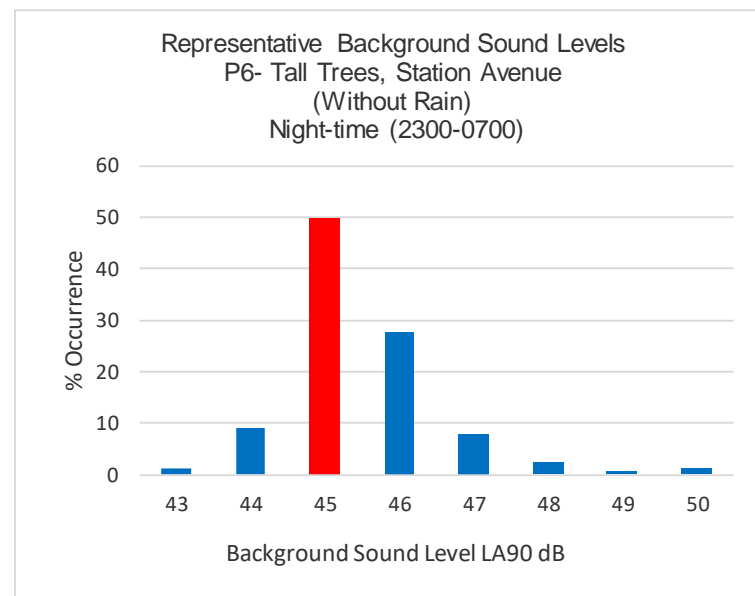
LA90	% Occurrence
43	1.0
44	8.3
45	46.9
46	27.1
47	8.9
48	2.6
49	2.1
50	1.0
51	0.0
52	0.5
53	1.0
54	0.0
55	0.0
56	0.0
57	0.5



LA90	% Occurrence
43	3.5
44	11.6
45	24.9
46	24.4
47	18.6
48	6.8
49	5.3
50	4.3
51	0.5



LA90	% Occurrence
43	1.1
44	9.1
45	50.0
46	27.8
47	8.0
48	2.3
49	0.6
50	1.1



Noise Survey Results

Date: Tuesday 27th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 123

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 7 - Canalwood Industrial Estate**

Instrumentation: Norsonic 116 Integrating Sound Level Meter (serial no: 21589)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	50.7	49.8	60.2	Train Noise
07:15	15:00	56.0	49.5	77.0	
07:30	15:00	56.3	49.5	71.6	
07:45	15:00	56.0	49.9	74.9	
08:00	15:00	53.5	48.7	69.7	
08:15	15:00	48.7	47.2	59.5	
08:30	15:00	49.0	46.8	69.1	
08:45	15:00	56.4	46.2	76.1	
09:00	15:00	61.8	47.7	92.1	
09:15	15:00	50.4	48.3	62.5	
09:30	15:00	49.1	47.8	56.5	
09:45	15:00	56.8	48.4	74.7	
10:00	15:00	67.5	47.6	90.3	
10:15	15:00	51.0	48.1	69.5	
10:30	15:00	50.4	48.2	71.5	
10:45	15:00	59.1	48.2	76.1	
11:00	15:00	52.0	47.7	63.2	
11:15	15:00	49.0	47.7	64.3	
11:30	15:00	49.7	47.5	64.4	
11:45	15:00	55.5	47.0	74.2	Rain
12:00	15:00	53.2	48.1	70.3	
12:15	15:00	49.4	48.2	53.9	
12:30	15:00	49.8	47.5	66.7	
12:45	15:00	57.1	49.0	75.6	
13:00	15:00	51.4	49.5	59.2	
13:15	15:00	54.3	50.6	65.1	
13:30	15:00	66.6	55.6	81.5	
13:45	15:00	55.8	48.6	73.2	
14:00	15:00	56.6	48.1	71.5	Rain
14:15	15:00	51.4	49.3	61.7	
14:30	15:00	64.0	50.1	82.4	
14:45	15:00	59.2	51.8	76.1	
Log Average 0700-1500		58.3	49.1	54-92	
Average 0700-1500		54.6	48.7	54-92	

Noise Survey Results

Date: Tuesday 27th July 2021

TABLE 124

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 7 - Canalwood Industrial Estate**

Instrumentation: Norsonic 116 Integrating Sound Level Meter (serial no: 21589)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	50.6	49.5	58.3	Rain
15:15	15:00	50.5	49.4	57.8	
15:30	15:00	51.2	50.0	60.3	Rain
15:45	15:00	52.3	49.8	63.4	
16:00	15:00	50.0	48.5	59.0	
16:15	15:00	51.4	50.0	61.1	
16:30	15:00	51.2	49.7	63.4	
16:45	15:00	50.8	49.6	58.9	
17:00	15:00	51.6	49.3	57.8	
17:15	15:00	50.3	49.0	55.8	Rain
17:30	15:00	49.5	48.6	61.1	
17:45	15:00	50.3	49.4	58.9	
18:00	15:00	49.9	48.9	60.4	
18:15	15:00	49.7	48.1	58.9	
18:30	15:00	54.7	52.1	62.3	
18:45	15:00	53.3	51.9	58.9	
19:00	15:00	52.2	47.9	59.0	
19:15	15:00	50.5	49.3	57.8	
19:30	15:00	50.6	48.7	59.8	
19:45	15:00	50.6	49.9	56.7	
20:00	15:00	51.5	50.8	58.9	
20:15	15:00	50.8	48.6	62.3	
20:30	15:00	50.6	50.0	58.9	
20:45	15:00	50.2	49.6	57.8	
21:00	15:00	51.2	50.4	59.0	
21:15	15:00	49.0	48.3	58.5	Rain
21:30	15:00	49.2	48.4	57.5	
21:45	15:00	51.3	50.3	60.2	Rain
22:00	15:00	51.1	50.2	57.8	
22:15	15:00	51.4	50.6	59.9	
22:30	15:00	50.3	49.5	57.8	
22:45	15:00	50.1	49.3	56.8	
Log Average 1500-2300		51.0	49.6	58-63	
Average 1500-2300		50.9	49.6	58-63	

Noise Survey Results

Date: Tuesday 27th- Wednesday 28th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 125

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 7 - Canalwood Industrial Estate**

Instrumentation: Norsonic 116 Integrating Sound Level Meter (serial no: 21589)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	48.1	47.0	50.5	Rain Rain
23:15	15:00	49.4	48.7	51.6	
23:30	15:00	50.1	49.1	52.8	
23:45	15:00	50.1	49.1	53.5	
00:00	15:00	48.7	47.5	57.6	
00:15	15:00	48.7	47.2	51.4	
00:30	15:00	49.2	48.2	51.8	
00:45	15:00	49.4	48.6	51.9	
01:00	15:00	49.6	49.0	58.6	
01:15	15:00	48.6	47.5	49.4	
01:30	15:00	48.6	47.4	51.3	
01:45	15:00	48.8	47.1	51.8	
02:00	15:00	48.7	47.5	53.9	
02:15	15:00	48.3	47.6	54.3	
02:30	15:00	48.6	47.9	59.0	
02:45	15:00	48.4	47.8	52.6	
03:00	15:00	48.2	47.5	51.0	
03:15	15:00	48.7	47.3	51.0	
03:30	15:00	48.7	47.8	49.1	
03:45	15:00	48.7	47.9	49.1	
04:00	15:00	49.3	48.1	52.5	
04:15	15:00	48.4	47.3	56.2	
04:30	15:00	49.4	48.2	56.6	
04:45	15:00	49.9	47.4	56.7	
05:00	15:00	50.2	48.6	57.9	
05:15	15:00	48.8	47.1	53.5	
05:30	15:00	49.4	48.2	56.4	
05:45	15:00	51.8	50.1	57.9	
06:00	15:00	50.5	49.1	55.5	
06:15	15:00	49.0	48.1	53.3	
06:30	15:00	49.4	48.0	56.6	
06:45	15:00	49.3	46.4	60.8	
Log Average 2300-0700		49.2	48.0	46-58	
Average 2300-0700		49.2	47.9	46-58	
Average 0700-2300		55.2	49.4	54-92	

Noise Survey Results

Date: Wednesday 28th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 126

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 7 - Canalwood Industrial Estate**

Instrumentation: Cirrus 171A Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	49.5	45.0	58.5	
07:15	15:00	47.7	45.6	60.7	
07:30	15:00	47.9	44.6	50.8	
07:45	15:00	50.1	45.8	43.9	
08:00	15:00	54.3	46.2	85.2	
08:15	15:00	52.3	45.5	83.4	
08:30	15:00	53.4	44.9	89.1	
08:45	15:00	54.5	46.1	89.1	
09:00	15:00	53.4	50.3	76.8	
09:15	15:00	55.2	50.4	66.5	
09:30	15:00	52.1	48.0	68.9	
09:45	15:00	45.0	43.0	63.4	
10:00	15:00	43.9	42.7	66.5	
10:15	15:00	43.4	42.2	48.1	
10:30	15:00	45.1	43.4	55.9	
10:45	15:00	46.2	44.8	52.6	
11:00	15:00	48.0	46.5	53.3	
11:15	15:00	49.8	48.2	57.3	
11:30	15:00	50.3	48.7	57.5	
11:45	15:00	52.0	49.6	58.6	
12:00	15:00	50.7	48.8	55.9	Rain
12:15	15:00	51.6	50.0	57.2	
12:30	15:00	50.8	49.0	57.6	Rain
12:45	15:00	50.1	48.1	56.8	
13:00	15:00	49.4	48.4	54.3	
13:15	15:00	50.2	48.5	54.6	
13:30	15:00	51.9	50.7	55.5	
13:45	15:00	50.5	49.0	55.9	
14:00	15:00	52.1	49.1	56.7	Rain
14:15	15:00	52.9	50.4	61.6	
14:30	15:00	57.8	51.0	64.7	
14:45	15:00	50.3	49.2	56.6	
Log Average 0700-1500		51.5	47.9	44-89	
Average 0700-1500		50.4	47.3	44-89	

Noise Survey Results

Date: Wednesday 28th July 2021

TABLE 127

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 7 - Canalwood Industrial Estate**

Instrumentation: Norsonic 116 Integrating Sound Level Meter (serial no: 21589)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	50.5	49.2	56.3	Rain
15:15	15:00	50.1	48.7	55.1	
15:30	15:00	50.7	49.5	56.5	
15:45	15:00	51.7	49.2	61.1	
16:00	15:00	49.8	48.2	61.1	
16:15	15:00	50.4	48.9	57.5	
16:30	15:00	50.0	48.5	60.6	
16:45	15:00	49.3	48.1	55.0	
17:00	15:00	50.7	48.3	57.9	
17:15	15:00	49.1	47.8	53.3	
17:30	15:00	48.7	47.6	52.8	
17:45	15:00	48.9	48.0	54.2	
18:00	15:00	50.1	49.1	58.2	
18:15	15:00	50.1	48.5	58.9	
18:30	15:00	53.2	50.6	58.8	
18:45	15:00	52.0	50.6	56.8	
19:00	15:00	51.0	48.8	55.9	Rain
19:15	15:00	49.7	48.5	54.3	
19:30	15:00	49.9	49.1	54.1	
19:45	15:00	49.4	48.7	52.5	
20:00	15:00	50.0	49.3	52.4	
20:15	15:00	49.9	49.2	57.3	
20:30	15:00	49.4	48.8	53.1	
20:45	15:00	49.4	48.7	55.2	
21:00	15:00	49.8	49.0	53.3	
21:15	15:00	49.2	48.3	51.9	
21:30	15:00	49.6	48.8	52.5	
21:45	15:00	49.8	49.1	52.1	
22:00	15:00	49.8	48.9	54.0	
22:15	15:00	50.2	49.4	54.8	
22:30	15:00	49.5	48.7	52.6	
22:45	15:00	49.4	48.6	56.5	
Log Average 1500-2300		50.1	48.8	52-61	
Average 1500-2300		50.0	48.8	52-61	

Noise Survey Results

Date: Wednesday 28th to Thursday 29th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 128

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 7 - Canalwood Industrial Estate**

Instrumentation: Norsonic 116 Integrating Sound Level Meter (serial no: 21589)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	49.8	48.8	53.9	Rain
23:15	15:00	50.0	49.5	54.5	
23:30	15:00	49.8	49.1	52.3	
23:45	15:00	49.3	48.6	53.6	
00:00	15:00	49.4	48.6	54.8	
00:15	15:00	49.3	48.5	55.0	
00:30	15:00	50.8	48.9	57.4	
00:45	15:00	49.5	48.6	58.6	
01:00	15:00	49.3	48.6	55.0	
01:15	15:00	49.4	48.7	53.2	
01:30	15:00	49.2	48.6	52.9	
01:45	15:00	49.6	48.7	54.0	
02:00	15:00	49.4	48.7	54.2	
02:15	15:00	49.4	48.8	52.2	
02:30	15:00	50.0	48.9	54.0	
02:45	15:00	49.9	48.8	54.0	
03:00	15:00	49.7	48.8	53.2	
03:15	15:00	49.1	48.4	52.5	
03:30	15:00	49.9	48.8	54.9	
03:45	15:00	50.2	49.5	53.1	
04:00	15:00	50.0	49.4	53.4	
04:15	15:00	50.1	49.4	55.2	
04:30	15:00	50.3	49.5	53.3	
04:45	15:00	50.6	49.7	54.0	
05:00	15:00	50.3	49.5	54.1	
05:15	15:00	50.1	49.5	54.5	
05:30	15:00	49.7	49.1	53.2	
05:45	15:00	49.5	48.8	54.5	
06:00	15:00	49.2	48.4	53.5	
06:15	15:00	48.9	47.8	53.2	
06:30	15:00	48.7	47.7	57.2	
06:45	15:00	50.2	47.8	58.8	
Log Average 2300-0700		49.7	48.8	52-59	
Average 2300-0700		49.7	48.8	52-59	
Average 0700-2300		50.8	48.4	44-89	

Noise Survey Results

Date: Thursday 29th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 129

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 7 - Canalwood Industrial Estate**

Instrumentation: Norsonic 116 Integrating Sound Level Meter (serial no: 21589)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	49.8	48.2	59.1	
07:15	15:00	49.6	48.5	54.9	
07:30	15:00	49.6	48.5	53.6	
07:45	15:00	48.7	47.7	53.1	
08:00	15:00	49.0	48.1	54.1	
08:15	15:00	50.4	48.7	56.3	
08:30	15:00	51.6	49.7	57.0	
08:45	15:00	51.7	50.3	58.4	
09:00	15:00	51.7	50.2	58.1	
09:15	15:00	50.9	49.4	61.5	
09:30	15:00	52.8	50.2	65.6	
09:45	15:00	49.4	48.6	52.3	
10:00	15:00	48.3	47.6	51.0	
10:15	15:00	49.5	48.2	55.2	
10:30	15:00	49.9	49.0	56.8	
10:45	15:00	51.9	50.5	56.1	
11:00	15:00	51.7	49.1	60.2	
11:15	15:00	50.7	49.6	61.8	
11:30	15:00	50.7	50.1	53.1	
11:45	15:00	51.4	50.6	54.8	
12:00	15:00	51.0	50.5	53.9	
12:15	15:00	51.3	50.6	54.2	
12:30	15:00	51.0	50.4	57.5	
12:45	15:00	51.0	50.3	57.1	
13:00	15:00	50.5	49.8	53.0	
13:15	15:00	51.0	50.1	53.8	
13:30	15:00	51.3	50.6	53.9	
13:45	15:00	51.3	50.5	54.6	
14:00	15:00	50.8	50.2	54.8	
14:15	15:00	51.1	50.5	53.1	
14:30	15:00	51.1	50.3	53.5	
14:45	15:00	51.2	50.6	54.4	
Log Average 0700-1500		50.7	49.7	51-66	
Average 0700-1500		50.7	49.6	51-66	

Noise Survey Results

Date: Thursday 29th July 2021

TABLE 130

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 7 - Canalwood Industrial Estate**

Instrumentation: Norsonic 116 Integrating Sound Level Meter (serial no: 21589)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	51.2	50.5	55.4	
15:15	15:00	51.1	50.4	54.5	
15:30	15:00	51.4	50.7	56.2	
15:45	15:00	51.7	51.1	55.2	
16:00	15:00	52.5	51.3	56.4	
16:15	15:00	53.2	52.1	56.9	
16:30	15:00	52.8	51.6	57.3	
16:45	15:00	51.9	51.0	56.7	
17:00	15:00	52.2	51.3	55.0	
17:15	15:00	51.5	50.7	57.6	
17:30	15:00	51.6	50.8	56.2	
17:45	15:00	51.7	51.1	56.5	
18:00	15:00	51.5	50.8	53.7	
18:15	15:00	51.4	50.6	54.6	
18:30	15:00	51.2	50.6	54.9	
18:45	15:00	51.2	50.6	54.9	
19:00	15:00	51.0	50.2	55.2	
19:15	15:00	51.0	50.2	54.8	
19:30	15:00	50.6	50.0	54.0	
19:45	15:00	53.7	49.8	70.0	
20:00	15:00	53.7	52.2	68.5	
20:15	15:00	52.9	51.7	59.9	
20:30	15:00	52.7	51.6	61.1	
20:45	15:00	55.1	52.2	68.0	
21:00	15:00	55.2	51.9	69.5	
21:15	15:00	54.2	52.0	61.5	
21:30	15:00	52.9	51.3	65.8	
21:45	15:00	52.6	50.8	64.9	
22:00	15:00	52.8	50.7	66.2	
22:15	15:00	53.9	51.2	68.8	
22:30	15:00	52.0	50.9	59.5	
22:45	15:00	51.0	50.3	56.4	
Log Average 1500-2300		52.4	51.0	54-70	
Average 1500-2300		52.3	51.0	54-70	

Noise Survey Results

Date: Thursday 29th to Friday 30th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 7 - Canalwood Industrial Estate**

Instrumentation: Norsonic 116 Integrating Sound Level Meter (serial no: 21589)

Calibration: 94dB

TABLE 131

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	51.4	50.5	56.5	
23:15	15:00	50.8	50.2	56.9	
23:30	15:00	50.9	50.2	55.9	
23:45	15:00	50.7	50.1	54.8	
00:00	15:00	51.2	50.4	57.3	Rain
00:15	15:00	51.1	50.5	56.6	Rain
00:30	15:00	51.2	50.2	60.2	
00:45	15:00	51.3	50.3	60.2	Rain
01:00	15:00	52.3	51.1	58.0	
01:15	15:00	56.0	50.8	89.2	
01:30	15:00	52.0	50.9	58.4	
01:45	15:00	52.0	51.0	60.0	
02:00	15:00	51.9	50.6	57.7	
02:15	15:00	51.9	50.9	57.2	
02:30	15:00	51.9	51.0	58.5	
02:45	15:00	51.6	50.6	58.1	
03:00	15:00	52.3	50.4	64.9	Rain
03:15	15:00	53.0	50.6	65.2	Rain
03:30	15:00	52.4	50.9	64.5	Rain
03:45	15:00	52.4	51.2	60.5	Rain
04:00	15:00	51.7	50.5	61.5	Rain
04:15	15:00	51.0	50.0	57.7	Rain
04:30	15:00	52.2	50.4	68.9	Rain
04:45	15:00	52.6	51.1	62.5	Rain
05:00	15:00	52.6	51.0	62.9	
05:15	15:00	53.5	51.3	60.2	
05:30	15:00	53.0	51.4	63.1	Rain
05:45	15:00	52.7	50.8	60.2	
06:00	15:00	53.1	51.1	61.4	
06:15	15:00	53.3	50.6	66.3	
06:30	15:00	52.6	50.8	59.8	
06:45	15:00	51.7	50.8	59.1	Rain
Log Average 2300-0700		52.2	50.7	55-89	
Average 2300-0700		52.1	50.7	55-89	
Average 0700-2300		51.8	50.8	51-70	

Noise Survey Results

Date: Friday 30th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 132

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 7 - Canalwood Industrial Estate**

Instrumentation: Norsonic 116 Integrating Sound Level Meter (serial no: 21589)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	52.1	51.1	63.8	
07:15	15:00	52.9	51.3	62.9	
07:30	15:00	52.3	50.9	65.4	
07:45	15:00	53.3	50.9	70.0	
08:00	15:00	52.8	51.3	63.3	
08:15	15:00	52.6	51.2	61.9	
08:30	15:00	54.0	51.5	63.5	
08:45	15:00	52.5	51.4	62.7	
09:00	15:00	53.5	51.9	62.3	
09:15	15:00	54.8	52.8	66.0	
09:30	15:00	56.6	53.1	68.6	
09:45	15:00	54.6	52.6	65.6	
10:00	15:00	53.8	52.5	61.3	
10:15	15:00	53.8	52.4	64.0	
10:30	15:00	53.7	52.5	60.0	
10:45	15:00	53.9	52.6	61.3	
11:00	15:00	53.2	51.7	62.3	
11:15	15:00	51.4	50.1	60.5	
11:30	15:00	52.3	49.8	66.9	
11:45	15:00	51.5	49.9	69.9	
12:00	15:00	52.1	50.5	69.7	
12:15	15:00	53.0	50.7	65.7	
12:30	15:00	53.7	52.3	67.0	
12:45	15:00	54.8	53.1	67.8	
13:00	15:00	54.7	53.0	67.5	
13:15	15:00	54.7	53.1	68.7	
13:30	15:00	55.0	53.6	63.0	
13:45	15:00	56.7	54.6	70.3	
14:00	15:00	55.8	54.2	65.3	
14:15	15:00	55.2	54.1	69.3	
14:30	15:00	56.2	54.9	64.7	
14:45	15:00	56.1	54.6	67.5	
Log Average 0700-1500		54.1	52.4	60-70	
Average 0700-1500		53.9	52.2	60-70	

Noise Survey Results

Date: Friday 30th July 2021

TABLE 133

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 7 - Canalwood Industrial Estate**

Instrumentation: Norsonic 116 Integrating Sound Level Meter (serial no: 21589)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmix (dB)	Observations
15:00	15:00	56.8	54.9	66.4	
15:15	15:00	56.1	54.4	71.4	
15:30	15:00	56.1	54.4	67.1	
15:45	15:00	57.7	55.0	72.0	
16:00	15:00	55.5	53.6	64.9	
16:15	15:00	55.8	54.0	69.3	
16:30	15:00	54.4	52.8	66.5	
16:45	15:00	54.6	52.8	67.6	
17:00	15:00	54.4	52.6	65.4	
17:15	15:00	53.5	51.7	67.0	
17:30	15:00	53.0	51.8	59.3	
17:45	15:00	53.4	51.9	62.3	
18:00	15:00	53.8	52.6	59.7	
18:15	15:00	53.0	51.8	59.7	
18:30	15:00	53.7	52.2	58.9	
18:45	15:00	53.8	51.6	66.9	
19:00	15:00	57.0	54.6	66.3	
19:15	15:00	54.9	53.5	64.7	
19:30	15:00	56.2	54.1	68.6	
19:45	15:00	56.0	53.6	62.6	
20:00	15:00	55.7	53.7	65.6	
20:15	15:00	56.3	54.4	65.0	
20:30	15:00	54.9	53.6	66.7	
20:45	15:00	55.4	53.8	65.7	
21:00	15:00	55.5	53.9	66.6	
21:15	15:00	55.6	54.4	64.0	
21:30	15:00	56.5	55.0	64.6	
21:45	15:00	56.5	55.1	67.1	
22:00	15:00	56.3	54.8	66.9	
22:15	15:00	55.9	54.7	62.9	
22:30	15:00	56.2	55.1	64.3	
22:45	15:00	56.5	54.8	63.9	
Log Average 1500-2300		55.5	53.8	59-72	
Average 1500-2300		55.3	53.7	59-72	

Noise Survey Results

Date: Friday 30th to Saturday 31st July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 134

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 7 - Canalwood Industrial Estate**

Instrumentation: Norsonic 116 Integrating Sound Level Meter (serial no: 21589)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	56.7	54.9	62.9	
23:15	15:00	55.7	54.4	65.7	
23:30	15:00	55.6	54.3	63.0	
23:45	15:00	55.6	54.2	64.7	
00:00	15:00	56.5	54.7	69.0	
00:15	15:00	56.6	55.1	67.3	
00:30	15:00	56.5	54.8	67.4	
00:45	15:00	56.2	55.0	63.3	
01:00	15:00	55.9	54.7	64.1	
01:15	15:00	56.7	55.1	66.5	
01:30	15:00	56.5	55.1	69.7	
01:45	15:00	56.3	54.9	66.4	
02:00	15:00	56.9	55.4	66.8	
02:15	15:00	56.3	55.0	63.5	
02:30	15:00	56.2	54.9	63.5	
02:45	15:00	56.0	54.7	64.3	
03:00	15:00	56.1	54.9	65.1	
03:15	15:00	56.0	54.6	67.3	
03:30	15:00	56.0	54.7	63.6	
03:45	15:00	55.9	54.7	65.9	
04:00	15:00	55.8	54.6	63.6	
04:15	15:00	55.2	53.8	61.2	
04:30	15:00	55.1	53.9	62.6	
04:45	15:00	56.1	54.1	69.6	
05:00	15:00	55.0	53.5	63.8	
05:15	15:00	55.4	53.6	65.7	
05:30	15:00	54.9	53.5	62.3	
05:45	15:00	55.7	54.1	63.6	
06:00	15:00	55.9	54.0	64.0	
06:15	15:00	55.2	53.9	62.4	
06:30	15:00	55.0	53.6	63.0	
06:45	15:00	54.9	53.5	64.0	
Log Average 2300-0700		55.9	54.4	61-70	
Average 2300-0700		55.9	54.4	61-70	
Average 0700-2300		54.8	53.1	59-72	

Noise Survey Results

Date: Saturday 31st July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 135

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 7 - Canalwood Industrial Estate**

Instrumentation: Norsonic 116 Integrating Sound Level Meter (serial no: 21589)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmix (dB)	Observations
07:00	15:00	55.4	53.8	63.5	
07:15	15:00	54.8	53.7	61.8	
07:30	15:00	56.6	54.6	63.5	
07:45	15:00	55.9	54.3	63.6	
08:00	15:00	55.0	53.8	61.0	
08:15	15:00	55.6	54.1	65.8	
08:30	15:00	55.5	54.2	63.0	
08:45	15:00	55.5	54.0	61.6	
09:00	15:00	55.1	54.0	61.8	
09:15	15:00	55.4	54.2	63.3	
09:30	15:00	55.7	54.2	68.9	
09:45	15:00	55.9	54.4	64.5	
10:00	15:00	56.1	54.5	66.8	
10:15	15:00	56.4	54.4	66.6	
10:30	15:00	55.3	53.8	69.7	
10:45	15:00	55.6	54.1	69.8	
11:00	15:00	55.5	53.9	64.6	
11:15	15:00	55.7	54.1	63.0	
11:30	15:00	55.1	53.9	66.2	
11:45	15:00	55.2	53.8	64.1	
12:00	15:00	55.5	54.2	63.0	
12:15	15:00	55.7	54.0	65.8	
12:30	15:00	55.6	54.1	67.7	
12:45	15:00	55.3	53.7	63.8	
13:00	15:00	55.0	53.7	65.8	
13:15	15:00	54.9	53.8	62.3	
13:30	15:00	55.3	53.7	65.3	
13:45	15:00	57.2	55.3	65.8	
14:00	15:00	57.0	55.2	64.8	
14:15	15:00	55.8	54.4	65.2	
14:30	15:00	55.6	54.4	64.0	
14:45	15:00	55.3	54.1	64.2	
Log Average 0700-1500		55.6	54.1	61-70	
Average 0700-1500		55.6	54.1	61-70	

Noise Survey Results

Date: Saturday 31st July 2021

TABLE 136

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 7 - Canalwood Industrial Estate**

Instrumentation: Norsonic 116 Integrating Sound Level Meter (serial no: 21589)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	55.1	53.9	63.6	
15:15	15:00	54.5	53.2	61.4	
15:30	15:00	54.5	53.3	69.2	
15:45	15:00	54.1	52.7	62.3	
16:00	15:00	54.5	53.2	61.3	
16:15	15:00	55.7	53.6	65.3	
16:30	15:00	54.4	53.2	64.3	
16:45	15:00	54.8	53.4	60.9	
17:00	15:00	54.3	53.2	63.3	
17:15	15:00	54.6	53.2	61.2	
17:30	15:00	54.3	53.2	61.3	
17:45	15:00	55.3	53.9	63.8	
18:00	15:00	54.5	53.2	60.7	
18:15	15:00	53.8	52.7	64.8	
18:30	15:00	54.2	53.0	60.8	
18:45	15:00	53.7	52.5	61.4	
19:00	15:00	54.2	53.0	61.5	
19:15	15:00	54.8	53.2	62.9	
19:30	15:00	55.1	53.7	64.7	
19:45	15:00	55.1	53.7	61.1	
20:00	15:00	55.8	54.2	66.7	
20:15	15:00	54.7	53.3	64.1	
20:30	15:00	55.2	53.3	65.4	
20:45	15:00	55.1	53.5	63.3	
21:00	15:00	54.3	53.1	64.2	
21:15	15:00	54.7	53.5	63.1	
21:30	15:00	54.8	53.4	62.2	
21:45	15:00	54.2	52.6	63.5	
22:00	15:00	53.7	52.4	60.7	
22:15	15:00	55.0	53.3	62.4	
22:30	15:00	53.8	52.6	63.2	
22:45	15:00	55.5	53.7	64.1	
Log Average 1500-2300		54.6	53.2	61-69	
Average 1500-2300		54.6	53.2	61-69	

Noise Survey Results

Date: Saturday 31st July to Sunday 1st August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 137

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 7 - Canalwood Industrial Estate**

Instrumentation: Norsonic 116 Integrating Sound Level Meter (serial no: 21589)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	54.1	53.1	60.9	
23:15	15:00	54.3	53.1	61.1	
23:30	15:00	54.2	53.1	61.4	
23:45	15:00	54.0	52.9	63.5	
00:00	15:00	54.0	52.7	61.1	
00:15	15:00	54.1	53.0	64.2	
00:30	15:00	53.8	52.6	61.5	
00:45	15:00	54.4	53.1	61.8	
01:00	15:00	55.3	53.6	62.7	
01:15	15:00	54.3	53.0	66.4	
01:30	15:00	54.0	52.7	65.1	
01:45	15:00	54.0	52.8	60.9	
02:00	15:00	54.7	53.2	61.8	
02:15	15:00	54.2	52.9	66.0	
02:30	15:00	54.4	52.6	66.1	
02:45	15:00	54.1	52.8	62.4	
03:00	15:00	53.9	52.5	65.8	
03:15	15:00	53.8	52.6	62.8	
03:30	15:00	54.3	52.6	65.7	
03:45	15:00	54.4	52.5	64.4	
04:00	15:00	54.1	52.6	67.8	
04:15	15:00	54.3	53.0	65.9	
04:30	15:00	54.6	52.7	68.3	
04:45	15:00	54.6	52.8	64.0	
05:00	15:00	54.2	52.5	67.3	
05:15	15:00	55.1	52.7	65.9	
05:30	15:00	54.5	53.1	68.6	
05:45	15:00	53.8	52.6	64.5	
06:00	15:00	54.1	52.7	69.1	
06:15	15:00	54.6	53.3	63.1	
06:30	15:00	55.0	53.6	68.6	
06:45	15:00	55.3	53.8	63.9	
Log Average 2300-0700		54.3	52.9	61-69	
Average 2300-0700		54.3	52.9	61-69	
Average 0700-2300		55.1	53.7	61-70	

Noise Survey Results

Date: Sunday 1st August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 138

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 7 - Canalwood Industrial Estate**

Instrumentation: Norsonic 116 Integrating Sound Level Meter (serial no: 21589)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	55.7	53.8	66.4	
07:15	15:00	55.8	54.2	65.2	
07:30	15:00	55.8	54.2	62.4	
07:45	15:00	56.5	54.7	64.1	
08:00	15:00	55.8	54.3	63.7	
08:15	15:00	54.7	53.5	63.1	
08:30	15:00	55.2	53.8	64.9	
08:45	15:00	55.5	54.2	64.9	
09:00	15:00	55.5	54.1	64.3	
09:15	15:00	56.5	54.8	64.9	
09:30	15:00	56.9	55.3	66.1	
09:45	15:00	58.1	55.4	66.8	
10:00	15:00	56.6	55.2	65.5	
10:15	15:00	57.0	55.3	67.5	
10:30	15:00	57.0	55.3	67.1	
10:45	15:00	56.6	55.0	68.2	
11:00	15:00	56.8	55.1	69.6	
11:15	15:00	56.7	55.0	66.6	
11:30	15:00	56.0	54.5	64.4	
11:45	15:00	55.8	54.2	64.5	
12:00	15:00	56.5	54.9	66.2	
12:15	15:00	56.4	54.7	67.0	
12:30	15:00	56.4	54.5	65.8	
12:45	15:00	56.6	54.7	67.5	
13:00	15:00	56.4	54.6	65.2	
13:15	15:00	56.5	54.9	67.0	
13:30	15:00	57.1	55.2	66.0	
13:45	15:00	56.6	54.9	71.6	
14:00	15:00	56.2	54.6	67.4	
14:15	15:00	56.2	54.7	66.3	
14:30	15:00	56.8	54.9	66.5	
14:45	15:00	56.4	54.7	68.3	
Log Average 0700-1500		56.3	54.6	62-72	
Average 0700-1500		56.3	54.7	62-72	

Noise Survey Results

Date: Sunday 1st August 2021

TABLE 139

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 7 - Canalwood Industrial Estate**

Instrumentation: Norsonic 116 Integrating Sound Level Meter (serial no: 21589)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmix (dB)	Observations
15:00	15:00	56.8	55.1	66.5	
15:15	15:00	56.2	54.5	65.0	
15:30	15:00	56.3	54.7	66.2	
15:45	15:00	55.8	54.3	65.1	
16:00	15:00	56.2	54.6	65.8	
16:15	15:00	56.1	54.5	64.8	
16:30	15:00	56.3	54.6	64.9	
16:45	15:00	55.7	54.1	67.3	
17:00	15:00	56.2	54.5	66.5	
17:15	15:00	56.5	55.1	64.6	
17:30	15:00	56.5	54.9	65.4	
17:45	15:00	55.8	54.2	65.0	
18:00	15:00	55.7	53.8	67.0	
18:15	15:00	54.8	53.4	62.2	
18:30	15:00	54.9	53.5	62.9	
18:45	15:00	54.3	52.9	65.2	
19:00	15:00	54.3	52.7	64.3	
19:15	15:00	54.8	53.3	65.8	
19:30	15:00	55.0	53.6	64.9	
19:45	15:00	55.5	53.5	64.2	
20:00	15:00	55.2	53.6	62.7	
20:15	15:00	54.7	53.3	68.1	
20:30	15:00	54.7	53.5	67.3	
20:45	15:00	54.5	53.2	66.5	
21:00	15:00	55.0	53.6	63.6	
21:15	15:00	55.1	53.7	63.9	
21:30	15:00	55.1	53.7	63.8	
21:45	15:00	55.3	53.9	64.4	
22:00	15:00	55.5	53.9	62.8	
22:15	15:00	55.8	54.2	63.5	
22:30	15:00	55.5	53.9	64.7	
22:45	15:00	56.0	54.1	62.6	
Log Average 1500-2300		55.5	53.9	62-68	
Average 1500-2300		55.5	54.0	62-68	

Noise Survey Results

Date: Sunday 1st to Monday 2nd August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 140

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 7 - Canalwood Industrial Estate**

Instrumentation: Norsonic 116 Integrating Sound Level Meter (serial no: 21589)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	56.1	54.1	66.5	
23:15	15:00	55.8	54.1	66.3	
23:30	15:00	55.6	54.1	65.1	
23:45	15:00	55.1	53.7	64.1	
00:00	15:00	55.2	53.8	67.7	
00:15	15:00	55.5	53.8	66.4	
00:30	15:00	55.1	53.5	65.3	
00:45	15:00	55.0	53.1	64.9	
01:00	15:00	55.3	53.2	67.3	
01:15	15:00	54.8	53.1	63.2	
01:30	15:00	56.1	53.6	66.8	
01:45	15:00	55.5	53.2	64.3	
02:00	15:00	53.9	52.6	64.0	
02:15	15:00	53.6	52.1	64.3	
02:30	15:00	53.6	52.1	64.4	
02:45	15:00	53.1	51.6	64.2	
03:00	15:00	52.7	51.4	63.9	
03:15	15:00	52.9	51.6	62.8	
03:30	15:00	52.2	51.1	60.3	
03:45	15:00	51.9	50.9	62.4	
04:00	15:00	52.3	51.1	60.7	
04:15	15:00	52.2	51.0	65.4	
04:30	15:00	52.4	51.1	60.6	
04:45	15:00	52.1	50.9	60.0	
05:00	15:00	53.1	51.6	63.2	
05:15	15:00	52.6	51.0	62.6	
05:30	15:00	51.8	50.7	56.9	
05:45	15:00	51.8	50.7	57.2	
06:00	15:00	51.8	50.6	59.7	
06:15	15:00	51.8	50.7	59.6	
06:30	15:00	52.0	50.9	58.5	
06:45	15:00	51.6	50.5	60.3	
Log Average 2300-0700		53.8	52.2	57-68	
Average 2300-0700		53.6	52.1	57-68	
Average 0700-2300		55.9	54.3	62-72	

Noise Survey Results

Date: Monday 2nd August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 141

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 7 - Canalwood Industrial Estate**

Instrumentation: Norsonic 116 Integrating Sound Level Meter (serial no: 21589)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	51.7	50.5	59.3	
07:15	15:00	52.1	50.8	58.8	
07:30	15:00	52.2	51.0	61.1	
07:45	15:00	52.5	51.4	59.9	
08:00	15:00	52.7	51.5	61.1	
08:15	15:00	53.1	51.9	61.4	
08:30	15:00	53.5	52.3	58.3	
08:45	15:00	54.1	52.7	59.3	
09:00	15:00	54.3	53.0	58.7	
09:15	15:00	53.4	52.3	58.1	
09:30	15:00	53.2	52.1	63.1	
09:45	15:00	53.2	52.1	58.2	
10:00	15:00	53.4	52.1	60.6	
10:15	15:00	52.9	51.7	66.5	
10:30	15:00	52.9	51.6	63.6	
10:45	15:00	53.1	51.8	63.3	
11:00	15:00	53.3	52.1	61.9	
11:15	15:00	53.2	51.9	63.5	
11:30	15:00	52.9	51.6	62.4	
11:45	15:00	52.6	51.5	64.4	
12:00	15:00	53.5	51.9	61.8	
12:15	15:00	53.5	51.7	65.2	
12:30	15:00	52.3	51.1	65.2	
12:45	15:00	52.2	51.1	59.1	
13:00	15:00	52.0	50.8	59.9	
13:15	15:00	52.0	50.8	60.3	
13:30	15:00	52.2	51.0	61.0	
13:45	15:00	51.7	50.7	59.1	
14:00	15:00	51.1	50.2	60.6	
14:15	15:00	51.7	50.7	61.9	
14:30	15:00	51.2	50.3	60.5	
14:45	15:00	51.0	50.1	56.9	
Log Average 0700-1500		52.7	51.5	57-67	
Average 0700-1500		52.6	51.4	57-67	

Noise Survey Results

Date: Monday 2nd August 2021

TABLE 142

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 7 - Canalwood Industrial Estate**

Instrumentation: Norsonic 116 Integrating Sound Level Meter (serial no: 21589)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmix (dB)	Observations
15:00	15:00	51.2	50.1	59.0	
15:15	15:00	50.9	50.0	58.3	
15:30	15:00	50.8	49.8	58.4	
15:45	15:00	50.8	49.8	57.4	
16:00	15:00	51.1	50.1	56.4	
16:15	15:00	50.9	49.9	61.0	
16:30	15:00	51.1	50.1	56.6	
16:45	15:00	51.0	50.1	57.9	
17:00	15:00	51.1	50.1	58.3	
17:15	15:00	50.7	49.7	56.7	
17:30	15:00	50.7	49.7	63.6	
17:45	15:00	50.7	49.7	58.2	
18:00	15:00	50.6	49.6	58.5	
18:15	15:00	50.7	49.7	57.1	
18:30	15:00	50.1	49.1	57.3	
18:45	15:00	50.5	49.5	56.7	
19:00	15:00	50.2	49.2	58.1	
19:15	15:00	50.1	49.1	55.8	
19:30	15:00	49.8	48.8	58.6	
19:45	15:00	49.2	48.4	55.3	
20:00	15:00	49.2	48.3	54.5	
20:15	15:00	49.2	48.4	54.8	
20:30	15:00	49.2	48.5	54.5	
20:45	15:00	49.2	48.5	57.1	
21:00	15:00	49.3	48.5	55.9	
21:15	15:00	49.3	48.3	60.9	
21:30	15:00	49.4	48.5	58.8	
21:45	15:00	49.0	48.3	55.6	
22:00	15:00	49.1	48.1	57.3	
22:15	15:00	48.9	48.0	56.1	
22:30	15:00	49.1	48.0	58.1	
22:45	15:00	49.0	48.0	56.2	
Log Average 1500-2300		50.1	49.1	55-64	
Average 1500-2300		50.1	49.1	55-64	

Noise Survey Results

Date: Monday 2nd - Tuesday 3rd August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 143

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 7 - Canalwood Industrial Estate**

Instrumentation: Norsonic 116 Integrating Sound Level Meter (serial no: 21589)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	49.1	48.1	57.8	
23:15	15:00	49.2	48.1	57.0	
23:30	15:00	48.8	47.9	56.3	
23:45	15:00	49.1	48.2	55.4	
00:00	15:00	49.4	48.5	58.5	
00:15	15:00	49.9	48.7	55.6	
00:30	15:00	49.8	48.7	55.7	
00:45	15:00	49.3	48.3	59.3	
01:00	15:00	49.2	48.3	61.4	
01:15	15:00	49.1	48.2	57.1	
01:30	15:00	48.7	47.8	61.1	
01:45	15:00	49.3	47.9	56.6	
02:00	15:00	49.1	47.8	56.8	
02:15	15:00	48.9	47.7	60.7	
02:30	15:00	49.2	48.0	55.2	
02:45	15:00	49.5	47.9	59.1	
03:00	15:00	48.2	47.4	53.2	
03:15	15:00	48.4	47.6	55.2	
03:30	15:00	48.7	47.5	57.5	
03:45	15:00	49.3	48.2	58.0	
04:00	15:00	49.4	48.2	56.9	
04:15	15:00	50.3	48.9	61.5	
04:30	15:00	50.3	49.1	58.9	
04:45	15:00	50.3	49.1	60.9	
05:00	15:00	50.2	49.0	59.3	
05:15	15:00	50.2	49.2	57.8	
05:30	15:00	50.1	49.1	63.4	
05:45	15:00	50.5	49.1	61.0	
06:00	15:00	50.5	49.1	57.1	
06:15	15:00	50.6	49.3	58.4	
06:30	15:00	51.3	50.1	59.2	
06:45	15:00	52.2	51.0	58.2	
Log Average 2300-0700		49.7	48.5	53-63	
Average 2300-0700		49.6	48.5	53-63	
Average 0700-2300		51.6	50.4	55-67	

Noise Survey Results

Date: Tuesday 3rd August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 144

Client: Kronospan Ltd

Project: Baseline Sound Survey

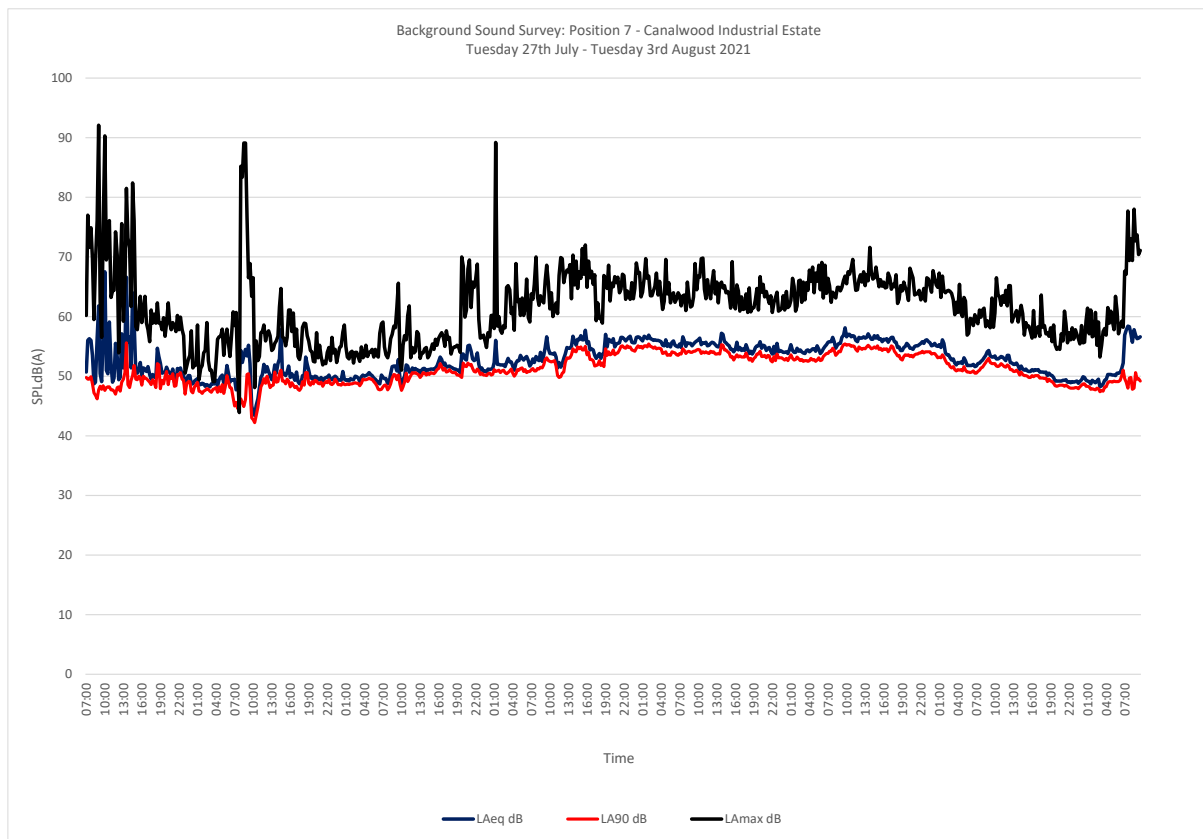
Data: Position 7 - Canalwood Industrial Estate

Instrumentation: Norsonic 116 Integrating Sound Level Meter (serial no: 21589)

Calibration: 94dB

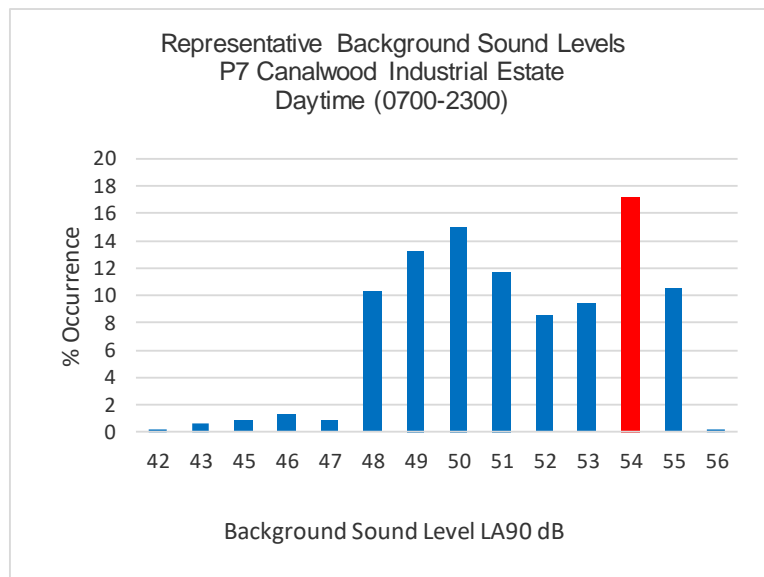
Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	56.9	49.6	67.6	
07:15	15:00	57.7	49.0	67.1	
07:30	15:00	58.4	48.0	77.7	
07:45	15:00	58.3	49.7	69.4	
08:00	15:00	57.1	49.8	73.0	
08:15	15:00	55.7	47.8	69.4	
08:30	15:00	57.8	48.0	78.0	
08:45	15:00	56.9	50.6	72.7	
09:00	15:00	56.3	49.5	73.7	
09:15	15:00	56.4	49.6	70.4	
09:30	15:00	56.6	49.2	71.1	
Log Average 0700-0945		57.1	49.2	66-78	
Average 0700-0945		57.1	49.2	66-78	
Overall Log Average		52.8	51.4	54-80	With Rain
Overall Log Average		54.3	51.8	44-92	With Rain

Overall Log Average	53.6	52.2	54-80	No Rain
Overall Log Average	54.4	51.9	44-92	No Rain

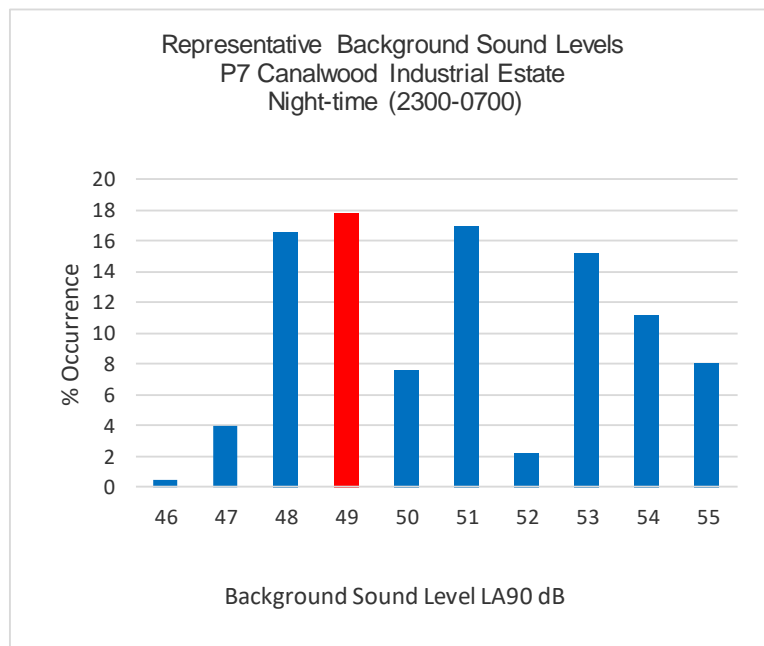


LA90 Representative Levels

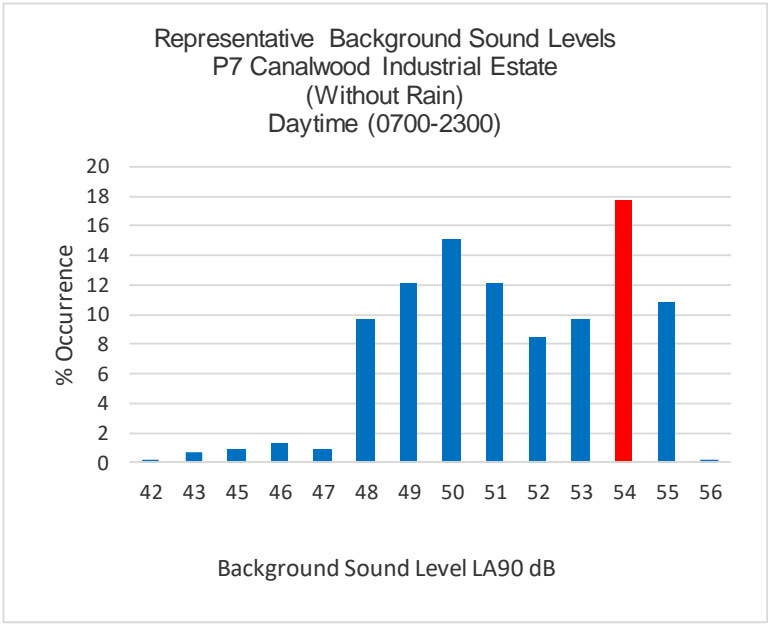
LA90	% Occurrence
42	0.2
43	0.7
45	0.9
46	1.3
47	0.9
48	10.2
49	13.3
50	15.0
51	11.8
52	8.5
53	9.4
54	17.2
55	10.5
56	0.2



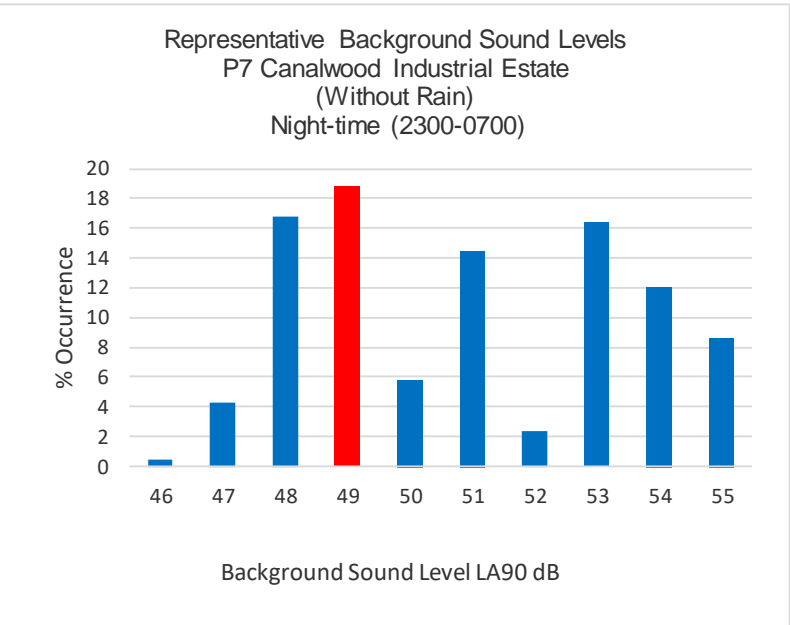
LA90	% Occurrence
46	0.4
47	4.0
48	16.5
49	17.9
50	7.6
51	17.0
52	2.2
53	15.2
54	11.2
55	8.0



LA90	% Occurrence
42	0.2
43	0.7
45	0.9
46	1.3
47	0.9
48	9.7
49	12.1
50	15.1
51	12.1
52	8.5
53	9.7
54	17.8
55	10.8
56	0.2



LA90	% Occurrence
46	0.5
47	4.3
48	16.8
49	18.8
50	5.8
51	14.4
52	2.4
53	16.3
54	12.0
55	8.7



Noise Survey Results

Date: Tuesday 27th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 145

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 8 - Manatton Llywyn-y-cil**

Instrumentation: Cirrus 171B Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
12:45	15:00	48.0	41.1	72.9	Rain
13:00	15:00	44.7	40.5	57.9	
13:15	15:00	55.2	41.6	65.3	
13:30	15:00	59.3	51.1	66.6	
13:45	15:00	48.4	44.4	62.2	
14:00	15:00	44.3	41.5	55.6	
14:15	15:00	43.2	41.4	54.7	
14:30	15:00	48.7	45.8	63.0	
14:45	15:00	49.8	47.5	62.1	Rain
Log Average 1245-1500		52.3	45.4	55-73	
Average 1245-1500		49.1	43.9	55-73	

Noise Survey Results

Date: Tuesday 27th July 2021

TABLE 146

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 8 - Manatton Llywyn-y-cil**

Instrumentation: Cirrus 171B Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	46.2	44.2	58.7	Rain
15:15	15:00	47.8	45.4	60.9	
15:30	15:00	43.2	40.5	54.6	Rain
15:45	15:00	41.7	39.4	60.8	
16:00	15:00	40.8	39.1	55.1	
16:15	15:00	42.1	39.4	59.6	
16:30	15:00	41.2	39.2	62.3	
16:45	15:00	45.1	42.6	55.7	
17:00	15:00	42.7	40.5	55.5	
17:15	15:00	41.7	39.4	50.3	Rain
17:30	15:00	41.5	38.9	53.5	
17:45	15:00	42.1	39.1	56.2	
18:00	15:00	41.9	39.2	57.8	
18:15	15:00	42.5	38.9	54.7	
18:30	15:00	42.9	39.3	55.2	
18:45	15:00	43.0	38.4	66.1	
19:00	15:00	42.3	36.6	62.0	
19:15	15:00	47.3	38.1	66.1	
19:30	15:00	44.1	39.1	58.5	
19:45	15:00	44.9	38.7	61.7	
20:00	15:00	44.4	36.9	61.7	
20:15	15:00	41.1	36.5	59.0	
20:30	15:00	40.5	37.5	58.5	
20:45	15:00	45.1	37.6	63.0	
21:00	15:00	56.3	37.7	67.3	
21:15	15:00	50.2	44.2	67.2	Rain
21:30	15:00	43.5	40.5	58.7	
21:45	15:00	41.9	40.1	53.7	
22:00	15:00	41.5	39.6	50.3	
22:15	15:00	41.3	40.4	49.9	
22:30	15:00	40.9	39.9	53.8	
22:45	15:00	40.0	38.9	49.2	
Log Average 1500-2300		45.6	40.1	49-67	
Average 1500-2300		43.5	39.6	49-67	

Noise Survey Results

Date: Tuesday 27th- Wednesday 28th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 147

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 8 - Manatton Llywyn-y-cil**

Instrumentation: Cirrus 171B Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	40.0	37.5	53.4	
23:15	15:00	40.2	38.8	47.2	
23:30	15:00	39.5	37.7	45.1	
23:45	15:00	39.4	37.3	51.9	
00:00	15:00	41.6	40.4	47.9	
00:15	15:00	41.9	41.1	46.7	
00:30	15:00	40.2	39.2	43.5	
00:45	15:00	39.6	38.7	47.9	
01:00	15:00	39.8	38.8	45.5	
01:15	15:00	41.1	40.0	46.1	
01:30	15:00	41.2	40.4	48.0	
01:45	15:00	39.8	36.5	44.5	
02:00	15:00	36.9	35.7	40.5	
02:15	15:00	36.8	34.4	44.0	
02:30	15:00	47.7	38.3	54.1	
02:45	15:00	45.3	41.5	55.9	Rain
03:00	15:00	41.2	39.2	50.5	Rain
03:15	15:00	41.0	39.6	50.4	
03:30	15:00	39.7	38.8	49.8	
03:45	15:00	40.0	37.8	50.6	
04:00	15:00	38.8	37.8	47.8	
04:15	15:00	38.7	37.5	46.7	
04:30	15:00	37.9	36.7	45.3	
04:45	15:00	39.7	36.1	65.5	
05:00	15:00	42.4	37.4	60.1	
05:15	15:00	41.9	36.9	58.7	
05:30	15:00	42.5	36.5	59.2	
05:45	15:00	41.7	36.8	56.7	
06:00	15:00	39.9	36.5	54.8	
06:15	15:00	40.8	37.0	54.4	
06:30	15:00	41.0	37.8	53.3	
06:45	15:00	41.8	37.0	58.9	
Log Average 2300-0700		41.2	38.2	41-66	
Average 2300-0700		40.6	38.0	41-66	
Average 1245-2300		49.4	42.9	49-73	

Noise Survey Results

Date: Wednesday 28th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 148

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 8 - Manatton Llywyn-y-cil**

Instrumentation: Cirrus 171B Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	39.9	37.5	57.7	
07:15	15:00	41.9	38.9	60.1	
07:30	15:00	43.2	39.5	57.2	
07:45	15:00	41.7	39.5	54.2	
08:00	15:00	44.5	38.9	67.1	
08:15	15:00	43.2	38.9	58.9	
08:30	15:00	41.2	38.8	53.1	
08:45	15:00	42.4	37.3	63.5	
09:00	15:00	42.6	37.8	62.5	
09:15	15:00	40.4	37.7	50.7	
09:30	15:00	42.5	38.1	57.7	
09:45	15:00	46.4	39.6	58.4	
10:00	15:00	48.1	41.5	57.5	
10:15	15:00	45.0	38.7	53.9	
10:30	15:00	47.2	38.8	58.3	
10:45	15:00	52.5	45.2	62.7	
11:00	15:00	52.0	46.1	59.7	
11:15	15:00	47.8	40.6	57.4	
11:30	15:00	49.8	43.4	59.9	
11:45	15:00	48.9	40.2	61.8	
12:00	15:00	42.4	38.0	55.9	Rain
12:15	15:00	52.4	41.2	66.7	
12:30	15:00	47.2	40.9	57.3	Rain
12:45	15:00	49.5	43.0	59.2	
13:00	15:00	51.5	43.6	60.3	
13:15	15:00	47.6	41.4	59.2	
13:30	15:00	52.6	45.9	65.3	
13:45	15:00	49.5	43.4	63.3	
14:00	15:00	51.9	43.4	62.9	Rain
14:15	15:00	48.9	40.7	61.5	
14:30	15:00	49.1	40.1	59.3	
14:45	15:00	52.7	42.4	66.1	
Log Average 0700-1500		48.4	41.4	51-67	
Average 0700-1500		46.8	40.7	51-67	

Noise Survey Results

Date: Wednesday 28th July 2021

TABLE 149

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 8 - Manatton Llywyn-y-cil**

Instrumentation: Cirrus 171B Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	52.1	43.0	63.8	
15:15	15:00	51.3	41.0	65.2	
15:30	15:00	47.7	40.4	60.0	
15:45	15:00	54.1	41.5	65.0	
16:00	15:00	48.3	41.4	60.6	
16:15	15:00	44.8	39.7	59.2	
16:30	15:00	49.1	41.6	66.0	
16:45	15:00	49.4	42.5	63.6	
17:00	15:00	52.3	47.1	62.3	
17:15	15:00	48.4	42.1	56.9	
17:30	15:00	44.5	37.8	63.4	Rain
17:45	15:00	43.8	38.3	57.6	
18:00	15:00	45.3	39.1	56.8	
18:15	15:00	43.2	37.6	59.6	
18:30	15:00	41.7	36.9	61.3	
18:45	15:00	44.3	36.0	61.5	
19:00	15:00	46.5	39.3	61.7	
19:15	15:00	46.3	38.3	62.4	
19:30	15:00	44.7	35.9	58.7	
19:45	15:00	41.5	35.2	56.9	
20:00	15:00	46.7	35.8	64.8	
20:15	15:00	46.7	36.7	60.1	
20:30	15:00	51.0	38.7	61.8	
20:45	15:00	54.3	46.7	64.5	Rain
21:00	15:00	44.5	39.2	62.4	Rain
21:15	15:00	39.6	36.5	50.2	
21:30	15:00	44.1	37.7	64.7	
21:45	15:00	38.7	36.1	49.6	
22:00	15:00	37.7	36.0	51.0	
22:15	15:00	38.6	36.9	53.4	
22:30	15:00	38.6	37.8	42.2	
22:45	15:00	39.4	36.7	49.8	
Log Average 1500-2300		47.9	40.3	42-66	
Average 1500-2300		45.6	39.0	42-66	

Noise Survey Results

Date: Wednesday 28th to Thursday 29th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 150

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 8 - Manatton Llywyn-y-cil**

Instrumentation: Cirrus 171B Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	37.0	35.0	50.2	Rain
23:15	15:00	39.0	37.0	48.9	
23:30	15:00	38.3	35.8	50.6	
23:45	15:00	38.4	36.0	44.8	
00:00	15:00	38.4	35.3	54.8	
00:15	15:00	37.9	35.2	44.5	
00:30	15:00	38.0	35.6	44.7	
00:45	15:00	38.3	35.8	47.4	
01:00	15:00	38.5	35.6	45.3	
01:15	15:00	39.8	35.7	51.9	
01:30	15:00	37.6	35.6	43.6	
01:45	15:00	37.7	35.0	50.1	
02:00	15:00	42.3	36.1	55.4	
02:15	15:00	42.3	36.8	51.2	
02:30	15:00	39.8	36.0	47.2	
02:45	15:00	42.3	37.8	53.5	
03:00	15:00	39.1	36.5	46.5	
03:15	15:00	42.0	36.9	55.5	
03:30	15:00	44.0	38.7	56.4	
03:45	15:00	40.1	35.0	52.7	
04:00	15:00	40.4	35.3	52.3	
04:15	15:00	38.6	35.3	47.4	
04:30	15:00	39.0	36.0	46.8	
04:45	15:00	39.2	35.6	54.1	
05:00	15:00	39.3	36.1	62.4	
05:15	15:00	40.9	36.9	51.0	
05:30	15:00	40.8	36.8	53.2	
05:45	15:00	43.8	36.7	58.2	
06:00	15:00	43.4	36.3	59.1	
06:15	15:00	41.6	36.0	64.4	
06:30	15:00	43.3	37.0	61.1	
06:45	15:00	42.8	37.4	57.9	
Log Average 2300-0700		40.6	36.2	44-64	
Average 2300-0700		40.1	36.2	44-64	
Average 0700-2300		48.2	40.9	42-67	

Noise Survey Results

Date: Thursday 29th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 151

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 8 - Manatton Llywyn-y-cil**

Instrumentation: Cirrus 171B Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	45.3	38.5	61.0	
07:15	15:00	45.1	39.4	56.3	
07:30	15:00	45.5	39.2	57.3	
07:45	15:00	45.1	38.5	56.8	
08:00	15:00	48.0	40.5	59.2	
08:15	15:00	48.6	42.1	61.2	
08:30	15:00	44.2	38.4	54.7	
08:45	15:00	46.1	39.5	56.9	
09:00	15:00	46.2	39.9	57.5	
09:15	15:00	46.7	41.0	57.4	
09:30	15:00	47.6	40.0	59.3	
09:45	15:00	47.2	40.1	57.2	
10:00	15:00	48.5	40.9	65.0	
10:15	15:00	46.4	39.7	62.2	
10:30	15:00	46.8	40.2	58.4	
10:45	15:00	48.8	41.2	60.4	
11:00	15:00	44.3	39.0	54.7	
11:15	15:00	45.6	40.2	57.3	
11:30	15:00	45.7	40.4	56.2	
11:45	15:00	46.6	40.3	57.5	
12:00	15:00	43.0	38.5	53.4	
12:15	15:00	44.6	38.6	54.6	
12:30	15:00	43.7	38.3	58.6	
12:45	15:00	42.2	37.4	55.6	
13:00	15:00	46.4	39.4	67.4	
13:15	15:00	44.7	38.8	61.0	
13:30	15:00	44.8	39.4	63.7	
13:45	15:00	45.6	40.6	60.1	
14:00	15:00	43.7	38.8	58.7	
14:15	15:00	51.6	38.7	72.4	
14:30	15:00	42.0	37.4	57.7	
14:45	15:00	48.9	37.5	60.7	
Log Average 0700-1500		46.4	39.5	43-72	
Average 0700-1500		45.9	39.5	43-72	

Noise Survey Results

Date: Thursday 29th July 2021

TABLE 152

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 8 - Manatton Llywyn-y-cil**

Instrumentation: Cirrus 171B Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	43.3	37.2	57.5	
15:15	15:00	45.5	37.8	59.6	
15:30	15:00	49.4	38.4	63.4	
15:45	15:00	50.2	41.0	62.5	
16:00	15:00	45.4	38.3	60.6	
16:15	15:00	45.0	37.9	63.0	
16:30	15:00	42.9	37.7	53.5	
16:45	15:00	41.0	37.0	56.8	
17:00	15:00	42.2	35.7	54.9	
17:15	15:00	40.5	36.1	57.3	
17:30	15:00	40.5	37.0	51.2	
17:45	15:00	42.4	35.3	59.4	
18:00	15:00	39.5	35.2	56.4	
18:15	15:00	40.5	36.3	58.7	
18:30	15:00	41.1	35.1	56.2	
18:45	15:00	42.7	35.4	65.7	
19:00	15:00	41.7	35.1	59.9	
19:15	15:00	49.5	36.5	64.6	
19:30	15:00	51.9	40.6	65.2	
19:45	15:00	48.2	36.4	63.0	
20:00	15:00	43.5	35.8	58.5	
20:15	15:00	41.6	37.3	57.0	
20:30	15:00	43.0	39.0	57.6	
20:45	15:00	44.2	37.4	61.0	
21:00	15:00	41.9	37.5	63.6	
21:15	15:00	41.1	38.0	59.3	
21:30	15:00	44.8	39.1	64.6	
21:45	15:00	40.4	38.5	53.3	
22:00	15:00	38.8	37.6	49.2	
22:15	15:00	42.3	39.3	61.5	
22:30	15:00	40.3	38.8	44.6	
22:45	15:00	40.9	40.1	46.6	
Log Average 1500-2300		44.8	37.7	45-66	
Average 1500-2300		43.3	37.5	45-66	

Noise Survey Results

Date: Thursday 29th to Friday 30th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 153

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 8 - Manatton Llywyn-y-cil**

Instrumentation: Cirrus 171B Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	40.1	39.2	44.6	
23:15	15:00	39.5	38.5	46.3	
23:30	15:00	47.0	42.3	55.5	
23:45	15:00	52.6	50.6	59.9	
00:00	15:00	48.2	44.7	64.8	Rain
00:15	15:00	46.7	44.0	55.6	Rain
00:30	15:00	48.1	45.8	57.6	
00:45	15:00	44.3	43.0	55.2	Rain
01:00	15:00	42.4	41.5	55.9	
01:15	15:00	43.0	42.1	52.6	
01:30	15:00	42.2	41.1	50.1	
01:45	15:00	42.3	40.7	48.8	
02:00	15:00	40.9	39.5	48.1	
02:15	15:00	42.4	41.3	46.6	
02:30	15:00	45.1	42.1	52.6	
02:45	15:00	52.1	48.1	61.8	
03:00	15:00	53.7	52.3	62.2	Rain
03:15	15:00	55.5	52.0	63.5	Rain
03:30	15:00	50.4	47.8	63.0	Rain
03:45	15:00	55.5	52.7	60.0	Rain
04:00	15:00	58.3	56.1	62.8	Rain
04:15	15:00	60.6	59.0	69.8	Rain
04:30	15:00	61.2	59.9	70.0	Rain
04:45	15:00	58.6	54.8	74.6	Rain
05:00	15:00	52.2	50.1	67.7	
05:15	15:00	51.7	49.9	63.6	
05:30	15:00	49.2	47.7	61.7	Rain
05:45	15:00	48.0	46.3	58.8	
06:00	15:00	48.1	45.2	65.9	
06:15	15:00	46.9	45.1	57.2	
06:30	15:00	47.7	46.1	57.8	
06:45	15:00	48.1	45.6	63.8	Rain
Log Average 2300-0700		52.9	50.8	45-75	
Average 2300-0700		48.8	46.7	45-75	
Average 0700-2300		47.3	37.6	43-72	

Noise Survey Results

Date: Friday 30th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 154

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 8 - Manatton Llywyn-y-cil**

Instrumentation: Cirrus 171B Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	48.0	45.8	70.5	
07:15	15:00	47.4	45.5	62.4	
07:30	15:00	46.5	45.3	54.8	
07:45	15:00	47.0	45.3	58.3	
08:00	15:00	47.0	45.6	63.0	
08:15	15:00	46.8	45.3	61.8	
08:30	15:00	47.4	45.7	54.6	
08:45	15:00	48.0	46.6	54.8	
09:00	15:00	47.5	46.1	56.2	
09:15	15:00	47.3	45.8	57.2	
09:30	15:00	47.6	45.8	60.7	
09:45	15:00	48.2	45.0	61.6	
10:00	15:00	46.3	44.2	65.4	
10:15	15:00	47.0	44.0	59.8	
10:30	15:00	46.3	44.9	52.1	
10:45	15:00	47.6	46.0	57.2	
11:00	15:00	49.2	45.6	65.9	
11:15	15:00	48.5	45.6	64.5	
11:30	15:00	46.7	44.9	56.2	
11:45	15:00	46.0	44.4	53.4	
12:00	15:00	46.1	44.3	54.7	
12:15	15:00	46.2	44.5	61.5	
12:30	15:00	46.0	43.9	54.4	
12:45	15:00	44.4	42.6	50.3	
13:00	15:00	45.5	43.6	50.3	
13:15	15:00	46.3	43.6	64.9	
13:30	15:00	45.5	43.3	60.4	
13:45	15:00	47.1	43.9	57.7	
14:00	15:00	46.7	43.3	59.3	
14:15	15:00	46.0	43.3	60.0	
14:30	15:00	45.5	42.8	58.0	
14:45	15:00	45.2	42.5	61.0	
Log Average 0700-1500		46.8	44.7	50-71	
Average 0700-1500		46.8	44.7	50-71	

Noise Survey Results

Date: Friday 30th July 2021

TABLE 155

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 8 - Manatton Llywyn-y-cil**

Instrumentation: Cirrus 171B Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	45.3	42.4	56.6	
15:15	15:00	43.6	41.4	50.0	
15:30	15:00	45.8	42.8	57.3	
15:45	15:00	45.5	42.8	58.6	
16:00	15:00	43.9	41.2	52.4	
16:15	15:00	44.7	41.2	54.6	
16:30	15:00	46.5	42.0	62.2	
16:45	15:00	44.7	41.5	52.2	
17:00	15:00	45.3	42.2	57.6	
17:15	15:00	46.3	41.7	59.4	
17:30	15:00	45.0	41.1	62.5	
17:45	15:00	44.0	41.3	62.2	
18:00	15:00	43.8	40.1	53.4	
18:15	15:00	43.6	40.6	57.4	
18:30	15:00	44.1	40.8	59.0	
18:45	15:00	42.0	39.7	59.4	
19:00	15:00	43.9	39.8	60.6	
19:15	15:00	45.1	39.4	61.3	
19:30	15:00	45.2	39.4	62.1	
19:45	15:00	43.5	39.3	57.4	
20:00	15:00	44.1	39.7	60.6	
20:15	15:00	46.5	40.0	64.2	
20:30	15:00	43.8	39.9	61.4	
20:45	15:00	42.8	39.0	62.2	
21:00	15:00	42.5	38.0	63.6	
21:15	15:00	42.3	37.3	63.7	
21:30	15:00	42.0	38.3	55.0	
21:45	15:00	42.2	38.5	52.8	
22:00	15:00	49.0	42.5	60.6	
22:15	15:00	48.7	42.0	62.1	
22:30	15:00	48.8	42.8	57.3	
22:45	15:00	52.9	44.2	64.5	
Log Average 1500-2300		45.7	41.0	50-65	
Average 1500-2300		44.9	40.7	50-65	

Noise Survey Results

Date: Friday 30th to Saturday 31st July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 156

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 8 - Manatton Llywyn-y-cil**

Instrumentation: Cirrus 171B Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	51.1	44.0	62.9	
23:15	15:00	48.4	41.2	57.8	
23:30	15:00	46.1	41.8	55.5	
23:45	15:00	42.4	39.9	49.6	
00:00	15:00	40.4	38.4	45.5	
00:15	15:00	39.9	38.3	45.9	
00:30	15:00	38.5	36.5	49.7	
00:45	15:00	38.7	36.7	43.8	
01:00	15:00	39.2	38.1	43.3	
01:15	15:00	39.5	38.4	47.4	
01:30	15:00	39.5	38.2	50.9	
01:45	15:00	39.5	38.3	49.4	
02:00	15:00	39.6	38.3	42.7	
02:15	15:00	38.7	37.6	47.1	
02:30	15:00	39.8	38.7	45.4	
02:45	15:00	39.0	37.5	42.8	
03:00	15:00	39.1	37.6	44.0	
03:15	15:00	40.8	39.1	44.5	
03:30	15:00	39.9	38.7	45.1	
03:45	15:00	40.8	38.9	49.2	
04:00	15:00	39.8	38.5	46.4	
04:15	15:00	39.5	38.6	43.1	
04:30	15:00	40.1	38.7	48.3	
04:45	15:00	39.4	37.2	48.3	
05:00	15:00	43.9	38.4	72.3	
05:15	15:00	43.1	39.4	57.7	
05:30	15:00	43.3	38.2	59.1	
05:45	15:00	41.0	38.9	55.7	
06:00	15:00	41.0	38.5	53.4	
06:15	15:00	41.7	37.5	62.9	
06:30	15:00	41.8	37.9	62.9	
06:45	15:00	42.3	38.8	58.5	
Log Average 2300-0700		42.5	38.9	43-72	
Average 2300-0700		41.2	38.7	43-72	
Average 0700-2300		46.3	43.3	50-75	

Noise Survey Results

Date: Saturday 31st July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 157

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 8 - Manatton Llywyn-y-cil**

Instrumentation: Cirrus 171B Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	42.7	37.2	64.2	
07:15	15:00	39.8	37.2	55.2	
07:30	15:00	41.2	38.0	62.1	
07:45	15:00	42.3	39.0	63.0	
08:00	15:00	41.7	38.7	62.3	
08:15	15:00	41.7	37.4	59.3	
08:30	15:00	43.0	37.1	63.3	
08:45	15:00	39.8	37.2	53.8	
09:00	15:00	41.0	38.3	51.9	
09:15	15:00	41.8	39.3	57.0	
09:30	15:00	47.0	39.6	59.0	
09:45	15:00	48.3	40.8	57.7	
10:00	15:00	42.3	38.2	58.0	
10:15	15:00	41.3	37.9	54.8	
10:30	15:00	41.6	38.4	55.3	
10:45	15:00	42.7	39.1	55.1	
11:00	15:00	43.2	39.5	56.0	
11:15	15:00	43.0	40.6	62.8	
11:30	15:00	43.7	41.3	56.0	
11:45	15:00	43.0	39.4	58.3	
12:00	15:00	41.7	36.9	61.8	
12:15	15:00	41.1	37.5	55.9	
12:30	15:00	42.0	36.5	57.3	
12:45	15:00	41.0	36.1	55.9	
13:00	15:00	40.2	37.0	55.4	
13:15	15:00	40.3	36.8	52.5	
13:30	15:00	41.0	36.8	59.7	
13:45	15:00	41.0	38.4	52.5	
14:00	15:00	41.9	39.7	57.3	
14:15	15:00	40.9	39.0	50.0	
14:30	15:00	40.4	38.0	52.8	
14:45	15:00	41.7	38.4	52.3	
Log Average 0700-1500		42.4	38.4	50-64	
Average 0700-1500		42.0	38.3	50-64	

Noise Survey Results

Date: Saturday 31st July 2021

TABLE 158

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 8 - Manatton Llywyn-y-cil**

Instrumentation: Cirrus 171B Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	41.2	39.8	49.3	
15:15	15:00	46.2	39.7	67.3	
15:30	15:00	41.4	39.0	56.9	
15:45	15:00	41.0	38.5	56.8	
16:00	15:00	41.8	38.8	55.4	
16:15	15:00	41.6	38.6	57.7	
16:30	15:00	41.0	38.8	53.9	
16:45	15:00	43.1	39.2	57.4	
17:00	15:00	42.0	39.9	57.4	
17:15	15:00	43.7	39.7	61.5	
17:30	15:00	40.7	39.1	56.9	
17:45	15:00	40.6	38.9	55.1	
18:00	15:00	41.8	39.1	58.8	
18:15	15:00	42.3	39.9	58.9	
18:30	15:00	49.5	40.2	68.9	
18:45	15:00	43.0	38.0	59.9	
19:00	15:00	43.5	37.1	65.5	
19:15	15:00	41.2	36.6	56.4	
19:30	15:00	48.1	36.6	70.7	
19:45	15:00	44.5	36.3	58.3	
20:00	15:00	46.0	35.7	60.1	
20:15	15:00	47.7	36.0	64.5	
20:30	15:00	52.3	36.2	65.8	
20:45	15:00	51.0	36.9	65.8	
21:00	15:00	45.8	35.1	64.2	
21:15	15:00	45.2	35.5	62.6	
21:30	15:00	40.4	37.8	53.0	
21:45	15:00	42.8	36.7	60.9	
22:00	15:00	39.8	35.5	58.8	
22:15	15:00	39.4	35.0	57.3	
22:30	15:00	35.8	34.2	43.3	
22:45	15:00	37.6	35.1	52.1	
Log Average 1500-2300		44.9	37.9	43-71	
Average 1500-2300		43.2	37.6	43-71	

Noise Survey Results

Date: Saturday 31st July to Sunday 1st August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 159

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 8 - Manatton Llywyn-y-cil**

Instrumentation: Cirrus 171B Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	37.7	36.0	41.8	
23:15	15:00	37.1	33.5	53.0	
23:30	15:00	35.6	33.2	44.3	
23:45	15:00	38.4	34.4	54.2	
00:00	15:00	37.7	35.8	50.3	
00:15	15:00	37.6	35.7	48.2	
00:30	15:00	39.5	38.3	46.5	
00:45	15:00	38.1	35.6	50.5	
01:00	15:00	38.7	36.4	58.2	
01:15	15:00	40.6	37.4	56.8	
01:30	15:00	38.7	37.0	56.4	
01:45	15:00	38.5	37.1	56.1	
02:00	15:00	40.4	38.3	58.9	
02:15	15:00	39.5	38.4	46.4	
02:30	15:00	40.0	39.1	43.4	
02:45	15:00	39.5	38.4	43.0	
03:00	15:00	39.3	37.8	43.2	
03:15	15:00	39.2	38.1	44.6	
03:30	15:00	38.4	36.7	42.2	
03:45	15:00	38.9	37.6	43.2	
04:00	15:00	38.0	37.0	43.6	
04:15	15:00	38.5	37.4	42.2	
04:30	15:00	39.0	38.1	41.7	
04:45	15:00	39.3	38.4	47.6	
05:00	15:00	41.6	38.6	60.0	
05:15	15:00	40.8	39.0	50.2	
05:30	15:00	46.9	39.3	61.8	
05:45	15:00	42.7	39.2	54.5	
06:00	15:00	41.5	38.8	63.7	
06:15	15:00	41.6	39.0	53.9	
06:30	15:00	43.1	38.4	63.2	
06:45	15:00	40.6	39.0	53.6	
Log Average 2300-0700		40.2	37.6	42-64	
Average 2300-0700		39.6	37.4	42-64	
Average 0700-2300		43.8	38.2	43-71	

Noise Survey Results

Date: Sunday 1st August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 160

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 8 - Manatton Llywyn-y-cil**

Instrumentation: Cirrus 171B Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	41.0	38.6	60.9	
07:15	15:00	42.6	38.2	54.8	
07:30	15:00	42.6	38.9	63.0	
07:45	15:00	45.9	40.5	61.1	
08:00	15:00	45.8	40.5	58.2	
08:15	15:00	47.7	41.5	72.8	
08:30	15:00	44.8	41.4	52.0	
08:45	15:00	43.3	39.6	52.2	
09:00	15:00	43.0	38.4	59.6	
09:15	15:00	40.6	37.8	53.4	
09:30	15:00	41.3	38.4	53.5	
09:45	15:00	42.4	38.7	61.8	
10:00	15:00	41.2	38.9	54.7	
10:15	15:00	42.4	38.2	58.0	
10:30	15:00	43.5	38.8	60.7	
10:45	15:00	41.9	39.0	50.8	
11:00	15:00	41.5	38.5	57.1	
11:15	15:00	42.1	38.3	54.6	
11:30	15:00	43.5	40.4	56.5	
11:45	15:00	42.9	40.2	55.6	
12:00	15:00	43.2	40.2	56.2	
12:15	15:00	43.0	40.7	51.8	
12:30	15:00	44.8	41.1	60.6	
12:45	15:00	43.9	41.0	57.0	
13:00	15:00	41.8	39.5	53.5	
13:15	15:00	42.8	40.4	52.6	
13:30	15:00	42.0	39.1	54.2	
13:45	15:00	41.2	39.0	51.1	
14:00	15:00	41.8	39.2	50.8	
14:15	15:00	43.3	39.4	60.4	
14:30	15:00	44.6	40.5	62.4	
14:45	15:00	43.1	40.8	58.0	
Log Average 0700-1500		43.2	39.6	51-73	
Average 0700-1500		43.0	39.6	51-73	

Noise Survey Results

Date: Sunday 1st August 2021

TABLE 161

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 8 - Manatton Llywyn-y-cil**

Instrumentation: Cirrus 171B Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	45.4	41.3	60.8	
15:15	15:00	43.9	42.1	54.0	
15:30	15:00	44.0	42.1	56.3	
15:45	15:00	44.4	41.9	58.8	
16:00	15:00	43.6	41.2	57.1	
16:15	15:00	43.2	40.8	62.1	
16:30	15:00	43.6	40.7	58.0	
16:45	15:00	44.8	41.9	61.6	
17:00	15:00	43.5	41.1	57.1	
17:15	15:00	43.2	41.1	54.5	
17:30	15:00	43.1	41.2	53.7	
17:45	15:00	43.1	40.8	60.4	
18:00	15:00	43.6	41.0	60.7	
18:15	15:00	43.7	41.3	58.6	
18:30	15:00	43.2	41.1	57.5	
18:45	15:00	43.3	40.5	54.5	
19:00	15:00	42.8	40.6	60.0	
19:15	15:00	43.4	41.0	61.4	
19:30	15:00	43.4	41.1	62.2	
19:45	15:00	43.7	41.4	59.7	
20:00	15:00	51.4	41.9	68.6	
20:15	15:00	47.1	41.8	61.1	
20:30	15:00	47.3	41.2	65.4	
20:45	15:00	43.5	41.5	61.8	
21:00	15:00	42.5	40.7	55.0	
21:15	15:00	42.2	40.5	55.7	
21:30	15:00	42.6	40.7	54.7	
21:45	15:00	42.2	40.0	56.7	
22:00	15:00	41.5	40.3	51.8	
22:15	15:00	41.3	40.1	48.4	
22:30	15:00	41.1	40.0	45.7	
22:45	15:00	40.4	39.1	52.2	
Log Average 1500-2300		44.2	41.0	46-69	
Average 1500-2300		43.6	41.0	46-69	

Noise Survey Results

Date: Sunday 1st to Monday 2nd August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 162

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 8 - Manatton Llywyn-y-cil**

Instrumentation: Cirrus 171B Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	41.1	39.8	45.5	
23:15	15:00	39.4	37.8	51.1	
23:30	15:00	37.9	36.1	48.4	
23:45	15:00	37.2	35.7	46.8	
00:00	15:00	38.4	36.9	46.3	
00:15	15:00	38.5	37.6	44.9	
00:30	15:00	37.2	35.6	46.5	
00:45	15:00	36.2	35.2	40.9	
01:00	15:00	36.8	35.7	45.5	
01:15	15:00	40.5	36.3	56.4	
01:30	15:00	37.8	36.7	40.7	
01:45	15:00	37.8	36.8	44.1	
02:00	15:00	37.2	36.0	40.6	
02:15	15:00	35.8	34.7	39.4	
02:30	15:00	36.5	35.6	46.9	
02:45	15:00	36.9	35.9	42.2	
03:00	15:00	37.0	36.0	39.8	
03:15	15:00	37.1	35.9	40.6	
03:30	15:00	36.6	35.5	41.0	
03:45	15:00	36.6	35.4	39.9	
04:00	15:00	38.8	34.1	65.1	
04:15	15:00	35.5	34.5	39.1	
04:30	15:00	37.8	36.4	46.8	
04:45	15:00	38.2	35.4	55.5	
05:00	15:00	41.9	36.1	62.1	
05:15	15:00	40.1	36.2	61.8	
05:30	15:00	42.4	35.3	58.8	
05:45	15:00	44.0	39.3	59.8	
06:00	15:00	42.3	38.4	59.5	
06:15	15:00	40.4	36.6	55.7	
06:30	15:00	40.0	36.6	52.1	
06:45	15:00	40.1	36.7	61.4	
Log Average 2300-0700		39.1	36.4	39-65	
Average 2300-0700		38.6	36.3	39-65	
Average 0700-2300		43.8	40.4	46-73	

Noise Survey Results

Date: Monday 2nd August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 163

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 8 - Manatton Llywyn-y-cil**

Instrumentation: Cirrus 171B Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	42.1	36.9	64.7	
07:15	15:00	42.2	37.3	60.7	
07:30	15:00	40.1	36.9	55.8	
07:45	15:00	41.5	37.8	54.6	
08:00	15:00	40.6	37.9	57.0	
08:15	15:00	40.4	37.9	56.7	
08:30	15:00	40.8	38.8	52.0	
08:45	15:00	41.8	40.5	54.3	
09:00	15:00	43.2	41.4	56.9	
09:15	15:00	42.4	40.5	59.8	
09:30	15:00	41.3	39.3	51.4	
09:45	15:00	42.3	40.5	55.8	
10:00	15:00	42.2	39.3	55.1	
10:15	15:00	41.5	39.4	52.8	
10:30	15:00	41.6	39.2	51.5	
10:45	15:00	42.2	38.5	57.8	
11:00	15:00	43.2	39.2	62.0	
11:15	15:00	41.7	38.4	52.3	
11:30	15:00	41.7	38.8	53.8	
11:45	15:00	43.0	40.5	54.9	
12:00	15:00	43.4	40.1	58.8	
12:15	15:00	42.2	39.8	52.6	
12:30	15:00	42.3	39.2	54.9	
12:45	15:00	43.6	38.6	65.3	
13:00	15:00	41.5	38.9	55.2	
13:15	15:00	40.6	39.3	50.3	
13:30	15:00	42.6	40.1	55.0	
13:45	15:00	42.9	40.0	56.3	
14:00	15:00	44.8	41.7	61.0	
14:15	15:00	47.0	44.7	64.1	
14:30	15:00	45.9	42.8	61.6	
14:45	15:00	45.0	43.0	62.7	
Log Average 0700-1500		42.7	39.9	50-65	
Average 0700-1500		42.4	39.6	50-65	

Noise Survey Results

Date: Monday 2nd August 2021

TABLE 164

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 8 - Manatton Llywyn-y-cil**

Instrumentation: Cirrus 171B Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	45.5	42.0	64.5	
15:15	15:00	45.4	41.9	68.0	
15:30	15:00	43.4	41.5	60.2	
15:45	15:00	43.5	41.3	55.7	
16:00	15:00	42.8	40.9	53.9	
16:15	15:00	44.1	41.4	68.1	
16:30	15:00	43.8	41.3	62.9	
16:45	15:00	45.2	41.8	60.8	
17:00	15:00	44.6	42.3	58.7	
17:15	15:00	44.3	42.7	56.3	
17:30	15:00	43.2	41.3	55.6	
17:45	15:00	43.0	41.5	58.6	
18:00	15:00	42.7	41.2	51.8	
18:15	15:00	45.0	41.1	60.0	
18:30	15:00	44.0	42.0	60.2	
18:45	15:00	42.7	41.6	50.5	
19:00	15:00	43.4	41.5	58.5	
19:15	15:00	42.0	40.6	50.2	
19:30	15:00	48.3	40.1	63.6	
19:45	15:00	48.4	40.1	63.7	
20:00	15:00	46.7	40.2	62.8	
20:15	15:00	42.0	40.2	56.5	
20:30	15:00	42.9	40.4	59.7	
20:45	15:00	46.2	41.2	63.2	
21:00	15:00	43.4	41.0	57.8	
21:15	15:00	42.6	39.3	56.8	
21:30	15:00	44.1	39.5	60.2	
21:45	15:00	40.3	38.7	52.4	
22:00	15:00	39.0	37.7	52.0	
22:15	15:00	39.2	38.1	49.2	
22:30	15:00	39.2	37.9	46.1	
22:45	15:00	39.7	38.1	44.5	
Log Average 1500-2300		44.0	40.8	45-68	
Average 1500-2300		43.5	40.6	45-68	

Noise Survey Results

Date: Monday 2nd - Tuesday 3rd August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 165

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 8 - Manatton Llywyn-y-cil**

Instrumentation: Cirrus 171B Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	40.3	39.0	43.7	
23:15	15:00	39.5	38.6	44.9	
23:30	15:00	39.9	38.9	44.7	
23:45	15:00	39.5	38.6	46.3	
00:00	15:00	39.8	38.6	45.8	
00:15	15:00	40.2	39.0	50.6	
00:30	15:00	41.9	38.9	60.4	
00:45	15:00	39.7	38.9	43.5	
01:00	15:00	37.1	35.8	41.0	
01:15	15:00	37.5	36.4	48.1	
01:30	15:00	38.0	37.2	40.7	
01:45	15:00	40.4	38.7	46.0	
02:00	15:00	41.7	40.7	47.6	
02:15	15:00	39.9	39.0	44.1	
02:30	15:00	41.8	40.4	61.0	
02:45	15:00	40.5	39.3	48.8	
03:00	15:00	40.2	39.2	46.8	
03:15	15:00	41.8	40.2	46.8	
03:30	15:00	41.9	40.4	45.8	
03:45	15:00	49.7	41.9	66.3	
04:00	15:00	43.3	42.2	47.2	
04:15	15:00	44.3	43.3	48.9	
04:30	15:00	43.4	42.4	49.2	
04:45	15:00	44.6	43.0	68.7	
05:00	15:00	44.0	41.9	60.0	
05:15	15:00	43.7	42.0	51.4	
05:30	15:00	44.9	43.3	54.9	
05:45	15:00	44.5	43.0	54.2	
06:00	15:00	43.8	42.3	55.7	
06:15	15:00	43.6	41.6	57.5	
06:30	15:00	42.5	40.9	55.0	
06:45	15:00	44.4	41.9	56.4	
Log Average 2300-0700		42.6	40.6	41-69	
Average 2300-0700		41.8	40.2	41-69	
Average 0700-2300		43.4	40.4	45-68	

Noise Survey Results

Date: Tuesday 3rd August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 166

Client: Kronospan Ltd

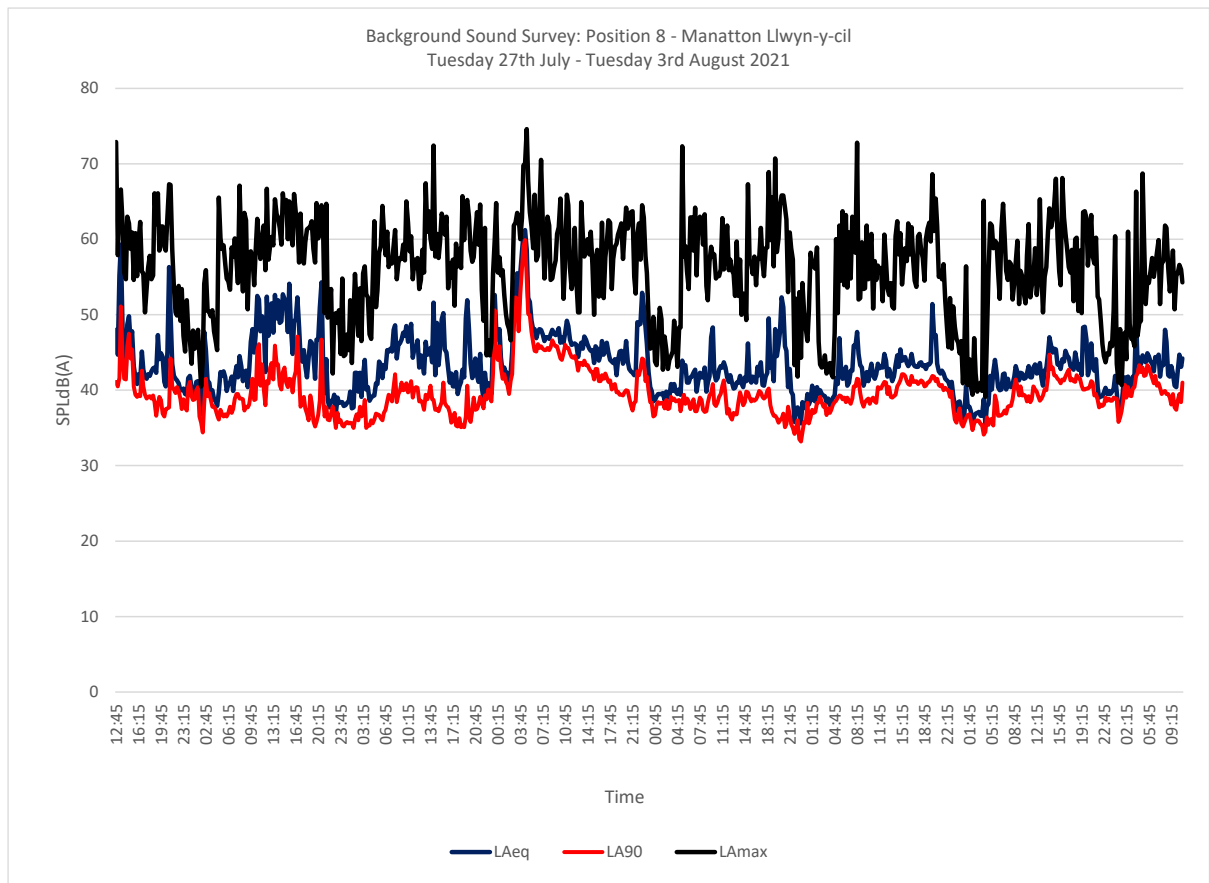
Project: **Baseline Sound Survey**

Data: **Position 8 - Manatton Llywyn-y-cil**

Instrumentation: Cirrus 171B Real Time Analyser (G056142)

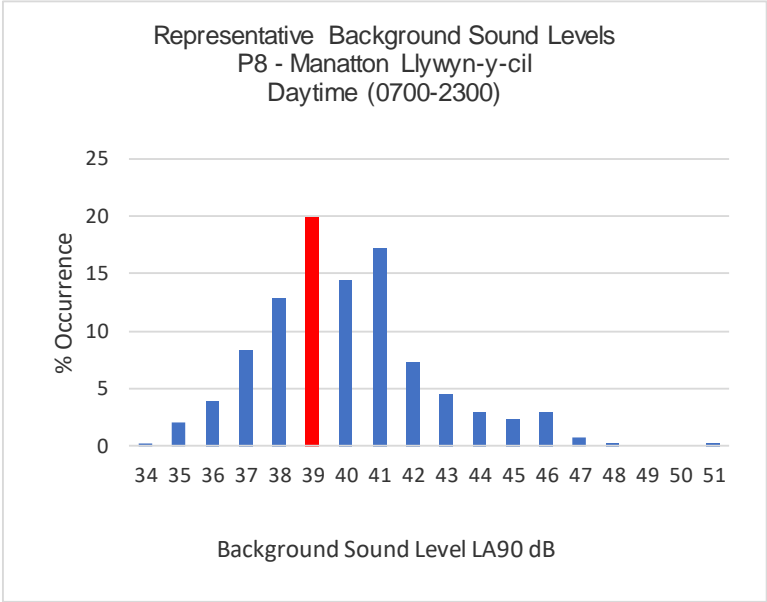
Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	44.0	40.6	58.2	
07:15	15:00	44.7	40.9	59.9	
07:30	15:00	41.8	40.3	51.4	
07:45	15:00	43.5	39.5	56.8	
08:00	15:00	43.3	39.8	57.1	
08:15	15:00	48.0	39.9	61.8	
08:30	15:00	46.4	39.5	61.5	
08:45	15:00	42.0	39.5	56.3	
09:00	15:00	41.8	39.0	53.1	
09:15	15:00	43.2	38.1	55.2	
09:30	15:00	42.2	39.5	58.5	
09:45	15:00	40.6	37.7	50.7	
10:00	15:00	40.4	37.4	55.2	
10:15	15:00	42.5	38.6	55.5	
10:30	15:00	44.7	39.5	56.6	
10:45	15:00	43.1	38.4	56.0	
11:00	15:00	44.2	41.0	54.3	
Log Average 0700-0945		43.7	39.4	51-62	
Average 0700-0945		43.3	39.4	51-62	
Overall Log Average		46.0	43.6	39-75	With Rain
Overall Log Average		45.8	41.4	42-75	With Rain
Overall Log Average		45.0	42.5	39-75	No Rain
Overall Log Average		45.7	40.7	42-75	No Rain

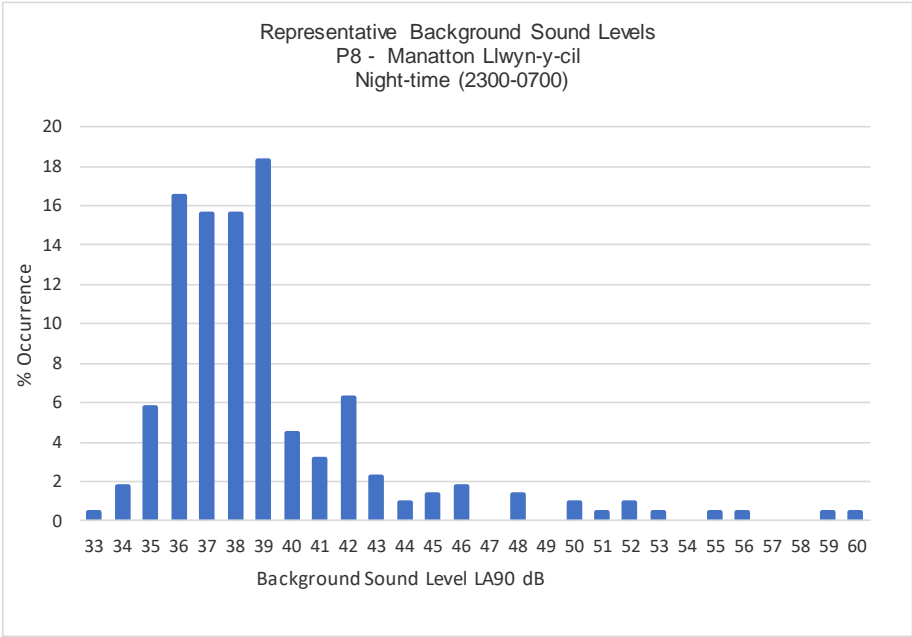


LA90 Representative Levels

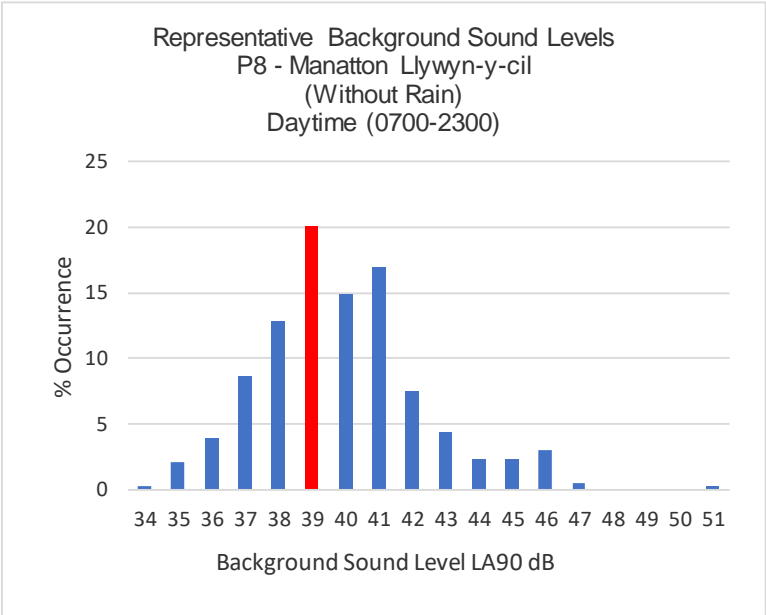
LA90	% Occurrence
34	0.2
35	2.0
36	3.8
37	8.4
38	12.9
39	19.9
40	14.5
41	17.2
42	7.2
43	4.5
44	2.9
45	2.3
46	2.9
47	0.7
48	0.2
49	0.0
50	0.0
51	0.2



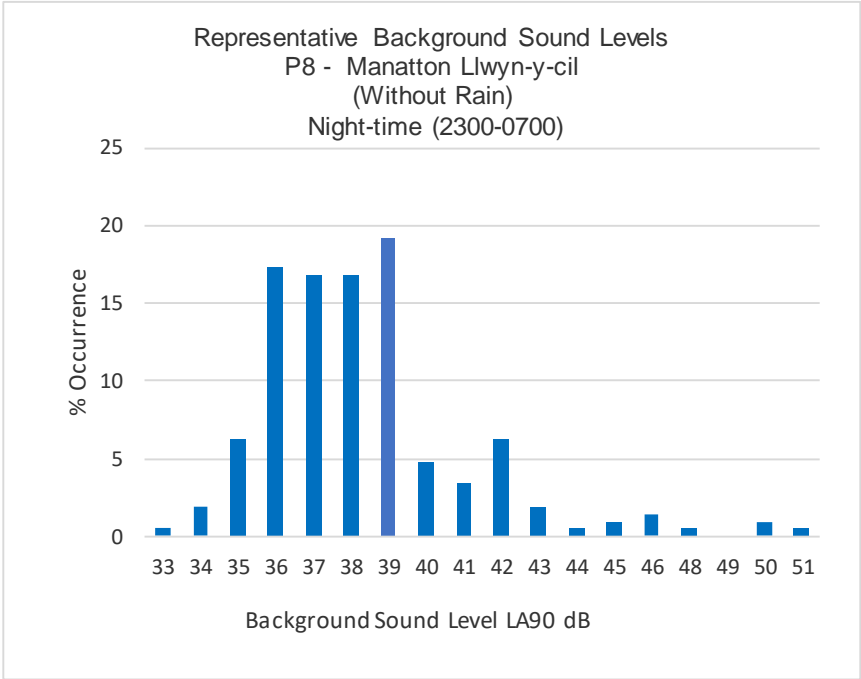
LA90	% Occurrence
33	0.4
34	1.8
35	5.8
36	16.5
37	15.6
38	15.6
39	18.3
40	4.5
41	3.1
42	6.3
43	2.2
44	0.9
45	1.3
46	1.8
47	0.0
48	1.3
49	0.0
50	0.9
51	0.4
52	0.9
53	0.4
54	0.0
55	0.4
56	0.4
57	0.0
58	0.0
59	0.4
60	0.4



LA90	% Occurrence
34	0.2
35	2.1
36	4.0
37	8.6
38	12.8
39	20.0
40	14.9
41	17.0
42	7.5
43	4.4
44	2.3
45	2.3
46	3.0
47	0.5
48	0.0
49	0.0
50	0.0
51	0.2



LA90	% Occurrence
33	0.5
34	1.9
35	6.3
36	17.3
37	16.8
38	16.8
39	19.2
40	4.8
41	3.4
42	6.3
43	1.9
44	0.5
45	1.0
46	1.4
48	0.5
49	0.0
50	1.0
51	0.5



Noise Survey Results

Date: Tuesday 27th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 167

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 9: Castle Gates (New Hall Farm)**

Instrumentation: Norsonic 140 Real Time Analyser (serial no. 1405418)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
09:00	15:00	58.1	40.0	87.2	
09:15	15:00	58.4	41.7	86.0	
09:30	15:00	48.3	43.0	71.8	
09:45	15:00	46.8	42.5	66.8	
10:00	15:00	45.1	42.6	59.8	
10:15	15:00	45.5	42.6	57.8	
10:30	15:00	46.0	43.1	67.2	
10:45	15:00	53.2	43.1	75.8	
11:00	15:00	47.8	42.3	66.3	
11:15	15:00	45.4	42.1	63.5	
11:30	15:00	46.1	42.6	63.5	
11:45	15:00	46.1	42.5	63.3	
12:00	15:00	48.3	41.4	69.5	
12:15	15:00	45.6	39.6	64.0	
12:30	15:00	40.6	36.5	58.7	Rain
12:45	15:00	44.2	35.7	65.9	
13:00	15:00	47.4	39.2	61.4	
13:15	15:00	53.2	42.2	65.6	
13:30	15:00	48.8	39.2	68.7	
13:45	15:00	45.1	42.3	57.9	Rain
14:00	15:00	47.0	43.5	62.6	
14:15	15:00	50.3	44.4	74.1	
14:30	15:00	45.9	42.9	63.3	
14:45	15:00	65.7	39.9	96.3	Rain
Log Average 0900-1500		54.2	41.8	58-96	
Average 0900-1500		48.7	41.5	58-96	

Noise Survey Results

Date: Tuesday 27th July 2021

TABLE 168

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 9: Castle Gates (New Hall Farm)**

Instrumentation: Norsonic 140 Real Time Analyser (serial no. 1405418)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	47.6	37.7	63.9	Rain
15:15	15:00	44.3	37.0	67.5	
15:30	15:00	39.4	36.9	54.6	
15:45	15:00	42.3	36.7	66.3	
16:00	15:00	43.7	39.2	65.7	
16:15	15:00	44.6	40.5	63.4	
16:30	15:00	45.9	41.8	65.0	
16:45	15:00	45.5	40.6	68.0	
17:00	15:00	44.4	40.8	58.3	
17:15	15:00	45.1	41.1	62.3	Rain
17:30	15:00	45.5	42.4	59.9	
17:45	15:00	45.5	42.8	67.4	
18:00	15:00	44.7	42.6	58.6	
18:15	15:00	45.1	43.0	62.2	
18:30	15:00	44.2	42.8	57.1	
18:45	15:00	44.3	41.5	64.0	
19:00	15:00	45.0	42.0	60.1	
19:15	15:00	47.0	43.5	71.2	
19:30	15:00	46.0	44.5	60.5	
19:45	15:00	45.9	43.8	63.1	
20:00	15:00	44.9	43.5	57.0	
20:15	15:00	44.5	42.7	60.1	
20:30	15:00	45.1	42.3	56.8	
20:45	15:00	59.7	41.3	72.0	
21:00	15:00	44.3	38.4	66.7	
21:15	15:00	42.2	39.2	63.4	Rain
21:30	15:00	38.4	36.5	56.7	
21:45	15:00	37.1	36.2	53.4	
22:00	15:00	37.3	35.7	57.1	
22:15	15:00	38.1	36.7	52.3	
22:30	15:00	42.2	39.8	54.5	
22:45	15:00	41.3	39.5	49.8	
Log Average 1500-2300		47.4	41.0	50-72	
Average 1500-2300		44.1	40.4	50-72	

Noise Survey Results

Date: Tuesday 27th- Wednesday 28th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 169

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 9: Castle Gates (New Hall Farm)**

Instrumentation: Norsonic 140 Real Time Analyser (serial no. 1405418)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	40.8	38.1	56.4	
23:15	15:00	38.1	35.6	53.2	
23:30	15:00	39.9	36.4	48.9	
23:45	15:00	39.2	35.8	50.6	
00:00	15:00	38.2	35.4	49.9	
00:15	15:00	37.6	34.3	51.3	
00:30	15:00	37.1	34.0	53.4	
00:45	15:00	38.1	34.2	54.7	
01:00	15:00	39.4	36.9	56.7	
01:15	15:00	40.3	37.2	53.2	
01:30	15:00	41.3	36.0	57.9	
01:45	15:00	44.3	38.1	55.5	
02:00	15:00	40.0	35.7	54.1	
02:15	15:00	41.8	36.3	57.8	
02:30	15:00	42.9	39.5	58.8	
02:45	15:00	39.4	37.4	48.2	Rain
03:00	15:00	38.4	37.4	46.6	Rain
03:15	15:00	38.9	37.7	48.7	
03:30	15:00	39.2	38.1	45.7	
03:45	15:00	39.9	38.3	49.3	
04:00	15:00	39.5	37.8	47.0	
04:15	15:00	39.6	37.7	46.8	
04:30	15:00	40.2	38.6	46.6	
04:45	15:00	40.2	38.3	50.6	
05:00	15:00	39.9	38.3	49.6	
05:15	15:00	39.7	38.2	46.1	
05:30	15:00	39.9	38.2	49.1	
05:45	15:00	40.5	37.7	60.0	
06:00	15:00	37.8	37.2	48.9	
06:15	15:00	39.4	37.3	60.4	
06:30	15:00	38.9	37.6	60.3	
06:45	15:00	43.6	37.9	60.8	
Log Average 2300-0700		40.1	37.2	46-61	
Average 2300-0700		39.8	37.1	46-61	
Average 0900-2300		51.2	41.4	50-96	

Noise Survey Results

Date: Wednesday 28th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 170

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 9: Castle Gates (New Hall Farm)**

Instrumentation: Norsonic 140 Real Time Analyser (serial no. 1405418)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	43.2	38.5	58.7	
07:15	15:00	42.8	39.0	56.4	
07:30	15:00	41.2	38.7	54.1	
07:45	15:00	39.6	38.5	53.8	
08:00	15:00	39.4	38.3	51.9	
08:15	15:00	39.0	37.7	47.0	
08:30	15:00	51.5	37.8	62.8	
08:45	15:00	44.1	39.3	61.7	
09:00	15:00	44.5	40.2	66.6	
09:15	15:00	46.6	40.7	69.2	
09:30	15:00	48.8	40.1	72.0	
09:45	15:00	44.7	39.2	69.5	
10:00	15:00	42.9	37.3	58.8	
10:15	15:00	47.2	39.8	70.3	
10:30	15:00	46.3	41.6	56.3	
10:45	15:00	44.5	40.1	57.6	
11:00	15:00	45.5	40.0	58.0	
11:15	15:00	55.1	42.8	68.3	
11:30	15:00	49.2	41.6	69.6	
11:45	15:00	47.4	42.2	68.6	
12:00	15:00	47.5	42.5	67.0	Rain
12:15	15:00	46.4	42.6	56.4	
12:30	15:00	46.4	41.6	63.8	Rain
12:45	15:00	46.3	42.2	60.0	
13:00	15:00	47.2	41.4	63.3	
13:15	15:00	50.0	41.5	69.5	
13:30	15:00	43.8	40.3	56.9	
13:45	15:00	45.6	39.8	62.0	
14:00	15:00	46.6	40.3	63.1	Rain
14:15	15:00	45.8	39.5	69.1	
14:30	15:00	49.4	39.7	72.0	
14:45	15:00	48.0	39.5	77.3	
Log Average 0700-1500		47.2	40.3	47-77	
Average 0700-1500		45.8	40.1	47-77	

Noise Survey Results

Date: Wednesday 28th July 2021

TABLE 171

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 9: Castle Gates (New Hall Farm)**

Instrumentation: Norsonic 140 Real Time Analyser (serial no. 1405418)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	59.7	41.1	87.8	Rain
15:15	15:00	47.3	37.2	69.9	
15:30	15:00	49.1	42.6	62.3	
15:45	15:00	42.9	38.5	58.8	
16:00	15:00	44.8	39.2	67.7	
16:15	15:00	45.2	39.3	61.1	
16:30	15:00	48.0	42.9	63.7	
16:45	15:00	51.0	45.9	66.8	
17:00	15:00	47.2	38.7	64.6	
17:15	15:00	43.7	38.2	61.4	
17:30	15:00	43.7	38.1	60.0	
17:45	15:00	44.3	38.3	63.6	
18:00	15:00	45.5	39.4	69.8	
18:15	15:00	42.1	36.6	64.8	
18:30	15:00	41.2	37.6	59.3	
18:45	15:00	46.2	37.8	70.4	
19:00	15:00	40.7	37.1	55.7	Rain
19:15	15:00	40.7	36.4	52.9	
19:30	15:00	40.9	36.5	55.9	
19:45	15:00	44.4	38.2	57.5	
20:00	15:00	48.7	38.0	72.4	
20:15	15:00	48.3	40.4	71.4	
20:30	15:00	41.1	35.6	54.6	
20:45	15:00	38.5	36.5	46.7	
21:00	15:00	41.4	36.4	64.8	
21:15	15:00	40.1	36.2	52.1	
21:30	15:00	37.7	35.1	53.1	
21:45	15:00	36.4	33.4	50.6	
22:00	15:00	38.3	36.1	53.6	
22:15	15:00	39.9	37.7	48.4	
22:30	15:00	44.8	42.9	56.1	
22:45	15:00	42.1	40.4	49.0	
Log Average 1500-2300		47.7	39.2	47-88	
Average 1500-2300		43.9	38.4	47-88	

Noise Survey Results

Date: Wednesday 28th to Thursday 29th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 172

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 9: Castle Gates (New Hall Farm)**

Instrumentation: Norsonic 140 Real Time Analyser (serial no. 1405418)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	40.3	37.3	61.0	Rain
23:15	15:00	37.9	35.3	45.9	
23:30	15:00	39.1	36.0	45.9	
23:45	15:00	38.9	35.7	47.0	
00:00	15:00	37.8	34.6	50.0	
00:15	15:00	37.5	34.0	45.2	
00:30	15:00	36.4	33.6	43.9	
00:45	15:00	38.0	34.1	48.4	
01:00	15:00	39.9	36.2	53.0	
01:15	15:00	40.7	37.1	51.7	
01:30	15:00	41.1	36.5	53.8	
01:45	15:00	43.7	38.5	53.4	
02:00	15:00	39.7	35.5	52.2	
02:15	15:00	42.1	36.7	54.3	
02:30	15:00	43.4	39.3	58.8	
02:45	15:00	42.7	38.6	53.8	
03:00	15:00	43.8	38.0	60.4	
03:15	15:00	39.5	35.6	48.9	
03:30	15:00	38.8	34.5	52.1	
03:45	15:00	38.5	36.0	51.3	
04:00	15:00	37.6	35.5	50.7	
04:15	15:00	40.4	36.4	63.0	
04:30	15:00	38.6	35.6	51.6	
04:45	15:00	37.5	34.1	48.8	
05:00	15:00	38.3	34.9	53.0	
05:15	15:00	40.1	35.2	57.5	
05:30	15:00	38.9	35.4	54.7	
05:45	15:00	39.8	36.5	57.9	
06:00	15:00	45.3	36.5	71.6	
06:15	15:00	41.9	37.2	52.5	
06:30	15:00	42.1	37.5	55.9	
06:45	15:00	43.4	37.9	64.6	
Log Average 2300-0700		40.7	36.3	44-72	
Average 2300-0700		40.1	36.1	44-72	
Average 0700-2300		47.4	39.8	47-88	

Noise Survey Results

Date: Thursday 29th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 173

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 9: Castle Gates (New Hall Farm)**

Instrumentation: Norsonic 140 Real Time Analyser (serial no. 1405418)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	43.6	38.5	57.3	
07:15	15:00	46.4	39.2	64.8	
07:30	15:00	49.3	39.9	73.4	
07:45	15:00	52.1	39.9	76.0	
08:00	15:00	44.1	38.2	58.7	
08:15	15:00	43.0	39.2	57.7	
08:30	15:00	47.2	39.0	71.7	
08:45	15:00	42.0	37.7	56.6	
09:00	15:00	48.1	39.4	72.8	
09:15	15:00	43.3	38.5	55.1	
09:30	15:00	45.6	39.6	63.1	
09:45	15:00	47.1	40.9	64.3	
10:00	15:00	43.0	38.5	58.5	
10:15	15:00	48.3	40.8	65.5	
10:30	15:00	43.6	39.1	59.4	
10:45	15:00	49.6	41.5	70.2	
11:00	15:00	47.9	40.0	66.1	
11:15	15:00	43.1	37.7	57.7	
11:30	15:00	44.8	39.6	60.5	
11:45	15:00	45.4	38.3	67.4	
12:00	15:00	41.7	38.2	56.3	
12:15	15:00	48.2	37.6	67.6	
12:30	15:00	47.1	37.1	65.4	
12:45	15:00	46.5	36.6	68.6	
13:00	15:00	42.0	36.5	60.5	
13:15	15:00	41.8	36.7	58.9	
13:30	15:00	43.0	36.8	64.8	
13:45	15:00	41.5	36.7	53.9	
14:00	15:00	47.6	36.1	69.9	
14:15	15:00	45.0	37.1	65.9	
14:30	15:00	47.2	36.9	65.8	
14:45	15:00	47.6	36.3	69.6	
Log Average 0700-1500		46.3	38.6	54-76	
Average 0700-1500		45.5	38.4	54-76	

Noise Survey Results

Date: Thursday 29th July 2021

TABLE 174

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 9: Castle Gates (New Hall Farm)**

Instrumentation: Norsonic 140 Real Time Analyser (serial no. 1405418)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	49.6	37.0	71.6	
15:15	15:00	55.9	38.1	79.5	
15:30	15:00	45.5	38.4	63.1	
15:45	15:00	47.4	37.3	69.3	
16:00	15:00	49.4	36.6	74.0	
16:15	15:00	41.3	35.9	55.5	
16:30	15:00	42.4	35.5	57.9	
16:45	15:00	43.6	36.4	68.1	
17:00	15:00	39.5	35.7	56.2	
17:15	15:00	42.4	34.1	64.2	
17:30	15:00	44.4	35.5	70.0	
17:45	15:00	44.1	34.4	63.0	
18:00	15:00	41.3	35.0	59.4	
18:15	15:00	38.8	35.0	56.6	
18:30	15:00	39.3	34.6	53.6	
18:45	15:00	45.5	35.6	69.1	
19:00	15:00	39.9	35.5	52.9	
19:15	15:00	41.4	38.3	58.5	
19:30	15:00	38.5	36.1	54.0	
19:45	15:00	37.7	35.4	50.0	
20:00	15:00	46.0	34.8	65.6	
20:15	15:00	39.4	34.6	55.1	
20:30	15:00	41.6	37.1	54.8	
20:45	15:00	43.6	42.7	50.1	
21:00	15:00	43.1	41.5	55.3	
21:15	15:00	45.9	42.2	62.4	
21:30	15:00	44.9	43.6	55.7	
21:45	15:00	44.9	43.1	57.7	
22:00	15:00	42.4	39.9	55.3	
22:15	15:00	43.2	40.4	55.0	
22:30	15:00	41.1	39.6	51.7	
22:45	15:00	42.1	40.8	50.6	
Log Average 1500-2300		45.6	38.5	50-80	
Average 1500-2300		43.3	37.5	50-80	

Noise Survey Results

Date: Thursday 29th to Friday 30th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 175

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 9: Castle Gates (New Hall Farm)**

Instrumentation: Norsonic 140 Real Time Analyser (serial no. 1405418)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	44.5	42.2	52.8	
23:15	15:00	48.4	45.8	54.2	
23:30	15:00	50.0	48.2	54.5	
23:45	15:00	48.1	46.6	54.1	
00:00	15:00	48.7	45.4	62.1	Rain
00:15	15:00	47.7	45.9	55.7	Rain
00:30	15:00	45.9	44.7	51.4	
00:45	15:00	46.8	45.8	53.9	Rain
01:00	15:00	47.3	46.1	54.2	
01:15	15:00	46.2	43.3	54.6	
01:30	15:00	45.7	44.3	51.6	
01:45	15:00	45.6	44.0	52.1	
02:00	15:00	46.0	44.7	57.8	
02:15	15:00	49.0	46.9	54.4	
02:30	15:00	49.9	48.2	62.7	
02:45	15:00	48.7	47.5	53.2	
03:00	15:00	51.2	47.3	59.3	Rain
03:15	15:00	47.8	46.1	54.1	Rain
03:30	15:00	49.1	47.4	54.6	Rain
03:45	15:00	52.8	49.9	59.6	Rain
04:00	15:00	55.7	53.5	65.0	Rain
04:15	15:00	56.7	54.0	68.3	Rain
04:30	15:00	51.1	47.3	60.6	Rain
04:45	15:00	47.1	45.4	54.5	Rain
05:00	15:00	46.8	45.1	55.2	
05:15	15:00	47.2	45.3	61.5	
05:30	15:00	49.0	44.9	69.9	Rain
05:45	15:00	46.6	44.9	56.1	
06:00	15:00	46.5	44.9	60.5	
06:15	15:00	47.3	45.5	56.3	
06:30	15:00	47.6	44.6	68.0	
06:45	15:00	47.7	45.1	68.4	Rain
Log Average 2300-0700		49.5	47.2	51-70	
Average 2300-0700		48.4	46.3	51-70	
Average 0700-2300		46.7	37.5	50-80	

Noise Survey Results

Date: Friday 30th July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 176

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 9: Castle Gates (New Hall Farm)**

Instrumentation: Norsonic 140 Real Time Analyser (serial no. 1405418)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	46.4	44.6	60.2	
07:15	15:00	47.1	45.3	60.0	
07:30	15:00	47.5	45.3	62.2	
07:45	15:00	46.7	44.8	62.8	
08:00	15:00	50.9	44.5	74.2	
08:15	15:00	47.8	44.7	62.3	
08:30	15:00	48.5	45.9	67.6	
08:45	15:00	50.5	44.7	75.4	
09:00	15:00	45.2	43.5	58.5	
09:15	15:00	45.6	42.7	59.6	
09:30	15:00	44.2	41.9	59.1	
09:45	15:00	49.2	40.9	81.1	
10:00	15:00	52.2	42.1	75.5	
10:15	15:00	45.4	42.3	60.8	
10:30	15:00	47.3	41.7	60.6	
10:45	15:00	47.4	41.2	68.7	
11:00	15:00	45.8	40.9	67.2	
11:15	15:00	47.1	41.4	65.4	
11:30	15:00	44.2	41.1	55.6	
11:45	15:00	44.3	40.7	57.4	
12:00	15:00	46.4	40.5	68.7	
12:15	15:00	44.8	38.8	64.2	
12:30	15:00	46.9	39.0	67.3	
12:45	15:00	47.7	40.6	66.2	
13:00	15:00	56.0	41.6	74.3	
13:15	15:00	51.2	43.6	69.2	
13:30	15:00	51.0	45.3	63.2	
13:45	15:00	49.2	44.9	59.6	
14:00	15:00	48.1	42.0	65.6	
14:15	15:00	46.9	40.7	63.9	
14:30	15:00	47.5	38.3	72.2	
14:45	15:00	46.1	38.9	64.4	
Log Average 0700-1500		48.6	42.8	56-81	
Average 0700-1500		47.7	42.3	56-81	

Noise Survey Results

Date: Friday 30th July 2021

TABLE 177

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 9: Castle Gates (New Hall Farm)**

Instrumentation: Norsonic 140 Real Time Analyser (serial no. 1405418)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	50.1	37.9	68.2	
15:15	15:00	45.2	39.5	58.4	
15:30	15:00	51.3	39.6	74.2	
15:45	15:00	44.5	38.2	66.2	
16:00	15:00	46.0	39.6	65.7	
16:15	15:00	50.1	39.1	71.9	
16:30	15:00	43.4	38.2	58.3	
16:45	15:00	44.2	38.4	59.7	
17:00	15:00	45.1	38.1	65.2	
17:15	15:00	41.9	37.2	59.7	
17:30	15:00	45.0	37.9	63.0	
17:45	15:00	43.5	36.4	62.3	
18:00	15:00	47.3	38.5	68.2	
18:15	15:00	47.5	37.8	67.5	
18:30	15:00	40.4	35.0	63.2	
18:45	15:00	43.8	33.3	67.9	
19:00	15:00	38.7	33.9	51.5	
19:15	15:00	38.4	34.1	54.9	
19:30	15:00	39.2	34.5	55.6	
19:45	15:00	38.8	34.1	60.0	
20:00	15:00	38.0	33.8	54.0	
20:15	15:00	37.7	33.3	55.8	
20:30	15:00	36.7	32.5	56.0	
20:45	15:00	35.2	32.1	55.7	
21:00	15:00	36.1	32.3	50.7	
21:15	15:00	36.3	33.8	46.7	
21:30	15:00	45.2	38.4	70.6	
21:45	15:00	45.0	39.8	62.6	
22:00	15:00	46.9	42.4	57.8	
22:15	15:00	46.3	41.8	57.7	
22:30	15:00	47.9	43.0	60.5	
22:45	15:00	53.5	45.6	65.8	
Log Average 1500-2300		45.8	38.5	47-74	
Average 1500-2300		43.4	37.2	47-74	

Noise Survey Results

Date: Friday 30th to Saturday 31st July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 178

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 9: Castle Gates (New Hall Farm)**

Instrumentation: Norsonic 140 Real Time Analyser (serial no. 1405418)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	45.2	39.8	59.7	
23:15	15:00	47.2	40.9	69.8	
23:30	15:00	45.9	37.9	59.8	
23:45	15:00	38.5	34.0	49.8	
00:00	15:00	42.1	34.1	64.7	
00:15	15:00	35.8	33.2	42.3	
00:30	15:00	34.6	31.9	43.5	
00:45	15:00	36.1	34.2	43.3	
01:00	15:00	35.3	33.7	41.3	
01:15	15:00	35.7	33.7	45.3	
01:30	15:00	36.3	34.5	45.0	
01:45	15:00	37.1	34.8	43.5	
02:00	15:00	36.5	33.8	47.6	
02:15	15:00	37.6	35.7	45.7	
02:30	15:00	37.2	34.9	45.2	
02:45	15:00	36.1	33.5	51.4	
03:00	15:00	36.5	33.6	48.6	
03:15	15:00	35.6	32.3	47.1	
03:30	15:00	33.6	31.6	40.2	
03:45	15:00	37.0	32.3	46.5	
04:00	15:00	35.7	33.4	45.6	
04:15	15:00	34.1	32.0	42.7	
04:30	15:00	35.9	32.4	48.1	
04:45	15:00	35.3	33.8	47.7	
05:00	15:00	40.5	34.0	60.6	
05:15	15:00	37.1	33.4	50.1	
05:30	15:00	40.3	33.6	55.3	
05:45	15:00	41.2	34.5	66.1	
06:00	15:00	44.8	35.1	67.2	
06:15	15:00	65.9	35.5	85.3	
06:30	15:00	49.1	34.9	65.3	
06:45	15:00	38.2	34.9	52.8	
Log Average 2300-0700		51.2	34.9	40-85	
Average 2300-0700		39.3	34.3	40-85	
Average 0700-2300		47.4	41.2	47-81	

Noise Survey Results

Date: Saturday 31st July 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 179

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 9: Castle Gates (New Hall Farm)**

Instrumentation: Norsonic 140 Real Time Analyser (serial no. 1405418)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	40.0	34.6	55.5	
07:15	15:00	43.0	35.7	63.0	
07:30	15:00	41.4	34.7	67.5	
07:45	15:00	40.5	35.1	65.1	
08:00	15:00	43.8	37.3	67.8	
08:15	15:00	42.1	35.6	60.6	
08:30	15:00	44.4	35.5	67.1	
08:45	15:00	43.9	35.5	60.3	
09:00	15:00	41.8	34.9	62.6	
09:15	15:00	40.8	34.7	55.4	
09:30	15:00	41.8	35.2	64.3	
09:45	15:00	46.6	35.3	73.2	
10:00	15:00	40.5	35.6	55.4	
10:15	15:00	40.5	35.9	58.0	
10:30	15:00	43.5	36.1	64.3	
10:45	15:00	42.2	36.2	59.8	
11:00	15:00	41.2	35.5	58.3	
11:15	15:00	40.7	35.0	58.4	
11:30	15:00	44.0	35.5	64.5	
11:45	15:00	47.0	36.5	70.1	
12:00	15:00	41.1	34.1	59.9	
12:15	15:00	45.7	35.5	68.0	
12:30	15:00	41.5	34.4	57.3	
12:45	15:00	41.8	34.2	63.0	
13:00	15:00	38.2	33.9	54.7	
13:15	15:00	39.0	32.3	58.3	
13:30	15:00	39.9	33.1	57.1	
13:45	15:00	46.5	33.2	68.8	
14:00	15:00	40.5	34.0	58.2	
14:15	15:00	44.6	36.8	65.0	
14:30	15:00	43.1	35.2	61.9	
14:45	15:00	41.3	34.8	63.3	
Log Average 0700-1500		42.8	35.1	55-73	
Average 0700-1500		42.3	35.1	55-73	

Noise Survey Results

Date: Saturday 31st July 2021

TABLE 180

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 9: Castle Gates (New Hall Farm)**

Instrumentation: Norsonic 140 Real Time Analyser (serial no. 1405418)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	45.0	37.3	68.6	
15:15	15:00	41.5	36.8	57.7	
15:30	15:00	37.6	33.9	58.2	
15:45	15:00	40.6	35.7	58.0	
16:00	15:00	47.3	38.9	66.5	
16:15	15:00	47.2	37.6	69.9	
16:30	15:00	48.4	38.1	68.3	
16:45	15:00	43.7	37.6	63.7	
17:00	15:00	46.3	38.7	67.6	
17:15	15:00	43.0	40.0	58.2	
17:30	15:00	44.5	40.7	62.0	
17:45	15:00	42.3	39.1	62.7	
18:00	15:00	43.4	39.1	72.0	
18:15	15:00	49.1	41.1	68.7	
18:30	15:00	41.6	39.2	51.7	
18:45	15:00	42.3	37.1	60.5	
19:00	15:00	42.6	35.2	64.7	
19:15	15:00	37.0	32.9	53.8	
19:30	15:00	35.5	33.1	48.8	
19:45	15:00	36.5	32.5	55.9	
20:00	15:00	35.0	32.0	62.6	
20:15	15:00	36.9	32.1	52.1	
20:30	15:00	35.7	31.7	53.0	
20:45	15:00	33.3	31.2	43.7	
21:00	15:00	48.0	31.8	75.4	
21:15	15:00	35.0	31.7	51.1	
21:30	15:00	34.9	32.8	43.6	
21:45	15:00	39.4	32.7	63.9	
22:00	15:00	37.9	31.0	56.6	
22:15	15:00	34.8	30.9	57.1	
22:30	15:00	32.3	30.4	39.6	
22:45	15:00	34.0	30.5	55.0	
Log Average 1500-2300		43.0	36.4	40-75	
Average 1500-2300		40.4	35.1	40-75	

Noise Survey Results

Date: Saturday 31st July to Sunday 1st August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 181

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 9: Castle Gates (New Hall Farm)**

Instrumentation: Norsonic 140 Real Time Analyser (serial no. 1405418)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	32.6	30.3	42.4	
23:15	15:00	33.6	31.1	46.0	
23:30	15:00	36.8	31.9	60.6	
23:45	15:00	37.8	35.4	45.7	
00:00	15:00	41.0	36.5	53.1	
00:15	15:00	43.4	38.4	54.2	
00:30	15:00	36.9	34.7	47.2	
00:45	15:00	35.6	33.5	42.1	
01:00	15:00	34.6	32.0	42.6	
01:15	15:00	36.0	34.2	44.3	
01:30	15:00	35.5	33.2	49.0	
01:45	15:00	33.6	31.5	41.8	
02:00	15:00	34.5	31.9	47.6	
02:15	15:00	35.9	33.8	49.5	
02:30	15:00	36.4	34.1	45.0	
02:45	15:00	35.5	33.2	42.2	
03:00	15:00	39.1	37.1	50.1	
03:15	15:00	39.1	35.5	51.2	
03:30	15:00	36.7	33.8	46.2	
03:45	15:00	36.4	33.0	44.6	
04:00	15:00	35.1	32.7	40.8	
04:15	15:00	36.1	33.8	44.0	
04:30	15:00	36.4	33.6	50.6	
04:45	15:00	35.1	32.7	45.1	
05:00	15:00	39.9	34.0	61.0	
05:15	15:00	39.5	37.0	53.6	
05:30	15:00	42.9	36.7	62.3	
05:45	15:00	45.4	36.2	73.1	
06:00	15:00	51.4	36.8	75.8	
06:15	15:00	43.0	35.4	67.1	
06:30	15:00	39.7	34.8	61.0	
06:45	15:00	39.8	34.3	61.7	
Log Average 2300-0700		40.6	34.5	41-76	
Average 2300-0700		38.0	34.2	41-76	
Average 0700-2300		42.9	35.8	40-75	

Noise Survey Results

Date: Sunday 1st August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 182

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 9: Castle Gates (New Hall Farm)**

Instrumentation: Norsonic 140 Real Time Analyser (serial no. 1405418)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	38.0	35.0	55.0	
07:15	15:00	41.1	36.0	57.7	
07:30	15:00	43.1	37.8	56.6	
07:45	15:00	43.9	38.7	58.5	
08:00	15:00	47.9	37.1	73.1	
08:15	15:00	50.6	36.6	75.8	
08:30	15:00	45.7	35.5	62.5	
08:45	15:00	39.6	35.2	59.0	
09:00	15:00	38.1	34.4	52.3	
09:15	15:00	39.8	34.0	62.9	
09:30	15:00	50.9	34.8	72.2	
09:45	15:00	38.2	32.3	56.5	
10:00	15:00	40.1	33.5	58.1	
10:15	15:00	44.4	35.3	71.6	
10:30	15:00	40.0	34.2	57.3	
10:45	15:00	39.6	35.0	56.5	
11:00	15:00	39.7	34.3	58.3	
11:15	15:00	38.7	34.5	54.2	
11:30	15:00	44.5	37.2	68.8	
11:45	15:00	40.1	35.9	55.7	
12:00	15:00	40.9	36.9	55.6	
12:15	15:00	42.2	37.7	59.2	
12:30	15:00	45.9	36.4	67.6	
12:45	15:00	48.7	36.5	76.0	
13:00	15:00	43.1	35.4	63.3	
13:15	15:00	40.1	34.1	55.1	
13:30	15:00	42.7	36.2	58.9	
13:45	15:00	41.7	34.3	57.1	
14:00	15:00	44.2	35.6	57.8	
14:15	15:00	53.6	39.4	76.0	
14:30	15:00	44.1	38.6	67.5	
14:45	15:00	48.6	40.4	71.4	
Log Average 0700-1500		45.3	36.2	52-76	
Average 0700-1500		43.1	35.9	52-76	

Noise Survey Results

Date: Sunday 1st August 2021

TABLE 183

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: **Baseline Sound Survey**

Data: **Position 9: Castle Gates (New Hall Farm)**

Instrumentation: Norsonic 140 Real Time Analyser (serial no. 1405418)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	45.5	39.7	66.6	
15:15	15:00	63.5	40.0	99.3	
15:30	15:00	41.8	39.2	56.7	
15:45	15:00	42.2	37.2	62.6	
16:00	15:00	41.8	38.4	57.4	
16:15	15:00	43.7	40.6	56.7	
16:30	15:00	44.9	40.5	61.2	
16:45	15:00	47.1	37.8	67.8	
17:00	15:00	44.6	38.1	69.1	
17:15	15:00	42.7	37.7	62.5	
17:30	15:00	44.7	38.6	68.5	
17:45	15:00	43.8	39.0	64.6	
18:00	15:00	40.5	37.9	53.7	
18:15	15:00	40.1	37.5	55.5	
18:30	15:00	43.7	38.1	72.6	
18:45	15:00	43.3	37.7	64.8	
19:00	15:00	47.0	39.2	65.2	
19:15	15:00	41.0	38.6	54.4	
19:30	15:00	41.6	36.9	56.8	
19:45	15:00	40.4	35.8	63.1	
20:00	15:00	39.2	35.1	58.9	
20:15	15:00	36.6	34.7	49.1	
20:30	15:00	37.8	34.2	56.0	
20:45	15:00	36.6	33.2	54.1	
21:00	15:00	35.0	32.7	51.9	
21:15	15:00	43.4	33.7	70.7	
21:30	15:00	35.5	33.4	44.7	
21:45	15:00	36.7	34.5	43.3	
22:00	15:00	35.3	33.5	43.1	
22:15	15:00	35.6	33.5	46.2	
22:30	15:00	36.3	34.1	46.1	
22:45	15:00	34.8	33.1	47.6	
Log Average 1500-2300		49.3	37.3	43-99	
Average 1500-2300		41.5	36.7	43-99	

Noise Survey Results

Date: Sunday 1st to Monday 2nd August 2021

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 184

Client: Kronospan Ltd

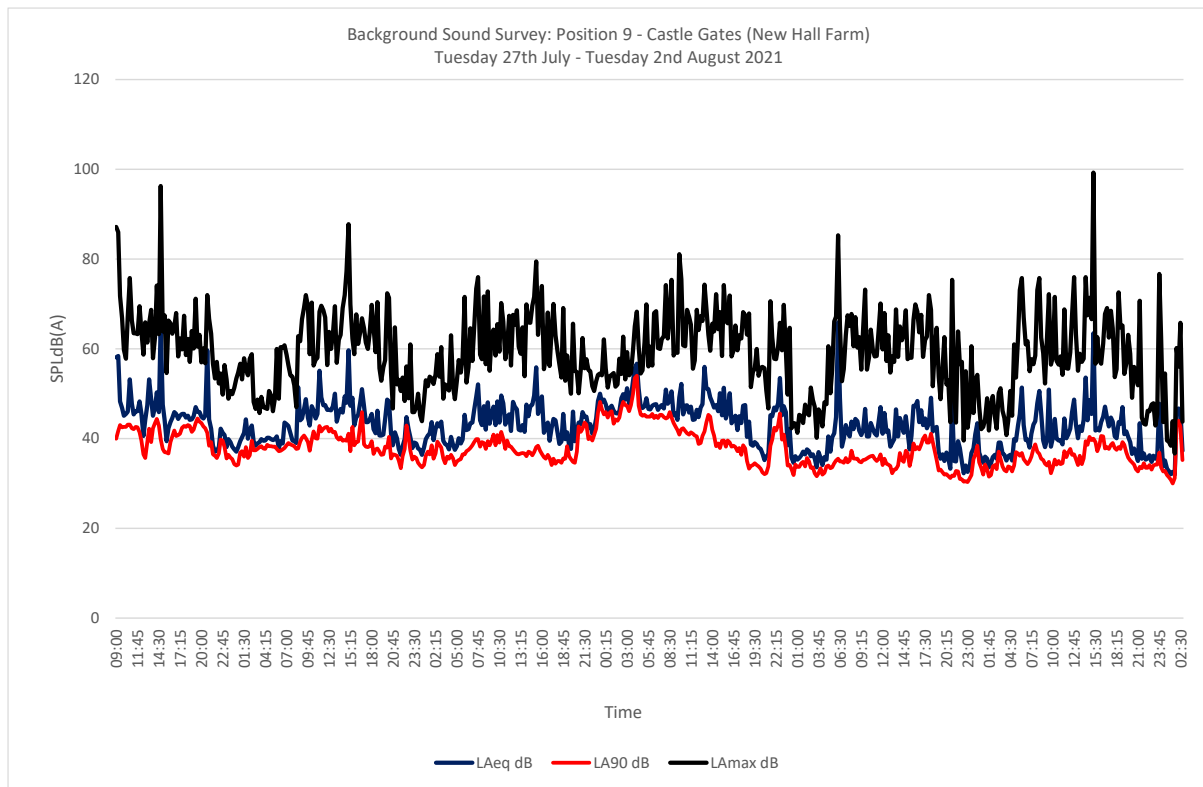
Project: **Baseline Sound Survey**

Data: **Position 9: Castle Gates (New Hall Farm)**

Instrumentation: Norsonic 140 Real Time Analyser (serial no. 1405418)

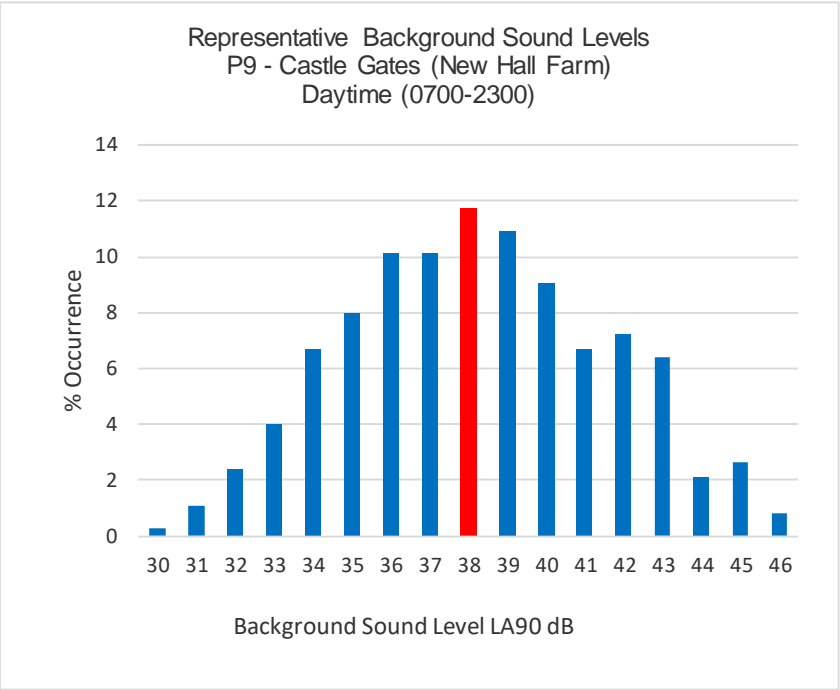
Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	36.2	34.0	47.9	
23:15	15:00	35.5	34.2	42.9	
23:30	15:00	36.0	34.2	45.5	
23:45	15:00	47.8	36.9	76.7	
00:00	15:00	40.5	33.6	62.5	
00:15	15:00	33.8	32.7	43.7	
00:30	15:00	35.1	32.8	54.5	
00:45	15:00	33.3	31.9	39.6	
01:00	15:00	32.8	31.4	39.3	
01:15	15:00	32.1	30.8	38.4	
01:30	15:00	32.6	30.0	43.9	
01:45	15:00	32.0	31.2	36.7	
02:00	15:00	46.4	42.8	60.2	
02:15	15:00	46.7	44.0	56.1	
02:30	15:00	46.2	42.6	65.8	
02:45	15:00	37.3	35.2	43.8	
Log Average 2300-0700		41.6	37.5	55-75	
Average 2300-0700		18.9	17.4	55-75	
Average 0700-2300		47.8	36.8	43-99	
Overall Log Average		46.8	41.1	54-80	With Rain
Overall Log Average		47.8	39.3	40-99	With Rain
Overall Log Average		46.5	39.9	54-80	No Rain
Overall Log Average		47.7	39.3	40-99	No Rain

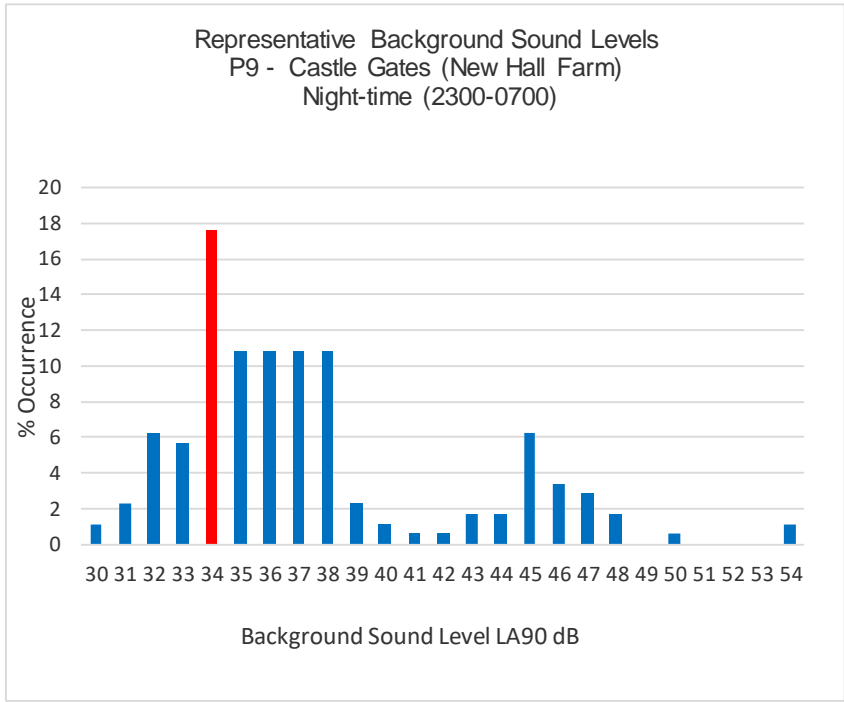


LA90 Representative Levels

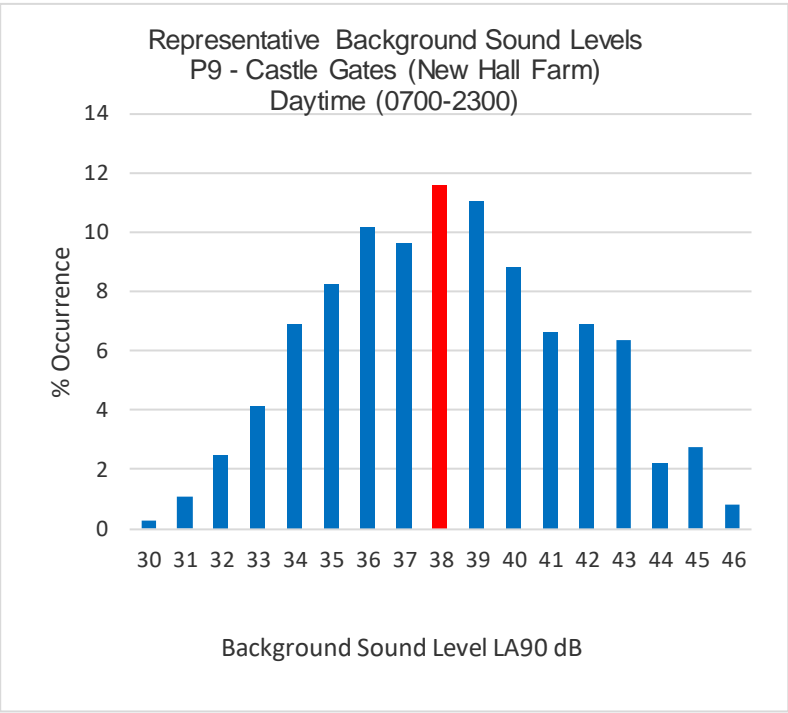
LA90	% Occurrence
30	0.3
31	1.1
32	2.4
33	4.0
34	6.6
35	8.0
36	10.1
37	10.1
38	11.7
39	10.9
40	9.0
41	6.6
42	7.2
43	6.4
44	2.1
45	2.7
46	0.8



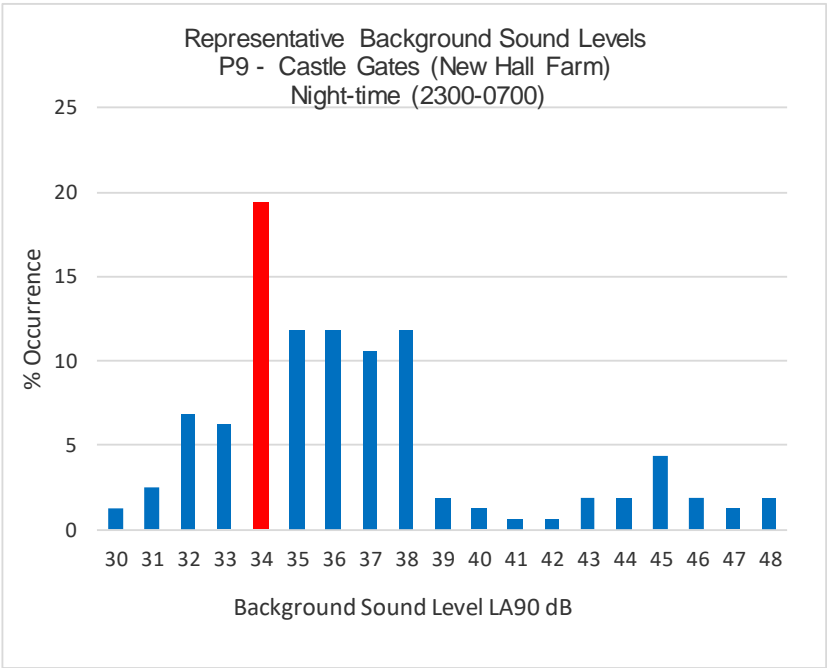
LA90	% Occurrence
30	1.1
31	2.3
32	6.3
33	5.7
34	17.6
35	10.8
36	10.8
37	10.8
38	10.8
39	2.3
40	1.1
41	0.6
42	0.6
43	1.7
44	1.7
45	6.3
46	3.4
47	2.8
48	1.7
49	0.0
50	0.6
51	0.0
52	0.0
53	0.0
54	1.1



LA90	% Occurrence
30	0.3
31	1.1
32	2.5
33	4.1
34	6.9
35	8.3
36	10.2
37	9.6
38	11.6
39	11.0
40	8.8
41	6.6
42	6.9
43	6.3
44	2.2
45	2.8
46	0.8



LA90	% Occurrence
30	1.3
31	2.5
32	6.9
33	6.3
34	19.4
35	11.9
36	11.9
37	10.6
38	11.9
39	1.9
40	1.3
41	0.6
42	0.6
43	1.9
44	1.9
45	4.4
46	1.9
47	1.3
48	1.9



WEATHER DETAILS

Date	Time	Temp Out	Wind Speed	Wind Dir	Bar	Rain
27/07/2021	09:00	24.8	0	ENE	759.9	0
27/07/2021	09:15	24.4	0	SE	759.8	0
27/07/2021	09:30	24.3	0	---	760	0
27/07/2021	09:45	24.4	0	ESE	759.6	0
27/07/2021	10:00	24.9	0	ESE	759.7	0
27/07/2021	10:15	25.3	0	---	759.6	0
27/07/2021	10:30	26	0	---	759.4	0
27/07/2021	10:45	25.7	0	ENE	759.6	0
27/07/2021	11:00	25.4	0	---	759	0
27/07/2021	11:15	25.6	0	SE	758.9	0
27/07/2021	12:30	23.8	0	W	758.9	0.25
27/07/2021	12:45	22.6	0	NW	758.9	0
27/07/2021	13:00	20.5	0.4	WNW	759	0
27/07/2021	13:15	18.9	0.4	NW	759	0
27/07/2021	13:30	18.1	0.4	W	759.1	0
27/07/2021	13:45	16.6	0	WNW	759	3.05
27/07/2021	14:00	15.8	0	WNW	759	0
27/07/2021	14:15	15.7	0	WNW	759	0
27/07/2021	14:30	15.9	0	---	759.2	0
27/07/2021	14:45	15.7	0	---	759.1	0.25
27/07/2021	15:00	15.8	0	---	759	0.51
27/07/2021	15:15	15.9	0	---	758.9	0
27/07/2021	15:30	16.3	0	---	758.8	0.25
27/07/2021	15:45	17.6	0	---	758.6	0
27/07/2021	16:00	17.8	0	---	758.5	0
27/07/2021	16:15	18.2	0	---	758.3	0
27/07/2021	16:30	17.8	0	---	758.3	0
27/07/2021	16:45	17.9	0	---	758.3	0
27/07/2021	17:00	17.8	0	---	758.2	0
27/07/2021	17:15	18.2	0	---	758.1	0.25
27/07/2021	17:30	18.1	0	---	758	0
27/07/2021	17:45	18.4	0	---	758	0
27/07/2021	18:00	18.3	0.4	WNW	757.9	0
27/07/2021	18:15	18.4	0.9	ENE	758	0
27/07/2021	18:30	18.7	0.4	ENE	757.9	0
27/07/2021	18:45	18.4	0.4	ENE	758	0
27/07/2021	19:00	18.3	0.4	ENE	758	0
27/07/2021	19:15	18.4	0.4	ENE	757.9	0
27/07/2021	19:30	18.1	0.4	WNW	757.9	0
27/07/2021	19:45	17.8	0.4	WNW	758	0
27/07/2021	20:00	17.4	0	---	758	0
27/07/2021	20:15	17.2	0	---	758.1	0
27/07/2021	20:30	16.8	0	---	758.2	0
27/07/2021	20:45	16.7	0	---	758	0
27/07/2021	21:00	16.5	0	---	758.1	0
27/07/2021	21:15	16.1	1.3	NW	758.3	1.02
27/07/2021	21:30	15.4	0.9	W	758.3	1.02
27/07/2021	21:45	15.3	0.4	W	758.3	0

		Temp	Wind	Wind		
Date	Time	Out	Speed	Dir	Bar	Rain
27/07/2021	22:00	15.3	0.4	W	758.2	0
27/07/2021	22:15	15.2	0.4	W	758.3	0
27/07/2021	22:30	15.2	0	---	758.3	0
27/07/2021	22:45	15.1	0.4	W	758.4	0
27/07/2021	23:00	14.9	0.4	W	758.2	0
27/07/2021	23:15	14.8	0.4	W	758.3	0
27/07/2021	23:30	14.7	0	---	758.1	0
27/07/2021	23:45	14.5	0.4	W	758	0
28/07/2021	00:00	14.4	0	---	758	0
28/07/2021	00:15	14.4	0.4	W	758	0
28/07/2021	00:30	14.4	0	---	757.9	0
28/07/2021	00:45	14.4	0	---	757.8	0
28/07/2021	01:00	14.3	0	---	757.8	0
28/07/2021	01:15	14.3	0	---	757.8	0
28/07/2021	01:30	14.3	0.4	W	757.7	0
28/07/2021	01:45	14.3	0	---	757.6	0
28/07/2021	02:00	14.3	0	---	757.6	0
28/07/2021	02:15	14.4	0.4	W	757.6	0
28/07/2021	02:30	14.5	1.3	W	757.5	0
28/07/2021	02:45	14.5	0.9	W	757.5	0.51
28/07/2021	03:00	14.4	2.2	W	757.5	0.25
28/07/2021	03:15	14.4	0.4	W	757.4	0
28/07/2021	03:30	14.3	0.4	W	757.3	0
28/07/2021	03:45	14.2	0.4	W	757.3	0
28/07/2021	04:00	14.1	0.4	W	757.3	0
28/07/2021	04:15	14.1	0	---	757.1	0
28/07/2021	04:30	13.8	0.4	W	757.2	0
28/07/2021	04:45	13.8	0.4	W	757.1	0
28/07/2021	05:00	13.8	1.3	W	757.1	0
28/07/2021	05:15	13.6	0.9	W	757.1	0
28/07/2021	05:30	13.6	2.2	W	757.1	0
28/07/2021	05:45	13.4	1.3	W	757.1	0
28/07/2021	06:00	13.5	1.3	W	757.1	0
28/07/2021	06:15	13.2	1.8	W	757	0
28/07/2021	06:30	13.7	1.8	W	757	0
28/07/2021	06:45	13.6	0.9	W	757	0
28/07/2021	07:00	13.6	0.4	NNW	756.9	0
28/07/2021	07:15	13.7	0.4	W	757	0
28/07/2021	07:30	13.8	0	---	756.9	0
28/07/2021	07:45	13.8	0.4	W	756.9	0
28/07/2021	08:00	13.7	0	---	756.9	0
28/07/2021	08:15	14.4	0.4	W	756.8	0
28/07/2021	08:30	14.8	0.4	NNW	756.8	0
28/07/2021	08:45	15.2	0.9	WSW	756.7	0
28/07/2021	09:00	16.1	1.3	W	756.7	0
28/07/2021	09:15	16.2	1.3	WNW	756.8	0
28/07/2021	09:30	16.6	1.8	W	756.6	0
28/07/2021	09:45	16.9	2.2	W	756.6	0

Date	Time	Temp Out	Wind Speed	Wind Dir	Bar	Rain
28/07/2021	10:00	17.8	3.6	W	756.4	0
28/07/2021	10:15	17.8	3.2	W	756.6	0
28/07/2021	10:30	17.8	3.4	W	756.5	0
28/07/2021	10:45	17.9	3.5	W	756.5	0
28/07/2021	11:00	17.3	3.6	WNW	756.5	0
28/07/2021	11:15	16.8	3.8	WNW	756.3	0
28/07/2021	11:30	17.4	3.6	W	756.2	0
28/07/2021	11:45	17.4	3.9	W	756.3	0
28/07/2021	12:00	15.7	3.6	WNW	756.2	0.25
28/07/2021	12:15	15.3	2.2	WNW	756.2	0
28/07/2021	12:30	16	3.1	W	756.1	0.76
28/07/2021	12:45	16.6	3	WNW	756.1	0
28/07/2021	13:00	16.7	3.4	WNW	756.1	0
28/07/2021	13:15	16.1	3.1	W	756.1	0
28/07/2021	13:30	17.6	3.5	W	756.2	0
28/07/2021	13:45	16.7	3.4	W	756.2	0
28/07/2021	14:00	16.4	3.6	W	756.2	0.25
28/07/2021	14:15	18.2	3.7	WNW	756.2	0
28/07/2021	14:30	18.2	3.5	W	756.2	0
28/07/2021	14:45	17.6	3.3	WNW	756.1	0
28/07/2021	15:00	18.4	3.3	W	756.2	0
28/07/2021	15:15	18.8	3.4	WNW	756.1	0
28/07/2021	15:30	18.8	3.6	WNW	756.4	0
28/07/2021	15:45	19	3.3	W	756.4	0
28/07/2021	16:00	17.3	3.4	WNW	756.6	0
28/07/2021	16:15	15.9	2.4	WNW	756.6	0
28/07/2021	16:30	15	3.5	W	756.7	0
28/07/2021	16:45	13.9	3.6	W	756.8	0
28/07/2021	17:00	13.3	2.5	W	757.1	0
28/07/2021	17:15	12.1	1.8	WNW	757.3	0
28/07/2021	17:30	11.9	1.8	W	756.7	0.25
28/07/2021	17:45	13.8	0.4	W	756.6	0
28/07/2021	18:00	15.9	2.2	W	756.4	0
28/07/2021	18:15	16.7	2.7	W	756.6	0
28/07/2021	18:30	15.4	3.6	W	756.7	0
28/07/2021	18:45	15.7	3.6	W	756.5	0
28/07/2021	19:00	16.3	3.1	W	756.4	0
28/07/2021	19:15	15.7	3.2	W	756.6	0
28/07/2021	19:30	15.1	3.1	W	756.8	0
28/07/2021	19:45	15	3	W	756.8	0
28/07/2021	20:00	14.9	1.8	W	756.9	0
28/07/2021	20:15	14.6	2.3	W	756.9	0
28/07/2021	20:30	14.5	2.6	W	756.9	0
28/07/2021	20:45	14	2.9	W	757.2	0.51
28/07/2021	21:00	12.8	3.2	W	757	0.76
28/07/2021	21:15	12.4	2.7	W	757.1	0
28/07/2021	21:30	12.4	2.7	W	757.2	0
28/07/2021	21:45	12.8	2.5	W	757.3	0

Date	Time	Temp Out	Wind Speed	Wind Dir	Bar	Rain
28/07/2021	22:00	12.8	3.1	W	757.5	0
28/07/2021	22:15	12.8	2.2	W	757.4	0
28/07/2021	22:30	12.3	0.4	W	757.1	0
28/07/2021	22:45	12.3	0.4	W	757	0
28/07/2021	23:00	12.1	0	---	757	0
28/07/2021	23:15	12.2	0	---	757.1	0
28/07/2021	23:30	12.2	0.4	W	757.2	0
28/07/2021	23:45	12.9	3.1	W	757.2	0
29/07/2021	00:00	13.3	2.2	W	757.3	0
29/07/2021	00:15	13.4	2.7	W	757.4	0
29/07/2021	00:30	13.3	2.4	W	757.5	0
29/07/2021	00:45	13.1	2.7	W	757.5	0
29/07/2021	01:00	12.7	2.3	W	757.6	0
29/07/2021	01:15	12.7	2.6	W	757.5	0
29/07/2021	01:30	12.8	2.6	W	757.4	0
29/07/2021	01:45	12.8	2.8	W	757.4	0
29/07/2021	02:00	12.9	2.7	W	757.4	0
29/07/2021	02:15	12.9	3.1	W	757.4	0
29/07/2021	02:30	12.5	3.4	W	757.3	0.25
29/07/2021	02:45	12.5	3	W	757.3	0
29/07/2021	03:00	12.6	1.3	W	757.4	0
29/07/2021	03:15	12.7	1.3	W	757.5	0
29/07/2021	03:30	12.6	0.9	W	757.5	0
29/07/2021	03:45	12.7	1.3	W	757.6	0
29/07/2021	04:00	12.8	1.3	W	757.9	0
29/07/2021	04:15	12.7	0.9	W	758	0
29/07/2021	04:30	12.8	0.9	W	758	0
29/07/2021	04:45	12.9	0.9	W	758	0
29/07/2021	05:00	12.6	0.4	W	758.1	0
29/07/2021	05:15	12.5	0.4	W	758.2	0
29/07/2021	05:30	12.7	0.4	W	758.3	0
29/07/2021	05:45	12.7	0.4	W	758.3	0
29/07/2021	06:00	12.8	0.4	W	758.4	0
29/07/2021	06:15	13.1	0.9	W	758.5	0
29/07/2021	06:30	13.1	0.4	W	758.5	0
29/07/2021	06:45	13.3	0.9	W	758.7	0
29/07/2021	07:00	13.5	1.3	W	758.7	0
29/07/2021	07:15	13.7	1.3	W	758.7	0
29/07/2021	07:30	14.1	1.8	W	758.9	0
29/07/2021	07:45	14.4	1.8	W	758.9	0
29/07/2021	08:00	14.5	1.8	W	759	0
29/07/2021	08:15	14.4	1.3	W	758.9	0
29/07/2021	08:30	14.7	1.8	W	759	0
29/07/2021	08:45	15.2	0.9	W	759.1	0
29/07/2021	09:00	15.4	1.3	W	759.3	0
29/07/2021	09:15	15.8	1.8	W	759.4	0
29/07/2021	09:30	16.1	1.3	W	759.4	0
29/07/2021	09:45	16.3	1.8	W	759.2	0

Date	Time	Temp Out	Wind Speed	Wind Dir	Bar	Rain
29/07/2021	10:00	16.9	1.3	W	759.3	0
29/07/2021	10:15	17.1	0.9	WNW	759.6	0
29/07/2021	10:30	17.1	1.3	W	759.4	0
29/07/2021	10:45	17.7	1.3	W	759.4	0
29/07/2021	11:00	17	1.8	W	759.8	0
29/07/2021	11:15	17.7	0.9	W	759.8	0
29/07/2021	11:30	18	1.3	WNW	759.8	0
29/07/2021	11:45	18	1.3	W	759.9	0
29/07/2021	12:00	18.3	1.3	W	759.8	0
29/07/2021	12:15	17.8	1.3	W	759.8	0
29/07/2021	12:30	17.7	1.3	W	759.9	0
29/07/2021	12:45	18	0.9	W	760	0
29/07/2021	13:00	17.7	0.9	W	759.9	0
29/07/2021	13:15	17.6	1.3	W	760	0
29/07/2021	13:30	17.9	1.3	W	760	0
29/07/2021	13:45	17.9	0.9	W	760.1	0
29/07/2021	14:00	18.1	1.3	WNW	760.1	0
29/07/2021	14:15	18.9	0.9	W	759.9	0
29/07/2021	14:30	18.3	0.9	WNW	760.2	0
29/07/2021	14:45	18.9	0.9	W	760.1	0
29/07/2021	15:00	18.3	1.3	W	760.2	0
29/07/2021	15:15	19.7	0.9	W	760.1	0
29/07/2021	15:30	19.6	0.9	W	760.1	0
29/07/2021	15:45	19.9	1.3	W	760	0
29/07/2021	16:00	19.6	1.8	WNW	760.1	0
29/07/2021	16:15	20.3	0.9	W	760.1	0
29/07/2021	16:30	20.3	0.9	W	760.3	0
29/07/2021	16:45	19.9	0.9	W	760.3	0
29/07/2021	17:00	19.2	0.9	W	760.4	0
29/07/2021	17:15	20.3	0.9	W	760.3	0
29/07/2021	17:30	19.4	0.9	W	760.3	0
29/07/2021	17:45	18.9	0.9	W	760.3	0
29/07/2021	18:00	19.7	0.9	W	760.3	0
29/07/2021	18:15	20.1	0.4	W	760.1	0
29/07/2021	18:30	18.7	0.4	W	760	0
29/07/2021	18:45	19.7	0.4	W	759.9	0
29/07/2021	19:00	19.6	0.4	W	759.9	0
29/07/2021	19:15	18.5	0.9	W	759.9	0
29/07/2021	19:30	17.8	0.4	W	759.8	0
29/07/2021	19:45	17.2	0.4	WNW	759.7	0
29/07/2021	20:00	16.7	0.4	W	759.7	0
29/07/2021	20:15	16.4	0	W	759.6	0
29/07/2021	20:30	16.3	0	W	759.4	0
29/07/2021	20:45	16.1	0.4	W	759.5	0
29/07/2021	21:00	15.7	0	---	759.5	0
29/07/2021	21:15	15.4	0	---	759.4	0
29/07/2021	21:30	15.2	0	---	759.3	0
29/07/2021	21:45	14.8	0.4	W	759.2	0

Date	Time	Temp Out	Wind Speed	Wind Dir	Bar	Rain
29/07/2021	22:00	14.2	0.4	W	759.2	0
29/07/2021	22:15	14	0.4	W	759	0
29/07/2021	22:30	13.7	0	---	759	0
29/07/2021	22:45	13.6	0.4	W	759	0
29/07/2021	23:00	13.7	0	---	758.8	0
29/07/2021	23:15	13.6	0.4	W	758.4	0
29/07/2021	23:30	13.4	0	---	758.5	0
29/07/2021	23:45	13.4	0	---	758.4	0
30/07/2021	00:00	13.1	0	---	758.3	1.02
30/07/2021	00:15	12.6	0	---	758.2	0.25
30/07/2021	00:30	12.3	0	W	758	0
30/07/2021	00:45	12.2	0	---	757.6	0.25
30/07/2021	01:00	12.1	0.4	W	757.3	0
30/07/2021	01:15	12	0.4	W	757.3	0
30/07/2021	01:30	11.9	0.4	W	757.1	0
30/07/2021	01:45	11.9	0	---	756.9	0
30/07/2021	02:00	11.9	0.4	W	756.9	0
30/07/2021	02:15	11.9	0	---	756.9	0
30/07/2021	02:30	12.1	0	---	756.5	0
30/07/2021	02:45	12.1	0	---	756.5	0
30/07/2021	03:00	12.1	0	---	756.4	1.02
30/07/2021	03:15	12	0	---	756.2	0.76
30/07/2021	03:30	11.9	0	---	755.9	1.27
30/07/2021	03:45	11.8	0	---	755.7	0.25
30/07/2021	04:00	11.9	0	---	755.4	1.27
30/07/2021	04:15	11.9	0.4	W	755.3	2.29
30/07/2021	04:30	12	0	---	755.1	4.32
30/07/2021	04:45	12.1	0.4	W	754.9	3.81
30/07/2021	05:00	12.1	0.4	W	754.7	1.78
30/07/2021	05:15	12.1	0.4	W	754.5	0
30/07/2021	05:30	12.1	0.4	W	754.4	0.25
30/07/2021	05:45	12.1	0.4	W	754.3	0
30/07/2021	06:00	12.1	0.4	W	754.2	0
30/07/2021	06:15	12.1	0.4	W	754.2	0
30/07/2021	06:30	12.2	0.4	W	754.1	0
30/07/2021	06:45	12.2	0.4	W	754	0.25
30/07/2021	07:00	12.3	0.4	W	754	0
30/07/2021	07:15	12.4	0	---	753.9	0
30/07/2021	07:30	12.6	0.4	W	753.9	0
30/07/2021	07:45	12.7	0.4	W	753.8	0
30/07/2021	08:00	12.8	0.4	W	753.7	0
30/07/2021	08:15	12.9	0.4	W	753.6	0
30/07/2021	08:30	13.1	0.4	W	753.6	0
30/07/2021	08:45	13.1	0.4	NNW	753.7	0
30/07/2021	09:00	13.1	0.4	NNW	753.7	0
30/07/2021	09:15	13.3	0.4	NNW	753.9	0
30/07/2021	09:30	13.4	0.4	NNW	753.8	0
30/07/2021	09:45	13.6	0.4	NNW	753.9	0

Date	Time	Temp Out	Wind Speed	Wind Dir	Bar	Rain
30/07/2021	10:00	13.8	0.4	NW	753.9	0
30/07/2021	10:15	13.9	0.4	NW	754	0
30/07/2021	10:30	13.8	0.4	NW	754.1	0
30/07/2021	10:45	13.8	0.4	NW	754.2	0
30/07/2021	11:00	13.7	0.9	NNW	754.3	0
30/07/2021	11:15	13.7	0.9	NNW	754.3	0
30/07/2021	11:30	13.8	0.4	NNW	754.5	0
30/07/2021	11:45	13.9	0.4	NNW	754.6	0
30/07/2021	12:00	14	0.9	NNW	754.6	0
30/07/2021	12:15	13.8	1.3	NW	754.7	0
30/07/2021	12:30	13.9	1.3	NW	754.7	0
30/07/2021	12:45	13.9	1.8	NNW	754.8	0
30/07/2021	13:00	14.2	1.3	NNW	754.9	0
30/07/2021	13:15	14.2	1.8	NNW	755.1	0
30/07/2021	13:30	14.2	1.3	NNW	755.3	0
30/07/2021	13:45	14	1.3	NNW	755.4	0
30/07/2021	14:00	13.8	1.8	NNW	755.5	0
30/07/2021	14:15	14	1.8	NNW	755.6	0
30/07/2021	14:30	14.8	1.3	NNW	755.7	0
30/07/2021	14:45	15.4	2.2	NNW	755.7	0
30/07/2021	15:00	15.8	1.8	NNW	755.7	0
30/07/2021	15:15	15.6	1.3	NW	756	0
30/07/2021	15:30	15.7	0.4	NNW	756.3	0
30/07/2021	15:45	17.1	0.9	NNW	756.3	0
30/07/2021	16:00	16.4	1.3	NNW	756.5	0
30/07/2021	16:15	15.8	1.3	NNW	756.6	0
30/07/2021	16:30	16.1	1.3	NNW	756.7	0
30/07/2021	16:45	16.1	1.3	NNW	756.9	0
30/07/2021	17:00	16.3	0.9	NW	757	0
30/07/2021	17:15	16.2	1.8	NNW	757	0
30/07/2021	17:30	16.2	2.7	NW	757.3	0
30/07/2021	17:45	16	2.2	NW	757.3	0
30/07/2021	18:00	15.8	1.3	NNW	757.3	0
30/07/2021	18:15	15.9	1.3	NNW	757.3	0
30/07/2021	18:30	16.2	1.3	NW	757.4	0
30/07/2021	18:45	15.9	1.8	NW	757.6	0
30/07/2021	19:00	15.4	0.9	NNW	757.6	0
30/07/2021	19:15	15.2	0.4	NNW	757.7	0
30/07/2021	19:30	15.4	0.9	NNW	757.9	0
30/07/2021	19:45	15.6	0.9	NNW	758	0
30/07/2021	20:00	15.7	1.3	WNW	758	0
30/07/2021	20:15	15.4	2.7	NW	758	0
30/07/2021	20:30	15.3	2.2	WNW	758.1	0
30/07/2021	20:45	15.2	1.8	NW	758.2	0
30/07/2021	21:00	15.1	1.8	WNW	758.3	0
30/07/2021	21:15	14.9	2.7	WNW	758.5	0
30/07/2021	21:30	14.8	1.8	WNW	758.5	0
30/07/2021	21:45	14.8	2.7	WNW	758.5	0

Date	Time	Temp Out	Wind Speed	Wind Dir	Bar	Rain
30/07/2021	22:00	14.8	2.7	WNW	758.4	0
30/07/2021	22:15	14.8	1.8	NW	758.4	0
30/07/2021	22:30	14.8	1.7	NW	758.5	0
30/07/2021	22:45	14.8	2	WNW	758.4	0
30/07/2021	23:00	14.8	2.1	NW	758.5	0
30/07/2021	23:15	14.7	2.3	NW	758.6	0
30/07/2021	23:30	14.5	2.7	NW	758.7	0
30/07/2021	23:45	14.6	2.7	WNW	758.8	0
31/07/2021	00:00	14.4	1.3	NW	759	0
31/07/2021	00:15	14.4	1.3	WNW	759.1	0
31/07/2021	00:30	14.4	2.2	W	759.1	0
31/07/2021	00:45	14.4	0.4	W	759.1	0
31/07/2021	01:00	14.4	1.8	W	759.2	0
31/07/2021	01:15	14.3	0.4	W	759.1	0
31/07/2021	01:30	14.2	0.4	WNW	759.1	0
31/07/2021	01:45	14.1	0.9	W	759.1	0
31/07/2021	02:00	14.1	0.4	W	759	0
31/07/2021	02:15	14.1	0.4	W	759.1	0
31/07/2021	02:30	14.1	0.9	WNW	759	0
31/07/2021	02:45	14.2	0.4	WNW	759	0
31/07/2021	03:00	14.1	0.4	NNW	759	0
31/07/2021	03:15	14.1	0.9	W	759.1	0
31/07/2021	03:30	14.1	0.9	W	759.1	0
31/07/2021	03:45	14.1	1.8	WNW	759.1	0
31/07/2021	04:00	14	0.4	WNW	759.1	0
31/07/2021	04:15	14.1	0	WNW	759.1	0
31/07/2021	04:30	14.1	0	WNW	759	0
31/07/2021	04:45	14.1	0	WNW	759.1	0
31/07/2021	05:00	14.1	0	WNW	759.1	0
31/07/2021	05:15	14.1	0.4	WNW	759.1	0
31/07/2021	05:30	14.1	0.4	WNW	759.2	0
31/07/2021	05:45	14	2.2	W	759.2	0
31/07/2021	06:00	14.2	1.8	WNW	759.3	0
31/07/2021	06:15	14.3	0.4	WNW	759.3	0
31/07/2021	06:30	14.4	2.2	WNW	759.4	0
31/07/2021	06:45	14.5	1.3	W	759.5	0
31/07/2021	07:00	14.5	0.9	WNW	759.5	0
31/07/2021	07:15	14.6	0.9	WNW	759.6	0
31/07/2021	07:30	14.7	1.3	WNW	759.7	0
31/07/2021	07:45	14.7	1.3	WNW	759.7	0
31/07/2021	08:00	14.7	1.3	W	759.7	0
31/07/2021	08:15	14.7	0.4	W	759.7	0
31/07/2021	08:30	14.9	1.3	WNW	759.7	0
31/07/2021	08:45	15.4	2.2	W	759.8	0
31/07/2021	09:00	15.4	1.8	W	759.9	0
31/07/2021	09:15	15.6	1.8	W	760	0
31/07/2021	09:30	15.8	0.4	W	760.1	0
31/07/2021	09:45	16.2	1.2	W	760.1	0

Date	Time	Temp Out	Wind Speed	Wind Dir	Bar	Rain
31/07/2021	10:00	16.1	1.8	WNW	760.1	0
31/07/2021	10:15	16.3	1.3	W	760.3	0
31/07/2021	10:30	16.4	1.8	WNW	760.2	0
31/07/2021	10:45	16.7	0.9	WNW	760.2	0
31/07/2021	11:00	16.7	0.4	W	760.3	0
31/07/2021	11:15	16.9	0.4	WNW	760.3	0
31/07/2021	11:30	16.7	0.9	WNW	760.3	0
31/07/2021	11:45	16.3	0.9	WNW	760.5	0
31/07/2021	12:00	16.1	1.8	NW	760.5	0
31/07/2021	12:15	15.8	1.8	W	760.6	0
31/07/2021	12:30	16	1.3	W	760.5	0
31/07/2021	12:45	16.2	0.4	W	760.6	0
31/07/2021	13:00	16	0.4	WNW	760.6	0
31/07/2021	13:15	16.6	0.4	WNW	760.5	0
31/07/2021	13:30	17.2	0.9	WNW	760.6	0
31/07/2021	13:45	16.9	0.4	WNW	760.7	0
31/07/2021	14:00	16.9	1.3	WNW	760.7	0
31/07/2021	14:15	16.6	0.9	WNW	760.8	0
31/07/2021	14:30	16.6	0.4	WNW	760.9	0
31/07/2021	14:45	17.1	1.3	W	760.8	0
31/07/2021	15:00	17	0.9	WNW	760.9	0
31/07/2021	15:15	16.3	0.9	WNW	761	0
31/07/2021	15:30	16.1	0.4	WNW	760.9	0
31/07/2021	15:45	16.2	0.4	WNW	761	0
31/07/2021	16:00	16.4	1.3	W	761	0
31/07/2021	16:15	16.4	0.4	W	761	0
31/07/2021	16:30	16.7	0.4	W	760.9	0
31/07/2021	16:45	16.8	0.4	W	760.9	0
31/07/2021	17:00	16.7	0	---	760.8	0
31/07/2021	17:15	16.6	0.4	W	760.8	0
31/07/2021	17:30	16.4	0.4	W	760.8	0
31/07/2021	17:45	16.3	0.4	W	760.7	0
31/07/2021	18:00	16.4	0.4	W	760.7	0
31/07/2021	18:15	16.4	0.4	W	760.6	0
31/07/2021	18:30	16.2	0.4	W	760.7	0
31/07/2021	18:45	16.1	0.4	W	760.7	0
31/07/2021	19:00	16.2	0.4	W	760.8	0
31/07/2021	19:15	16.3	0.4	W	760.8	0
31/07/2021	19:30	16.3	0.4	W	760.7	0
31/07/2021	19:45	16.3	0.9	WNW	760.8	0
31/07/2021	20:00	16.3	1.3	WNW	760.8	0
31/07/2021	20:15	16.3	0.9	W	760.8	0
31/07/2021	20:30	16.3	1.3	W	760.7	0
31/07/2021	20:45	16.2	2.2	WNW	760.8	0
31/07/2021	21:00	16.1	0.9	W	760.9	0
31/07/2021	21:15	15.9	2.2	W	760.9	0
31/07/2021	21:30	15.8	1.8	WNW	761	0
31/07/2021	21:45	15.7	2.2	WNW	761.1	0

Date	Time	Temp Out	Wind Speed	Wind Dir	Bar	Rain
31/07/2021	22:00	15.6	1.8	WNW	761	0
31/07/2021	22:15	15.4	1.8	W	761	0
31/07/2021	22:30	15.3	2.2	W	761	0
31/07/2021	22:45	15.3	2.7	WNW	761	0
31/07/2021	23:00	15.3	2.2	WNW	760.9	0
31/07/2021	23:15	15.3	1.3	WNW	760.9	0
31/07/2021	23:30	15.2	1.3	WNW	760.9	0
31/07/2021	23:45	15.3	2.2	WNW	760.8	0
01/08/2021	00:00	15.2	2.7	WNW	760.8	0
01/08/2021	00:15	15.1	1.3	WNW	760.8	0
01/08/2021	00:30	15.1	1.3	WNW	760.8	0
01/08/2021	00:45	15.1	0.4	WNW	760.8	0
01/08/2021	01:00	15.1	1.3	W	760.9	0
01/08/2021	01:15	15	1.3	W	761	0
01/08/2021	01:30	14.9	0.4	WNW	761	0
01/08/2021	01:45	14.8	0.4	WNW	761	0
01/08/2021	02:00	14.6	0.4	WNW	761.1	0
01/08/2021	02:15	14.4	0.4	WNW	761	0
01/08/2021	02:30	14.3	0.4	WNW	761.1	0
01/08/2021	02:45	14.2	0	---	761	0
01/08/2021	03:00	14	0	---	761	0
01/08/2021	03:15	13.8	0.4	WNW	761	0
01/08/2021	03:30	13.6	0.4	WNW	761.1	0
01/08/2021	03:45	13.3	1.3	WNW	761.1	0
01/08/2021	04:00	13.2	1.8	WNW	761.1	0
01/08/2021	04:15	13.1	0.9	W	761.1	0
01/08/2021	04:30	13	0.9	W	761.1	0
01/08/2021	04:45	12.9	0	---	761	0
01/08/2021	05:00	12.9	0.4	W	761.1	0
01/08/2021	05:15	12.8	0.9	W	761.1	0
01/08/2021	05:30	12.8	0.9	W	761.3	0
01/08/2021	05:45	12.8	0.9	WNW	761.2	0
01/08/2021	06:00	12.8	0.9	WNW	761.3	0
01/08/2021	06:15	12.7	0.4	WNW	761.4	0
01/08/2021	06:30	12.5	0.9	WNW	761.4	0
01/08/2021	06:45	12.4	0.4	WNW	761.4	0
01/08/2021	07:00	12.6	1.8	WSW	761.6	0
01/08/2021	07:15	12.7	0.9	WNW	761.5	0
01/08/2021	07:30	12.9	0.9	WNW	761.6	0
01/08/2021	07:45	13.2	1.3	WNW	761.7	0
01/08/2021	08:00	13.4	2.2	WNW	761.7	0
01/08/2021	08:15	13.6	0.9	NW	761.7	0
01/08/2021	08:30	13.8	3.1	W	761.8	0
01/08/2021	08:45	14.1	2.2	WNW	761.9	0
01/08/2021	09:00	14.2	3.1	WNW	761.9	0
01/08/2021	09:15	14.6	2.2	WNW	762.1	0
01/08/2021	09:30	15.1	3.1	WNW	762.1	0
01/08/2021	09:45	15.3	2.2	WNW	762.1	0

Date	Time	Temp Out	Wind Speed	Wind Dir	Bar	Rain
01/08/2021	10:00	15.5	2.2	WNW	762.1	0
01/08/2021	10:15	15.7	0.9	WNW	762.2	0
01/08/2021	10:30	15.5	1.8	WNW	762	0
01/08/2021	10:45	15.7	1.3	W	762	0
01/08/2021	11:00	15.7	2.2	WNW	762.1	0
01/08/2021	11:15	15.9	1.8	W	762.2	0
01/08/2021	11:30	16.1	2.7	WNW	762.2	0
01/08/2021	11:45	16.2	0.4	WNW	762.3	0
01/08/2021	12:00	17.4	0.4	WSW	762.2	0
01/08/2021	12:15	17.5	1.8	WNW	762.4	0
01/08/2021	12:30	17.6	0.9	WNW	762.3	0
01/08/2021	12:45	18.1	0.9	NW	762.4	0
01/08/2021	13:00	17.8	0.9	NW	762.6	0
01/08/2021	13:15	19.5	1.3	NW	762.4	0
01/08/2021	13:30	18.8	0.9	NW	762.7	0
01/08/2021	13:45	18.8	1.3	NW	762.8	0
01/08/2021	14:00	18.7	1.8	NW	763	0
01/08/2021	14:15	18.5	1.8	NW	763.1	0
01/08/2021	14:30	18.8	0.9	NW	763.1	0
01/08/2021	14:45	19.8	0.9	N	763.1	0
01/08/2021	15:00	19.6	0.4	NNW	763.2	0
01/08/2021	15:15	19.9	0.4	NNW	763.1	0
01/08/2021	15:30	19.4	0.4	NNW	763.1	0
01/08/2021	15:45	18.8	0.4	NNW	763.2	0
01/08/2021	16:00	18.6	0.9	WNW	763.3	0
01/08/2021	16:15	18.1	0.9	WNW	763.3	0
01/08/2021	16:30	18.5	0.4	WNW	763.3	0
01/08/2021	16:45	20.3	1.3	WNW	763.3	0
01/08/2021	17:00	19.1	0.4	NW	763.4	0
01/08/2021	17:15	18.1	0.4	NW	763.5	0
01/08/2021	17:30	18.1	0.4	NW	763.5	0
01/08/2021	17:45	18.2	0.4	NW	763.4	0
01/08/2021	18:00	18.3	0.4	NW	763.6	0
01/08/2021	18:15	17.7	0.4	NW	763.4	0
01/08/2021	18:30	17.3	0.4	NW	763.4	0
01/08/2021	18:45	17.7	0.4	NW	763.6	0
01/08/2021	19:00	18.7	0.4	NW	763.7	0
01/08/2021	19:15	18.2	0.4	NW	763.7	0
01/08/2021	19:30	17.8	0.4	NW	763.7	0
01/08/2021	19:45	17.3	0.4	NW	763.9	0
01/08/2021	20:00	16.9	0.4	NW	763.9	0
01/08/2021	20:15	16.3	0.4	NW	764	0
01/08/2021	20:30	15.7	0.4	NW	764	0
01/08/2021	20:45	15.2	0.4	NW	764.2	0
01/08/2021	21:00	14.9	0.4	NW	764.2	0
01/08/2021	21:15	14.5	0.4	NW	764.3	0
01/08/2021	21:30	14.2	0.4	NW	764.4	0
01/08/2021	21:45	13.6	0.4	NW	764.6	0

Date	Time	Temp Out	Wind Speed	Wind Dir	Bar	Rain
01/08/2021	22:00	13.4	0.9	NW	764.7	0
01/08/2021	22:15	13.2	0.4	WNW	764.8	0
01/08/2021	22:30	13.1	0.9	WNW	764.9	0
01/08/2021	22:45	13	0.4	WNW	764.9	0
01/08/2021	23:00	13.2	0.4	WNW	764.8	0
01/08/2021	23:15	13.2	0.4	WNW	764.8	0
01/08/2021	23:30	13.6	0.4	WNW	764.8	0
01/08/2021	23:45	13.8	0.9	WNW	764.7	0
02/08/2021	00:00	13.9	0.9	WNW	764.8	0
02/08/2021	00:15	13.9	1.8	W	764.8	0
02/08/2021	00:30	13.8	1.3	WNW	764.8	0
02/08/2021	00:45	13.9	1.8	WNW	764.8	0
02/08/2021	01:00	13.9	0.9	WNW	764.8	0
02/08/2021	01:15	14.1	1.3	WNW	764.7	0
02/08/2021	01:30	14	0.9	W	764.7	0
02/08/2021	01:45	14	0.4	W	764.7	0
02/08/2021	02:00	13.9	0.9	W	764.7	0
02/08/2021	02:15	13.8	0.4	W	764.7	0
02/08/2021	02:30	13.6	0.4	W	764.7	0
02/08/2021	02:45	13.5	1.8	W	764.7	0
02/08/2021	03:00	13.6	0.9	WNW	764.7	0
02/08/2021	03:15	13.4	0.9	NW	764.7	0
02/08/2021	03:30	13.4	1.3	W	764.7	0
02/08/2021	03:45	13.6	1.3	W	764.7	0
02/08/2021	04:00	13.3	0.4	WNW	764.7	0
02/08/2021	04:15	13.1	0.9	WNW	764.7	0
02/08/2021	04:30	13.1	0.9	W	764.8	0
02/08/2021	04:45	12.9	0	W	764.7	0
02/08/2021	05:00	12.4	0.4	W	764.7	0
02/08/2021	05:15	12	0.4	W	764.8	0
02/08/2021	05:30	11.9	0.4	W	764.8	0
02/08/2021	05:45	11.9	0.4	NW	764.8	0
02/08/2021	06:00	11.9	0.4	NW	764.7	0
02/08/2021	06:15	11.7	0.4	NW	764.8	0
02/08/2021	06:30	11.9	1.3	W	764.8	0
02/08/2021	06:45	12.3	0.4	W	764.8	0
02/08/2021	07:00	12.7	0.4	WNW	764.9	0
02/08/2021	07:15	12.9	0.4	WNW	764.9	0
02/08/2021	07:30	13.2	0.4	WNW	764.8	0
02/08/2021	07:45	13.3	1.3	W	764.8	0
02/08/2021	08:00	13.6	1.3	WNW	764.8	0
02/08/2021	08:15	13.9	0.9	WNW	764.8	0
02/08/2021	08:30	14.2	0.9	W	764.8	0
02/08/2021	08:45	14.8	1.3	W	764.9	0
02/08/2021	09:00	15.7	0.4	NW	765	0
02/08/2021	09:15	16.4	0.4	WSW	765	0
02/08/2021	09:30	17.6	0.9	NNW	764.9	0
02/08/2021	09:45	17	1.3	WNW	764.9	0

Date	Time	Temp Out	Wind Speed	Wind Dir	Bar	Rain
02/08/2021	10:00	16.7	0	---	764.9	0
02/08/2021	10:15	16.8	0	---	764.9	0
02/08/2021	10:30	17.1	0.4	WNW	765	0
02/08/2021	10:45	17.1	0.9	WNW	765	0
02/08/2021	11:00	17.3	0.4	NW	765	0
02/08/2021	11:15	17.8	0.4	NW	764.7	0
02/08/2021	11:30	18.3	1.3	WNW	764.8	0
02/08/2021	11:45	17.9	1.3	WNW	764.8	0
02/08/2021	12:00	18.2	0.4	W	764.8	0
02/08/2021	12:15	18.6	0.9	W	764.8	0
02/08/2021	12:30	19.1	0.4	W	764.8	0
02/08/2021	12:45	19.1	0.9	W	764.8	0
02/08/2021	13:00	19	0.4	W	764.8	0
02/08/2021	13:15	18.7	0.9	W	764.7	0
02/08/2021	13:30	18.7	0.9	WNW	764.9	0
02/08/2021	13:45	18.9	0.4	WNW	764.8	0
02/08/2021	14:00	19.2	0.9	W	764.9	0
02/08/2021	14:15	19.4	0.4	W	764.8	0
02/08/2021	14:30	19.3	0.4	NNW	764.7	0
02/08/2021	14:45	19.1	0.4	NW	764.6	0
02/08/2021	15:00	19.1	0.4	NW	764.6	0
02/08/2021	15:15	19.1	0.4	NW	764.5	0
02/08/2021	15:30	18.8	0.4	NW	764.5	0
02/08/2021	15:45	18.8	0.4	ESE	764.4	0
02/08/2021	16:00	19.3	0.9	NNW	764.4	0
02/08/2021	16:15	18.9	0.4	WNW	764.4	0
02/08/2021	16:30	18.6	0.9	WNW	764.3	0
02/08/2021	16:45	18.4	0.4	WNW	764.3	0
02/08/2021	17:00	18	0.4	WNW	764.3	0
02/08/2021	17:15	17.7	0.4	WNW	764.2	0
02/08/2021	17:30	17.4	0.4	NW	764.2	0
02/08/2021	17:45	17	0.4	NNW	764.2	0
02/08/2021	18:00	16.6	0	---	764.2	0
02/08/2021	18:15	16.4	0	---	764.1	0
02/08/2021	18:30	16.1	0	---	764.2	0
02/08/2021	18:45	15.7	0	---	764.2	0
02/08/2021	19:00	15.4	0	---	764.1	0
02/08/2021	19:15	15.3	0	---	764.2	0
02/08/2021	19:30	15.3	0	---	764.2	0
02/08/2021	19:45	15.4	0	---	764.2	0
02/08/2021	20:00	15.4	0	---	764.3	0
02/08/2021	20:15	15.3	0	---	764.2	0
02/08/2021	20:30	15.1	0	---	764.3	0
02/08/2021	20:45	14.6	0	---	764.3	0
02/08/2021	21:00	13.9	0	---	764.4	0
02/08/2021	21:15	13.6	0	---	764.6	0
02/08/2021	21:30	13.4	0	---	764.6	0
02/08/2021	21:45	13.4	0	W	764.7	0

Date	Time	Temp Out	Wind Speed	Wind Dir	Bar	Rain
02/08/2021	22:00	13.5	0	---	764.8	0
02/08/2021	22:15	13.1	0	WNW	764.6	0
02/08/2021	22:30	12.4	0	---	764.5	0
02/08/2021	22:45	11.8	0	---	764.7	0
02/08/2021	23:00	11.4	0	---	764.6	0
02/08/2021	23:15	11.2	0	---	764.6	0
02/08/2021	23:30	11.1	0	---	764.4	0
02/08/2021	23:45	10.9	0	---	764.4	0
03/08/2021	00:00	10.9	0	---	764.4	0
03/08/2021	00:15	11.2	0	---	764.5	0
03/08/2021	00:30	11.2	0	---	764.5	0
03/08/2021	00:45	11.2	0	---	764.4	0
03/08/2021	01:00	11.2	0	---	764.3	0
03/08/2021	01:15	11	0	---	764.4	0
03/08/2021	01:30	10.7	0	---	764.2	0
03/08/2021	01:45	10.4	0	---	764.2	0
03/08/2021	02:00	10.1	0	---	764.2	0
03/08/2021	02:15	9.7	0	---	764.1	0
03/08/2021	02:30	9.3	0	---	764.1	0
03/08/2021	02:45	9	0	---	764	0
03/08/2021	03:00	8.9	0	---	763.9	0
03/08/2021	03:15	8.8	0	---	764	0
03/08/2021	03:30	8.6	0	---	764	0
03/08/2021	03:45	8.4	0	---	764.1	0
03/08/2021	04:00	8.2	0	---	764	0
03/08/2021	04:15	8.1	0	---	764	0
03/08/2021	04:30	7.9	0	---	764	0
03/08/2021	04:45	7.8	0	---	763.9	0
03/08/2021	05:00	7.8	0	---	763.9	0
03/08/2021	05:15	7.9	0	---	763.9	0
03/08/2021	05:30	7.9	0	---	763.8	0
03/08/2021	05:45	7.8	0	---	763.8	0
03/08/2021	06:00	7.8	0	---	763.8	0
03/08/2021	06:15	7.7	0	---	763.8	0
03/08/2021	06:30	7.7	0	---	763.8	0
03/08/2021	06:45	7.9	0	---	763.9	0
03/08/2021	07:00	8.1	0	---	763.9	0
03/08/2021	07:15	8.6	0	---	763.9	0
03/08/2021	07:30	9.2	0	---	763.8	0
03/08/2021	07:45	9.8	0	---	763.9	0
03/08/2021	08:00	10.6	0	---	764	0
03/08/2021	08:15	11.4	0	---	764	0
03/08/2021	08:30	12.3	0	---	764.1	0
03/08/2021	08:45	13.3	0	NW	764.1	0
03/08/2021	09:00	14	0	---	763.9	0
03/08/2021	09:15	14.7	0	NW	764	0
03/08/2021	09:30	15.7	0	NNW	764	0
03/08/2021	09:45	15.9	0	WNW	764.1	0

BASELINE SURVEY RESULTS

April 2022 Baseline Survey

STATISTICAL ANALYSIS

	Posn 10 (Day)	Posn 10 (Night)	Posn 11 (Day)	Posn 11 (Night)
Total number of values	229	115	234	115
Number of excluded values	0	0	0	0
Number of binned values	229	115	234	115
Minimum	38	34	36	33
25% Percentile	42	40	46	40
Median	43	43	50	43
75% Percentile	45	45	52	47
Maximum	50	49	60	54
Most common place	43	43	51	42
Mean	43.4	42.7	49.2	43.2
Std. Deviation	2.3	3.5	4.1	4.1
Std. Error of Mean	0.2	0.3	0.3	0.4
Lower 95% CI of mean	43.1	42.0	48.7	42.5
Upper 95% CI of mean	43.7	43.3	49.8	44.0

Noise Survey Results

Date: Friday 1st April 2022

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: Access Road & Lorry Park

Data: **Baseline Sound Survey: Position 10 - Afon Bradley Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

TABLE 1

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90	LAmix (dB)	Observations
09:00	15:00	58.7	55.1	49.5	82.9	Dominated by road traffic noise
09:15	15:00	53.0	55.4	46.7	69.8	
09:30	15:00	51.5	53.3	46.8	69.2	
09:45	15:00	51.9	53.5	46.5	67.9	
10:00	15:00	58.9	57.7	48.1	80.4	
10:15	15:00	54.3	54.1	47.7	72.0	
10:30	15:00	52.0	53.7	47.1	76.5	
10:45	15:00	51.2	52.8	45.9	67.4	
11:00	15:00	49.6	51.6	46.4	56.8	
11:15	15:00	52.0	54.3	47.1	67.5	
11:30	15:00	50.8	52.7	47.0	67.3	
11:45	15:00	50.9	52.9	46.0	69.7	
12:00	15:00	51.1	52.1	46.6	69.6	
12:15	15:00	51.1	52.8	46.3	67.4	
12:30	15:00	50.0	52.4	46.6	60.9	
12:45	15:00	51.1	53.2	46.2	66.1	
13:00	15:00	53.4	56.9	46.1	67.0	
13:15	15:00	50.8	52.9	47.3	66.3	
13:30	15:00	50.7	52.7	46.0	66.3	
13:45	15:00	50.1	51.4	45.6	66.0	
14:00	15:00	52.5	52.3	45.0	72.9	
14:15	15:00	50.8	52.6	45.9	66.4	
14:30	15:00	54.0	57.6	47.0	69.4	
14:45	15:00	51.3	52.0	46.5	68.4	
Log Average 0900-1500		53.0	53.9	46.7	57-83	
Average 0900-1500		52.2	53.6	46.7	57-83	

Noise Survey Results

Date: Friday 1st April 2022

TABLE 2

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: Access Road & Lorry Park

Data: **Baseline Sound Survey: Position 10 - Afon Bradley Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
15:00	15:00	54.0	53.7	47.1	74.7	
15:15	15:00	52.8	53.4	46.5	73.9	
15:30	15:00	52.6	54.4	45.9	75.0	
15:45	15:00	51.0	53.9	45.4	65.1	
16:00	15:00	51.9	53.1	46.2	71.4	
16:15	15:00	49.0	50.8	45.9	62.8	
16:30	15:00	50.2	51.4	44.8	68.8	
16:45	15:00	51.8	51.6	45.6	71.1	
17:00	15:00	50.3	51.5	45.5	67.6	
17:15	15:00	49.2	51.0	45.0	69.1	
17:30	15:00	50.1	52.5	45.4	66.6	
17:45	15:00	49.1	50.4	43.1	69.6	
18:00	15:00	50.2	50.4	43.7	72.0	
18:15	15:00	48.2	49.0	43.4	68.9	
18:30	15:00	45.6	47.6	42.0	66.3	
18:45	15:00	50.0	50.2	43.0	68.4	
19:00	15:00	45.9	48.3	42.1	60.6	
19:15	15:00	58.3	58.0	42.7	75.2	
19:30	15:00	51.4	50.7	42.8	70.6	
19:45	15:00	47.3	47.4	42.3	66.6	
20:00	15:00	46.8	47.6	42.0	68.8	
20:15	15:00	43.6	45.7	40.9	56.9	
20:30	15:00	45.7	47.1	41.6	70.0	
20:45	15:00	50.1	47.6	40.0	70.0	
21:00	15:00	44.8	46.7	40.3	67.3	
21:15	15:00	44.7	46.8	39.7	61.0	
21:30	15:00	43.6	45.6	39.2	60.2	
21:45	15:00	49.5	48.3	38.9	71.0	
22:00	15:00	49.0	47.4	38.0	71.0	
22:15	15:00	43.0	45.8	38.6	51.2	
22:30	15:00	42.5	45.1	38.0	60.7	
22:45	15:00	48.8	46.6	38.4	69.7	
Log Average 1500-2300		50.2	50.8	43.4	51-75	
Average 1500-2300		48.8	49.7	42.6	51-75	

Noise Survey Results

Date: Friday 1st - Saturday 2nd April 2022

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: Access Road & Lorry Park

Data: **Baseline Sound Survey: Position 10 - Afon Bradley Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

TABLE 3

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	42.3	44.9	37.0	55.6	
23:15	15:00	44.2	44.4	36.8	67.5	
23:30	15:00	42.3	42.1	34.3	66.1	
23:45	15:00	38.2	40.6	34.5	49.5	
00:00	15:00	42.9	43.1	35.4	61.9	
00:15	15:00	40.6	43.3	35.8	53.3	
00:30	15:00	39.8	42.2	36.0	52.2	
00:45	15:00	43.8	45.1	41.7	53.3	
01:00	15:00	44.0	46.1	40.2	53.9	
01:15	15:00	43.2	45.4	39.7	52.1	
01:30	15:00	45.2	46.9	42.8	54.3	
01:45	15:00	44.4	45.5	42.5	54.4	
02:00	15:00	44.4	46.3	41.2	63.0	
02:15	15:00	45.0	46.9	42.8	51.0	
02:30	15:00	45.7	47.8	42.1	55.8	
02:45	15:00	46.0	47.8	43.2	53.9	
03:00	15:00	46.0	47.2	44.3	53.8	
03:15	15:00	45.9	47.5	43.4	54.8	
03:30	15:00	46.2	47.5	43.2	58.8	
03:45	15:00	43.4	45.5	40.9	52.1	
04:00	15:00	44.6	46.5	42.0	54.8	
04:15	15:00	44.6	47.4	39.4	55.8	
04:30	15:00	45.2	47.2	42.6	58.0	
04:45	15:00	45.8	47.3	41.5	58.6	
05:00	15:00	43.2	45.1	40.6	51.0	
05:15	15:00	41.5	44.4	35.0	51.2	
05:30	15:00	43.3	46.1	37.8	65.7	
05:45	15:00	47.3	50.0	37.4	71.8	
06:00	15:00	55.6	60.1	42.6	76.5	
06:15	15:00	52.2	54.1	41.7	71.8	
06:30	15:00	51.8	51.7	43.1	70.6	
06:45	15:00	52.8	56.6	44.3	68.6	
Log Average 2300-0700		47.0	49.7	41.1	50-77	
Average 2300-0700		45.0	47.0	40.2	50-77	
Log Average 0900-2300		51.5	52.3	45.0	51-83	

Noise Survey Results

Date: Saturday 2nd April 2022

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 4

Client: Kronospan Ltd

Project: Access Road & Lorry Park

Data: **Baseline Sound Survey: Position 10 - Afon Bradley Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
07:00	15:00	53.3	56.4	44.0	70.0	
07:15	15:00	52.2	56.1	43.7	68.3	
07:30	15:00	57.3	60.6	42.9	75.2	
07:45	15:00	51.3	52.7	41.8	69.3	
08:00	15:00	51.4	54.6	42.2	70.8	
08:15	15:00	52.6	56.2	40.4	72.5	
08:30	15:00	53.8	55.7	41.3	74.0	
08:45	15:00	53.6	55.9	41.0	72.6	
09:00	15:00	52.5	50.3	41.1	75.8	
09:15	15:00	49.6	51.9	43.7	65.9	
09:30	15:00	49.4	53.1	44.0	63.7	
09:45	15:00	51.6	55.0	43.7	69.2	
10:00	15:00	51.9	53.3	43.3	71.4	
10:15	15:00	46.8	48.6	42.7	66.2	
10:30	15:00	46.5	48.9	42.2	60.9	
10:45	15:00	49.1	49.6	42.5	68.3	
11:00	15:00	47.6	48.8	43.9	73.1	
11:15	15:00	48.3	47.7	42.9	68.7	
11:30	15:00	46.7	47.9	42.6	70.7	
11:45	15:00	47.6	49.4	42.7	63.5	
12:00	15:00	46.5	48.9	42.9	60.8	
12:15	15:00	49.3	49.5	42.4	71.3	
12:30	15:00	47.6	49.4	41.2	64.8	
12:45	15:00	49.4	49.5	41.1	71.8	
13:00	15:00	46.0	47.6	42.1	62.5	
13:15	15:00	46.4	48.6	42.1	59.1	
13:30	15:00	47.7	51.4	41.8	60.0	
13:45	15:00	45.7	47.9	42.2	59.0	
14:00	15:00	51.6	50.1	44.5	72.2	
14:15	15:00	51.5	53.7	43.7	67.6	
14:30	15:00	52.0	56.1	43.0	69.8	
14:45	15:00	50.2	49.9	42.1	68.7	
Log Average 0700-1500		50.8	51.7	42.6	59-76	
Average 0700-1500		49.9	51.7	42.6	59-76	

Noise Survey Results

Date: Saturday 2nd April 2022

TABLE 5

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: Access Road & Lorry Park

Data: **Baseline Sound Survey: Position 10 - Afon Bradley Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	49.4	49.9	42.6	67.8	
15:15	15:00	45.7	47.7	42.0	60.9	
15:30	15:00	48.4	50.6	43.6	63.3	
15:45	15:00	50.3	50.8	45.0	67.8	
16:00	15:00	52.0	52.0	45.1	72.0	
16:15	15:00	49.4	51.8	44.8	61.8	
16:30	15:00	48.9	51.3	41.3	69.0	
16:45	15:00	50.0	50.4	41.7	70.4	
17:00	15:00	46.6	48.8	41.7	67.2	
17:15	15:00	50.1	52.8	41.5	67.1	
17:30	15:00	47.4	49.4	41.6	70.7	
17:45	15:00	47.0	48.2	40.8	66.8	
18:00	15:00	50.1	50.6	43.2	70.8	
18:15	15:00	47.5	49.7	43.2	61.8	
18:30	15:00	47.7	49.0	42.2	66.9	
18:45	15:00	51.3	51.7	41.9	70.4	
19:00	15:00	47.0	48.5	43.2	62.9	
19:15	15:00	51.7	52.1	41.1	69.4	
19:30	15:00	52.0	54.8	43.6	73.2	
19:45	15:00	55.5	59.0	47.6	71.5	
20:00	15:00	55.2	58.3	47.5	74.2	
20:15	15:00	50.3	52.0	45.7	68.3	
20:30	15:00	48.6	50.9	44.2	64.5	
20:45	15:00	49.6	51.0	43.3	69.4	
21:00	15:00	46.3	49.1	41.8	54.9	
21:15	15:00	45.7	48.2	39.7	59.8	
21:30	15:00	45.5	47.3	42.7	55.8	
21:45	15:00	47.3	48.6	44.9	60.5	
22:00	15:00	52.0	52.5	45.7	71.6	
22:15	15:00	48.0	48.5	43.4	67.1	
22:30	15:00	47.8	48.5	42.3	66.3	
22:45	15:00	51.4	52.1	44.3	69.2	
Log Average 1500-2300		50.0	51.9	43.6	55-74	
Average 1500-2300		49.2	50.8	43.2	55-74	

Noise Survey Results

Date: Saturday 2nd - Sunday 3rd April 2022
 Location: Kronospan Ltd, Off Holyhead Road, Chirk
 Client: Kronospan Ltd
 Project: Access Road & Lorry Park
 Data: **Baseline Sound Survey: Position 10 - Afon Bradley Farm**
 Instrumentation: Cirrus 171A Real Time Analyser (G061253)
 Calibration: 94dB

TABLE 6

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	50.5	50.7	44.3	71.9	
23:15	15:00	49.4	51.2	45.2	68.6	
23:30	15:00	51.1	54.8	45.5	64.7	
23:45	15:00	55.5	58.0	49.3	69.1	
00:00	15:00	50.5	52.2	42.5	67.2	
00:15	15:00	46.2	48.1	42.8	55.4	
00:30	15:00	46.8	48.3	41.9	59.2	
00:45	15:00	45.7	47.6	41.7	51.4	
01:00	15:00	47.5	48.7	45.9	53.4	
01:15	15:00	47.2	48.3	45.6	53.2	
01:30	15:00	48.9	50.9	46.6	53.2	
01:45	15:00	48.8	49.6	47.7	53.9	
02:00	15:00	49.2	50.0	48.1	57.0	
02:15	15:00	49.6	51.2	47.6	56.9	
02:30	15:00	48.4	50.5	45.2	56.5	
02:45	15:00	44.4	45.3	43.3	50.1	
03:00	15:00	46.3	47.8	44.0	53.2	
03:15	15:00	48.9	49.9	47.4	55.7	
03:30	15:00	48.7	49.7	47.3	52.9	
03:45	15:00	49.9	50.7	48.9	57.3	
04:00	15:00	50.5	51.6	48.9	60.4	
04:15	15:00	49.5	50.7	47.9	61.5	
04:30	15:00	47.7	49.2	45.5	59.4	
04:45	15:00	47.8	48.9	46.4	53.9	
05:00	15:00	49.4	51.0	47.0	57.8	
05:15	15:00	50.1	51.6	47.4	58.4	
05:30	15:00	51.3	52.3	46.0	69.7	
05:45	15:00	53.8	55.9	46.5	69.1	
06:00	15:00	56.4	60.8	48.5	70.2	
06:15	15:00	53.4	54.3	47.7	70.6	
06:30	15:00	54.7	58.4	47.0	76.2	
06:45	15:00	53.3	56.0	46.7	71.5	
Log Average 2300-0700		50.7	53.0	46.5	50-76	
Average 2300-0700		49.7	51.4	46.1	50-76	
Average 0700-2300		50.4	52.6	43.1	55-76	

Noise Survey Results

Date: Sunday 3rd April 2022

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 7

Client: Kronospan Ltd

Project: Access Road & Lorry Park

Data: **Baseline Sound Survey: Position 10 - Afon Bradley Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
07:00	15:00	52.8	55.5	48.0	70.0	
07:15	15:00	50.9	52.5	47.7	65.1	
07:30	15:00	51.2	51.9	46.8	68.3	
07:45	15:00	54.8	55.1	45.9	71.1	
08:00	15:00	49.6	51.7	44.3	64.7	
08:15	15:00	48.8	52.2	43.1	59.5	
08:30	15:00	49.4	49.9	41.7	70.8	
08:45	15:00	46.3	49.3	40.2	60.2	
09:00	15:00	46.7	49.3	41.1	69.9	
09:15	15:00	52.3	55.7	40.7	70.8	
09:30	15:00	45.3	47.5	41.4	57.0	
09:45	15:00	54.1	52.4	41.7	74.0	
10:00	15:00	48.2	48.8	41.1	71.2	
10:15	15:00	46.3	48.8	41.8	59.0	
10:30	15:00	48.3	50.7	41.5	65.7	
10:45	15:00	48.7	51.7	43.2	59.4	
11:00	15:00	50.3	51.6	42.1	69.3	
11:15	15:00	49.8	49.5	39.7	70.5	
11:30	15:00	49.8	49.1	40.7	74.3	
11:45	15:00	47.5	47.9	40.7	67.5	
12:00	15:00	52.0	52.8	41.4	71.6	
12:15	15:00	50.7	51.0	41.9	71.6	
12:30	15:00	50.6	53.5	41.1	71.6	
12:45	15:00	51.9	51.5	40.8	77.0	
13:00	15:00	46.3	47.0	40.3	67.0	
13:15	15:00	44.6	47.1	40.1	57.8	
13:30	15:00	49.1	50.8	39.4	67.3	
13:45	15:00	51.1	49.3	42.0	72.4	
14:00	15:00	44.7	46.9	40.1	59.0	
14:15	15:00	47.0	48.4	39.4	71.3	
14:30	15:00	47.0	49.2	39.3	65.0	
14:45	15:00	46.8	49.1	38.6	65.2	
Log Average 0700-1500		49.9	51.2	42.5	57-77	
Average 0700-1500		49.2	50.6	41.8	57-77	

Noise Survey Results

Date: Sunday 3rd April 2022

TABLE 8

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: Access Road & Lorry Park

Data: **Baseline Sound Survey: Position 10 - Afon Bradley Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	45.5	48.0	40.6	62.0	
15:15	15:00	46.6	49.5	40.7	62.0	
15:30	15:00	44.0	45.9	40.6	56.8	
15:45	15:00	46.8	47.4	39.9	65.1	
16:00	15:00	43.2	45.0	39.9	56.5	
16:15	15:00	50.2	49.5	40.9	70.1	
16:30	15:00	49.9	47.4	40.9	69.1	
16:45	15:00	51.2	51.5	41.4	69.6	
17:00	15:00	47.4	48.5	42.2	65.8	
17:15	15:00	46.0	48.6	41.8	60.0	
17:30	15:00	47.9	50.1	42.8	65.6	
17:45	15:00	52.5	50.3	43.6	74.5	
18:00	15:00	49.0	50.3	42.9	70.7	
18:15	15:00	46.7	49.0	43.1	61.9	
18:30	15:00	47.5	49.7	42.3	68.1	
18:45	15:00	50.8	51.6	42.7	70.2	
19:00	15:00	50.2	53.3	44.3	61.0	
19:15	15:00	48.7	51.3	42.7	67.7	
19:30	15:00	48.7	49.3	42.4	67.9	
19:45	15:00	48.5	50.0	43.1	68.4	
20:00	15:00	47.0	48.9	43.4	59.6	
20:15	15:00	48.7	51.6	44.3	61.8	
20:30	15:00	49.0	51.6	44.8	59.7	
20:45	15:00	47.1	49.7	42.9	58.9	
21:00	15:00	50.9	51.0	44.2	69.0	
21:15	15:00	46.2	48.1	42.7	62.2	
21:30	15:00	45.0	46.8	42.5	53.3	
21:45	15:00	46.0	47.7	43.7	55.6	
22:00	15:00	49.7	51.9	45.4	66.2	
22:15	15:00	50.0	51.9	44.5	68.2	
22:30	15:00	48.6	50.7	45.4	57.8	
22:45	15:00	47.5	50.0	44.0	56.1	
Log Average 1500-2300		48.5	49.9	42.9	53-75	
Average 1500-2300		48.0	49.6	42.7	53-75	

Noise Survey Results

Date: Sunday 3rd - Monday 4th April 2022

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: Access Road & Lorry Park

Data: **Baseline Sound Survey: Position 10 - Afon Bradley Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

TABLE 9

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
23:00	15:00	47.4	49.8	43.2	61.4	
23:15	15:00	47.0	49.2	42.8	61.7	
23:30	15:00	46.0	48.3	42.0	59.2	
23:45	15:00	44.1	46.0	40.9	56.0	
00:00	15:00	46.7	48.9	43.0	58.1	
00:15	15:00	48.5	50.8	44.6	62.6	
00:30	15:00	45.6	47.8	42.1	55.9	
00:45	15:00	48.4	51.1	42.9	61.3	
01:00	15:00	45.6	47.4	42.8	55.0	
01:15	15:00	42.7	45.6	38.3	51.3	
01:30	15:00	42.6	45.1	39.7	51.5	
01:45	15:00	45.4	47.2	42.2	53.7	
02:00	15:00	49.8	52.7	45.1	58.3	Rain period
02:15	15:00	50.3	53.1	46.2	59.9	Rain period
02:30	15:00	47.8	49.6	45.3	55.5	Rain period
02:45	15:00	48.3	50.4	45.4	58.5	Rain period
03:00	15:00	49.3	52.1	45.1	60.9	Rain period
03:15	15:00	49.7	52.3	44.9	60.9	Rain period
03:30	15:00	50.6	54.2	45.4	61.4	Rain period
03:45	15:00	49.3	51.6	45.8	60.4	Rain period
04:00	15:00	50.2	53.5	45.7	58.6	
04:15	15:00	49.8	51.6	44.9	63.2	
04:30	15:00	48.3	51.2	44.0	59.1	
04:45	15:00	48.1	50.4	43.6	59.3	
05:00	15:00	46.7	48.4	44.0	55.6	
05:15	15:00	47.3	49.5	44.3	56.4	
05:30	15:00	46.4	47.9	44.2	56.6	
05:45	15:00	51.5	53.5	44.6	67.4	
06:00	15:00	55.7	59.7	46.1	69.6	
06:15	15:00	53.9	55.1	45.2	71.4	
06:30	15:00	55.4	58.7	44.7	69.9	
06:45	15:00	50.4	53.0	43.4	70.4	
Log Average 2300-0700		49.5	52.2	44.1	51-71	
Average 2300-0700		48.4	50.8	43.8	51-71	
Average 0700-2300		49.2	50.6	42.7	53-77	
Log Average 2300-0700		48.9	51.6	42.9	51-71	Excluding Rain

Noise Survey Results

Date: Monday 4th April 2022

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 10

Client: Kronospan Ltd

Project: Access Road & Lorry Park

Data: **Baseline Sound Survey: Position 10 - Afon Bradley Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
07:00	15:00	51.2	54.3	44.0	66.6	Rain period
07:15	15:00	50.0	51.5	45.0	67.1	Rain period
07:30	15:00	50.8	53.0	46.0	68.6	Rain period
07:45	15:00	52.5	52.8	46.3	68.5	Rain period
08:00	15:00	51.6	52.6	45.6	67.7	Rain period
08:15	15:00	51.8	53.2	44.7	68.5	Rain period
08:30	15:00	50.3	53.1	44.5	68.7	Rain period
08:45	15:00	52.5	53.2	45.0	68.7	Rain period
09:00	15:00	49.7	51.7	44.2	67.3	
09:15	15:00	51.3	53.2	44.3	67.2	
09:30	15:00	49.1	49.7	45.7	70.2	
09:45	15:00	51.0	50.5	45.5	71.3	
10:00	15:00	51.9	51.9	45.5	70.1	
10:15	15:00	54.3	53.8	45.2	75.2	
10:30	15:00	49.3	50.1	44.9	67.5	
10:45	15:00	50.3	52.7	44.8	67.1	
11:00	15:00	49.0	51.5	44.9	59.3	
11:15	15:00	48.6	50.8	43.7	69.1	
11:30	15:00	52.0	54.6	44.5	67.1	
11:45	15:00	49.6	50.8	44.5	68.0	
12:00	15:00	50.5	50.5	44.2	70.3	
12:15	15:00	47.1	48.7	43.8	61.1	
12:30	15:00	49.7	52.0	43.8	66.5	
12:45	15:00	50.3	52.6	44.5	64.1	
13:00	15:00	50.1	53.1	44.0	65.3	
13:15	15:00	50.0	53.0	45.2	61.5	
13:30	15:00	48.6	51.2	44.5	65.2	
13:45	15:00	50.1	51.6	44.5	67.7	
14:00	15:00	52.7	50.2	43.7	74.3	
14:15	15:00	49.0	51.8	44.4	61.5	
14:30	15:00	51.5	54.5	44.0	66.2	
14:45	15:00	49.5	52.4	45.3	68.3	
Log Average 0700-1500		50.7	52.3	44.7	59-75	
Average 0700-1500		50.5	52.1	44.7	59-75	
Log Average 0700-1500		50.6	52.1	44.6	59-75	Excluding Rain

Noise Survey Results

Date: Monday 4th April 2022

TABLE 11

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: Access Road & Lorry Park

Data: **Baseline Sound Survey: Position 10 - Afon Bradley Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
15:00	15:00	51.4	52.6	44.4	69.9	
15:15	15:00	51.4	49.8	44.4	70.0	
15:30	15:00	51.1	53.4	45.2	70.2	
15:45	15:00	53.0	55.0	45.1	72.5	
16:00	15:00	49.5	48.1	44.3	71.3	
16:15	15:00	48.5	51.0	44.8	63.2	
16:30	15:00	48.5	50.6	45.4	60.4	
16:45	15:00	50.8	52.4	44.8	67.6	
17:00	15:00	47.4	48.6	44.7	64.4	Rain period
17:15	15:00	48.2	49.9	44.9	63.0	Rain period
17:30	15:00	50.1	53.0	44.9	64.7	Rain period
17:45	15:00	47.6	49.3	44.3	65.7	Rain period
18:00	15:00	49.7	50.7	44.2	69.0	
18:15	15:00	50.4	52.1	44.1	71.9	
18:30	15:00	49.7	51.4	43.4	71.3	
18:45	15:00	49.5	50.6	42.6	73.6	
19:00	15:00	59.0	57.6	42.4	75.2	Rain period
19:15	15:00	49.0	50.9	41.9	65.8	Rain period
19:30	15:00	47.9	47.4	41.3	65.7	Rain period
19:45	15:00	51.8	50.8	41.9	70.8	Rain period
20:00	15:00	49.0	49.9	41.8	68.0	Rain period
20:15	15:00	44.0	45.9	40.9	54.2	Rain period
20:30	15:00	44.1	46.2	41.2	53.8	Rain period
20:45	15:00	49.0	47.5	40.8	70.3	Rain period
21:00	15:00	43.5	45.2	41.1	56.7	Rain period
21:15	15:00	44.9	47.9	40.4	53.7	Rain period
21:30	15:00	52.9	48.1	41.2	72.6	Rain period
21:45	15:00	50.5	45.4	40.1	73.4	Rain period
22:00	15:00	44.9	44.8	40.1	63.6	
22:15	15:00	45.4	46.3	41.0	63.6	
22:30	15:00	43.3	45.3	40.6	56.4	
22:45	15:00	45.5	44.7	40.3	65.0	
Log Average 1500-2300		50.2	50.6	43.1	54-75	
Average 1500-2300		48.8	49.5	42.8	54-75	
Log Average 1500-2300		49.9	50.1	42.8	56-74	Excluding Rain

Noise Survey Results

Date: Monday 4th - Tuesday 5th April 2022

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: Access Road & Lorry Park

Data: **Baseline Sound Survey: Position 10 - Afon Bradley Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

TABLE 12

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
23:00	15:00	45.8	44.8	40.5	68.0	Rain period
23:15	15:00	41.8	43.7	39.1	51.5	Rain period
23:30	15:00	42.2	43.8	39.5	52.5	Rain period
23:45	15:00	54.4	44.6	38.8	73.1	Rain period
00:00	15:00	45.6	43.1	37.5	65.0	Rain period
00:15	15:00	43.6	43.0	38.1	63.7	
00:30	15:00	40.5	42.2	38.0	47.7	
00:45	15:00	55.2	46.0	39.0	72.6	
01:00	15:00	41.3	43.0	38.8	49.0	
01:15	15:00	42.2	43.8	39.6	49.6	
01:30	15:00	41.2	43.1	38.6	48.3	
01:45	15:00	41.5	43.5	38.7	49.5	
02:00	15:00	41.8	43.8	38.6	50.3	
02:15	15:00	41.2	43.0	38.3	49.4	
02:30	15:00	42.7	44.5	39.7	51.6	
02:45	15:00	43.4	45.7	40.6	50.3	
03:00	15:00	42.0	43.9	39.6	49.8	
03:15	15:00	42.1	43.9	39.6	50.3	
03:30	15:00	42.1	44.2	38.3	53.5	
03:45	15:00	41.4	43.6	38.5	52.1	
04:00	15:00	41.8	43.2	38.8	53.6	
04:15	15:00	42.4	44.5	39.0	50.3	
04:30	15:00	51.4	46.5	40.1	73.2	
04:45	15:00	43.7	45.0	40.5	64.1	
05:00	15:00	46.8	47.9	41.6	67.3	
05:15	15:00	45.9	48.4	42.6	55.5	
05:30	15:00	46.2	48.2	43.3	53.1	
05:45	15:00	51.3	51.6	43.7	70.1	
06:00	15:00	54.6	58.9	45.4	70.7	
06:15	15:00	56.7	59.8	46.8	73.2	
06:30	15:00	55.7	58.5	47.2	71.4	
06:45	15:00	52.5	56.1	46.9	68.0	
Log Average 2300-0700		49.2	50.7	41.5	48-73	
Average 2300-0700		45.7	46.4	40.5	48-73	
Average 0700-2300		50.5	51.5	44.0	56-75	
Log Average 2300-0700		48.5	50.6	41.1	52-80	Excluding Rain

Noise Survey Results

Date: Tuesday 5th April 2022

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 13

Client: Kronospan Ltd

Project: Access Road & Lorry Park

Data: **Baseline Sound Survey: Position 10 - Afon Bradley Farm**

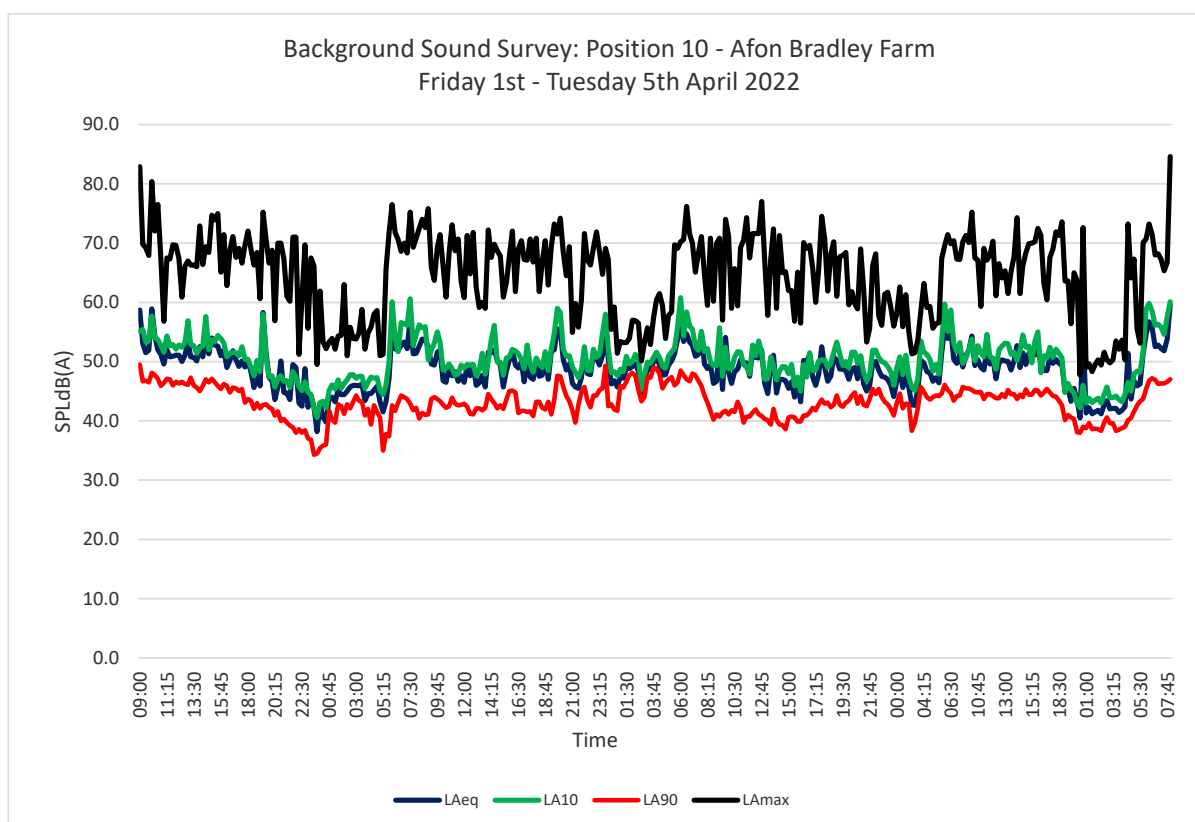
Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

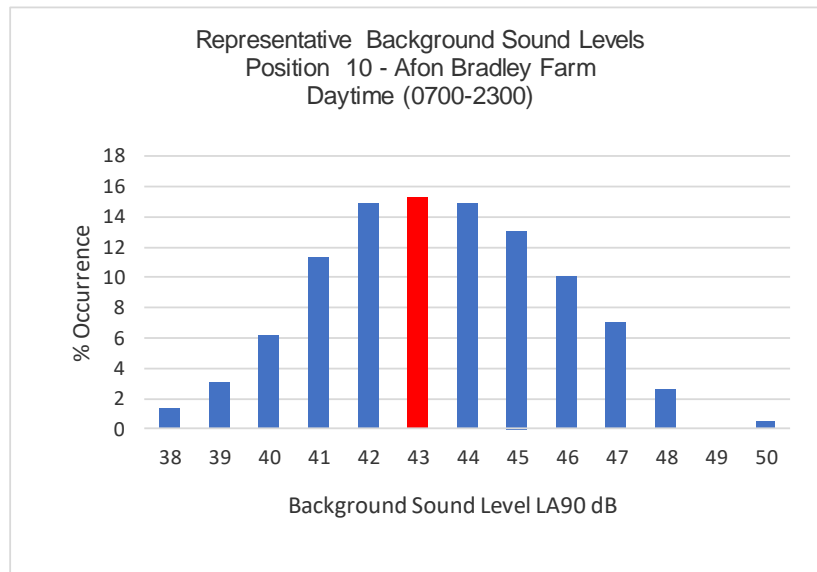
Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
07:00	15:00	52.8	56.3	46.2	68.2	
07:15	15:00	52.2	55.8	46.3	67.2	
07:30	15:00	51.8	54.6	46.3	65.3	
07:45	15:00	53.8	57.6	46.6	66.7	
08:00	15:00	59.6	60.1	47.0	84.6	
Log Average 0700-0815		55.2	57.3	46.4	65-85	
Average 0700-0815		54.0	56.9	46.5	65-85	

Overall Log Average	49.3	51.6	43.9	48-77	
Overall Log Average	50.7	52.1	43.9	51-83	

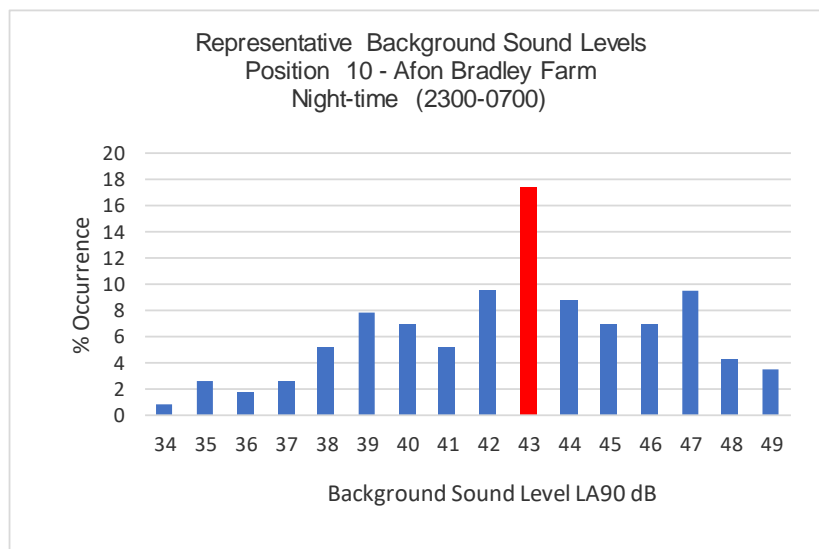
Overall Log Average	49.0	51.4	43.6	52-92	Excluding Rain
Overall Log Average	50.7	52.1	43.9	51-83	Excluding Rain



LA90	% Occurrence
38	1.3
39	3.1
40	6.1
41	11.4
42	14.8
43	15.3
44	14.8
45	13.1
46	10.0
47	7.0
48	2.6
49	0.0
50	0.4



LA90	% Occurrence
34	0.9
35	2.6
36	1.7
37	2.6
38	5.2
39	7.8
40	7.0
41	5.2
42	9.6
43	17.4
44	8.7
45	7.0
46	7.0
47	9.6
48	4.3
49	3.5



Noise Survey Results

Date: Friday 1st April 2022

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 14

Client: Kronospan Ltd

Project: Access Road & Lorry Park

Data: **Baseline Sound Survey: Position 11 - Opposite Lodge Farm Cottage**

Instrumentation: Cirrus 171B Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
07:30	15:00	59.7	63.3	54.7	71.6	Distant road traffic noise
07:45	15:00	63.0	64.3	55.8	84.6	Distant road traffic noise
08:00	15:00	63.3	63.7	55.0	87.2	
08:15	15:00	60.9	62.5	53.2	79.5	
08:30	15:00	62.3	63.5	52.1	79.3	
08:45	15:00	61.8	63.1	52.8	78.5	
09:00	15:00	61.2	63.0	52.9	81.2	
09:15	15:00	61.1	62.2	50.4	81.2	
09:30	15:00	61.0	61.8	50.7	81.8	
09:45	15:00	62.0	64.7	51.6	78.2	
10:00	15:00	63.2	66.4	52.0	81.8	
10:15	15:00	62.2	63.5	52.1	81.5	
10:30	15:00	61.5	63.2	52.1	78.1	
10:45	15:00	60.2	61.6	50.7	77.9	
11:00	15:00	60.7	62.0	50.6	78.1	
11:15	15:00	61.0	63.3	51.9	77.7	
11:30	15:00	60.0	62.1	51.3	75.7	
11:45	15:00	60.0	60.9	50.5	78.6	
12:00	15:00	60.8	61.2	51.7	78.3	
12:15	15:00	60.3	62.0	51.7	77.3	
12:30	15:00	62.9	66.5	52.8	79.9	
12:45	15:00	61.4	63.5	51.3	79.3	
13:00	15:00	60.0	61.2	50.7	77.2	
13:15	15:00	62.2	63.1	52.2	80.4	
13:30	15:00	61.1	61.9	51.2	81.5	
13:45	15:00	60.8	60.2	50.1	83.3	
14:00	15:00	60.2	62.0	51.9	75.9	
14:15	15:00	59.3	61.4	50.9	74.9	
14:30	15:00	62.2	62.3	51.9	84.3	
14:45	15:00	65.7	63.3	53.1	91.8	
Log Average 0730-1500		61.6	63.0	52.2	72-92	
Average 0730-1500		61.4	62.8	52.0	72-92	

Noise Survey Results

Date: Friday 1st April 2022
 Location: Kronospan Ltd, Off Holyhead Road, Chirk
 Client: Kronospan Ltd
 Project: Access Road & Lorry Park
 Data: **Baseline Sound Survey: Position 11 - Opposite Lodge Farm Cottage**
 Instrumentation: Cirrus 171B Real Time Analyser (G066350)
 Calibration: 94dB

TABLE 15

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	61.7	62.4	53.4	83.8	
15:15	15:00	61.6	63.6	53.0	78.0	
15:30	15:00	61.0	63.3	53.2	77.2	
15:45	15:00	61.7	63.1	52.9	78.9	
16:00	15:00	61.1	62.0	54.1	78.4	
16:15	15:00	61.4	63.4	53.5	78.4	
16:30	15:00	61.6	63.3	54.9	78.6	
16:45	15:00	60.7	62.7	53.1	75.1	
17:00	15:00	63.1	65.6	56.2	80.2	
17:15	15:00	62.7	63.5	54.0	83.3	
17:30	15:00	63.0	63.9	53.8	83.0	
17:45	15:00	60.6	62.3	52.4	77.4	
18:00	15:00	63.0	64.8	53.5	79.1	
18:15	15:00	60.8	62.6	52.2	77.0	
18:30	15:00	62.6	64.6	50.8	80.6	
18:45	15:00	60.9	62.6	49.9	80.0	
19:00	15:00	59.8	61.9	49.6	79.2	
19:15	15:00	59.8	62.4	48.5	78.2	
19:30	15:00	61.3	62.9	49.2	81.1	
19:45	15:00	60.5	61.6	50.6	77.4	
20:00	15:00	61.6	62.6	50.0	81.3	
20:15	15:00	59.7	61.3	47.0	76.7	
20:30	15:00	58.6	60.1	45.4	76.8	
20:45	15:00	59.7	61.0	45.4	79.7	
21:00	15:00	58.3	59.5	46.4	81.1	
21:15	15:00	59.2	60.9	45.7	76.9	
21:30	15:00	57.6	59.1	43.7	78.0	
21:45	15:00	57.3	58.3	43.4	79.1	
22:00	15:00	58.5	58.2	38.1	81.4	
22:15	15:00	57.0	58.3	42.9	75.3	
22:30	15:00	55.0	57.7	39.5	75.6	
22:45	15:00	54.8	55.9	40.5	77.9	
Log Average 1500-2300		60.6	62.2	51.2	75-84	
Average 1500-2300		60.2	61.7	49.3	75-84	

Noise Survey Results

Date: Friday 1st - Saturday 2nd April 2022

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 16

Client: Kronospan Ltd

Project: Access Road & Lorry Park

Data: **Baseline Sound Survey: Position 11 - Opposite Lodge Farm Cottage**

Instrumentation: Cirrus 171B Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
23:00	15:00	54.3	55.6	39.0	78.7	
23:15	15:00	54.3	55.3	37.5	75.3	
23:30	15:00	51.5	53.6	33.1	72.9	
23:45	15:00	53.5	54.2	34.9	75.4	
00:00	15:00	64.2	56.2	37.2	92.3	
00:15	15:00	53.9	55.3	35.1	76.4	
00:30	15:00	52.6	56.1	36.7	67.8	
00:45	15:00	52.4	53.0	38.6	75.2	
01:00	15:00	52.6	50.9	39.7	76.3	
01:15	15:00	45.9	48.2	40.6	63.4	
01:30	15:00	55.3	50.5	40.3	79.7	
01:45	15:00	43.8	44.5	39.1	59.3	
02:00	15:00	52.5	50.6	39.1	77.9	
02:15	15:00	47.4	49.5	42.9	64.8	
02:30	15:00	47.2	49.1	41.7	61.6	
02:45	15:00	48.1	49.7	42.1	64.7	
03:00	15:00	47.8	49.2	44.5	61.0	
03:15	15:00	46.5	47.0	42.6	65.6	
03:30	15:00	51.9	51.5	42.6	74.6	
03:45	15:00	45.7	46.4	38.1	63.6	
04:00	15:00	46.5	49.7	37.4	65.1	
04:15	15:00	48.2	51.8	37.2	65.8	
04:30	15:00	47.2	50.7	37.9	64.3	
04:45	15:00	48.7	50.6	41.2	67.2	
05:00	15:00	49.4	53.4	40.4	63.2	
05:15	15:00	49.6	53.8	37.1	63.7	
05:30	15:00	62.8	57.4	39.9	89.1	
05:45	15:00	54.0	56.8	39.7	74.4	
06:00	15:00	53.9	58.1	42.7	74.9	
06:15	15:00	51.9	54.6	42.3	71.5	
06:30	15:00	55.3	57.4	44.7	73.9	
06:45	15:00	52.9	56.4	45.3	65.4	
Log Average 2300-0700		54.4	53.6	40.6	59-92	
Average 2300-0700		51.3	52.4	39.7	59-92	
Log Average 0730-2300		61.0	62.5	51.6	72-92	

Noise Survey Results

Date: Saturday 2nd April 2022

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 17

Client: Kronospan Ltd

Project: Access Road & Lorry Park

Data: **Baseline Sound Survey: Position 11 - Opposite Lodge Farm Cottage**

Instrumentation: Cirrus 171B Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
07:00	15:00	55.6	58.1	46.0	77.0	
07:15	15:00	58.8	59.0	45.7	84.0	
07:30	15:00	56.6	58.8	46.7	74.9	
07:45	15:00	58.7	60.2	43.6	80.8	
08:00	15:00	56.9	59.3	46.3	75.6	
08:15	15:00	59.5	60.3	43.7	79.1	
08:30	15:00	57.9	61.4	46.3	73.7	
08:45	15:00	60.4	61.9	45.2	78.6	
09:00	15:00	56.4	57.9	42.7	75.6	
09:15	15:00	60.5	61.0	47.9	81.8	
09:30	15:00	58.9	59.5	48.0	75.0	
09:45	15:00	58.1	58.9	45.5	78.1	
10:00	15:00	58.9	60.5	48.0	79.6	
10:15	15:00	61.0	63.0	46.5	80.2	
10:30	15:00	60.6	62.1	46.5	77.8	
10:45	15:00	59.7	60.0	47.4	78.1	
11:00	15:00	59.2	60.5	48.5	77.5	
11:15	15:00	59.6	59.7	47.3	79.0	
11:30	15:00	61.0	62.4	48.8	79.9	
11:45	15:00	59.4	61.0	48.1	76.4	
12:00	15:00	60.1	61.0	48.9	80.1	
12:15	15:00	59.5	61.2	46.4	81.2	
12:30	15:00	59.9	61.1	46.6	76.5	
12:45	15:00	61.2	62.6	47.4	80.0	
13:00	15:00	59.8	60.6	47.6	77.6	
13:15	15:00	59.8	61.5	47.0	77.6	
13:30	15:00	60.1	61.8	45.8	77.9	
13:45	15:00	58.4	59.2	45.0	78.6	
14:00	15:00	60.6	62.0	47.7	77.6	
14:15	15:00	60.4	61.6	47.8	77.0	
14:30	15:00	58.0	58.8	46.4	75.9	
14:45	15:00	59.2	60.5	46.5	77.9	
Log Average 0700-1500		59.4	60.5	46.6	74-84	
Average 0700-1500		59.2	60.5	46.6	74-84	

Noise Survey Results

Date: Saturday 2nd April 2022
 Location: Kronospan Ltd, Off Holyhead Road, Chirk
 Client: Kronospan Ltd
 Project: Access Road & Lorry Park
 Data: **Baseline Sound Survey: Position 11 - Opposite Lodge Farm Cottage**
 Instrumentation: Cirrus 171B Real Time Analyser (G066350)
 Calibration: 94dB

TABLE 18

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	61.2	61.7	46.6	83.8	
15:15	15:00	57.6	57.6	45.6	77.9	
15:30	15:00	59.3	59.9	46.0	77.4	
15:45	15:00	61.2	62.0	48.5	83.1	
16:00	15:00	62.5	61.9	50.0	84.8	
16:15	15:00	60.4	60.3	47.7	80.3	
16:30	15:00	58.9	59.1	44.0	76.6	
16:45	15:00	61.6	63.4	45.8	79.3	
17:00	15:00	58.7	59.4	46.6	76.0	
17:15	15:00	60.6	62.9	45.6	77.1	
17:30	15:00	61.1	62.8	47.9	81.6	
17:45	15:00	61.5	63.1	47.8	80.9	
18:00	15:00	59.2	60.5	47.0	76.5	
18:15	15:00	59.8	61.2	44.2	79.0	
18:30	15:00	59.1	58.5	44.5	77.6	
18:45	15:00	60.2	61.1	44.2	81.4	
19:00	15:00	59.5	60.5	45.7	77.1	
19:15	15:00	60.2	59.2	44.1	88.1	
19:30	15:00	60.2	63.0	47.1	77.5	
19:45	15:00	56.4	60.2	46.1	68.8	
20:00	15:00	61.0	62.5	48.0	84.0	
20:15	15:00	58.1	59.4	44.5	76.5	
20:30	15:00	58.3	59.1	43.9	77.8	
20:45	15:00	58.0	58.1	43.7	79.1	
21:00	15:00	58.2	58.6	42.8	76.6	
21:15	15:00	54.5	57.6	35.7	72.8	
21:30	15:00	57.8	58.5	44.5	77.3	
21:45	15:00	58.6	57.7	40.2	81.5	
22:00	15:00	57.8	59.0	46.7	76.6	
22:15	15:00	58.2	60.0	45.5	78.3	
22:30	15:00	52.7	55.5	41.6	73.1	
22:45	15:00	56.5	56.7	41.9	80.2	
Log Average 1500-2300		59.4	60.4	45.8	69-88	
Average 1500-2300		59.0	60.0	45.1	69-88	

Noise Survey Results

Date: Saturday 2nd - Sunday 3rd April 2022
 Location: Kronospan Ltd, Off Holyhead Road, Chirk
 Client: Kronospan Ltd
 Project: Access Road & Lorry Park
 Data: **Baseline Sound Survey: Position 11 - Opposite Lodge Farm Cottage**
 Instrumentation: Cirrus 171B Real Time Analyser (G066350)
 Calibration: 94dB

TABLE 19

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
23:00	15:00	57.5	54.6	40.8	84.2	
23:15	15:00	63.5	57.9	43.3	91.1	
23:30	15:00	54.5	56.0	41.6	74.5	
23:45	15:00	57.2	59.2	46.9	77.2	
00:00	15:00	54.5	54.3	43.6	77.5	
00:15	15:00	53.8	56.2	41.6	75.9	
00:30	15:00	49.2	52.5	40.7	66.0	
00:45	15:00	50.2	53.5	43.1	65.6	
01:00	15:00	54.5	55.9	46.3	75.2	
01:15	15:00	56.6	56.2	46.2	77.9	
01:30	15:00	53.3	54.3	47.8	77.0	
01:45	15:00	52.0	51.8	46.5	72.9	
02:00	15:00	49.4	51.0	46.3	64.0	
02:15	15:00	51.0	51.9	48.5	62.8	
02:30	15:00	49.4	50.7	45.5	61.6	
02:45	15:00	45.4	45.4	42.7	65.3	
03:00	15:00	52.2	51.2	43.9	77.7	
03:15	15:00	49.6	50.6	47.4	62.9	
03:30	15:00	50.4	51.9	48.0	62.7	
03:45	15:00	50.3	50.9	48.3	63.8	
04:00	15:00	54.0	53.0	48.7	77.5	
04:15	15:00	55.1	55.4	47.9	76.2	
04:30	15:00	54.8	54.4	47.5	79.0	
04:45	15:00	48.3	50.1	42.9	64.2	
05:00	15:00	52.6	56.1	45.1	64.8	
05:15	15:00	53.4	55.2	46.6	76.2	
05:30	15:00	59.0	60.0	48.4	80.1	
05:45	15:00	55.8	57.7	46.9	81.7	
06:00	15:00	58.1	60.7	47.9	80.7	
06:15	15:00	60.8	59.9	44.1	86.0	
06:30	15:00	56.8	58.7	44.4	77.8	
06:45	15:00	58.5	59.9	45.8	78.5	
Log Average 2300-0700		55.6	55.9	46.0	62-91	
Average 2300-0700		53.8	54.6	45.5	62-91	
Average 0700-2300		59.4	60.6	46.3	69-88	

Noise Survey Results

Date: Sunday 3rd April 2022

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 20

Client: Kronospan Ltd

Project: Access Road & Lorry Park

Data: **Baseline Sound Survey: Position 11 - Opposite Lodge Farm Cottage**

Instrumentation: Cirrus 171B Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
07:00	15:00	60.2	61.8	47.4	80.8	
07:15	15:00	61.2	63.9	47.4	78.7	
07:30	15:00	62.6	65.2	48.1	83.5	
07:45	15:00	61.0	62.9	48.8	77.9	
08:00	15:00	60.0	61.9	44.2	77.4	
08:15	15:00	61.8	63.7	47.8	83.0	
08:30	15:00	63.9	67.7	48.1	82.4	
08:45	15:00	61.7	63.5	47.1	79.6	
09:00	15:00	62.9	66.2	49.5	83.1	
09:15	15:00	62.9	66.7	50.1	80.6	
09:30	15:00	64.2	68.5	50.8	81.7	
09:45	15:00	63.6	68.0	51.2	77.2	
10:00	15:00	63.7	66.9	49.3	85.4	
10:15	15:00	63.6	67.7	52.4	77.7	
10:30	15:00	63.0	65.7	50.3	78.6	
10:45	15:00	65.4	66.5	53.4	88.7	
11:00	15:00	66.8	66.6	53.8	90.3	
11:15	15:00	61.8	65.0	52.0	82.9	
11:30	15:00	61.8	65.5	51.9	77.8	
11:45	15:00	60.9	64.5	52.3	74.6	
12:00	15:00	60.6	63.5	52.5	77.3	
12:15	15:00	61.2	62.9	51.2	78.8	
12:30	15:00	62.3	65.4	50.7	79.4	
12:45	15:00	61.1	63.0	50.2	79.1	
13:00	15:00	61.7	63.9	52.2	78.3	
13:15	15:00	58.8	60.9	49.8	74.1	
13:30	15:00	57.6	58.5	46.4	75.9	
13:45	15:00	58.7	60.0	49.6	77.3	
14:00	15:00	60.6	62.8	50.6	77.6	
14:15	15:00	59.5	60.9	48.5	76.8	
14:30	15:00	59.8	60.9	49.9	79.3	
14:45	15:00	59.8	60.8	46.9	78.5	
Log Average 0700-1500		62.1	64.8	50.3	74-90	
Average 0700-1500		61.7	64.1	49.8	74-90	

Noise Survey Results

Date: Sunday 3rd April 2022
 Location: Kronospan Ltd, Off Holyhead Road, Chirk
 Client: Kronospan Ltd
 Project: Access Road & Lorry Park
 Data: **Baseline Sound Survey: Position 11 - Opposite Lodge Farm Cottage**
 Instrumentation: Cirrus 171B Real Time Analyser (G066350)
 Calibration: 94dB

TABLE 21

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
15:00	15:00	58.4	59.6	50.3	76.0	
15:15	15:00	59.7	60.6	50.4	79.6	
15:30	15:00	59.5	60.4	50.5	79.4	
15:45	15:00	60.5	61.6	50.6	79.2	
16:00	15:00	62.9	61.4	49.8	90.0	
16:15	15:00	59.3	60.8	51.0	75.9	
16:30	15:00	60.4	62.1	51.2	79.6	
16:45	15:00	62.1	62.3	50.6	86.5	
17:00	15:00	60.2	61.0	49.2	78.9	
17:15	15:00	58.4	60.1	48.7	75.6	
17:30	15:00	59.5	60.8	49.1	78.8	
17:45	15:00	58.8	60.5	49.2	80.1	
18:00	15:00	58.3	60.3	50.1	76.5	
18:15	15:00	61.9	62.6	50.4	83.3	
18:30	15:00	61.9	61.4	46.3	85.9	
18:45	15:00	58.8	60.3	47.5	78.5	
19:00	15:00	58.3	60.3	47.4	74.9	
19:15	15:00	57.2	58.6	45.4	76.4	
19:30	15:00	56.5	58.2	43.3	76.3	
19:45	15:00	57.4	58.5	44.9	77.5	
20:00	15:00	56.6	58.7	46.4	76.1	
20:15	15:00	55.2	56.7	43.7	77.1	
20:30	15:00	57.7	59.5	44.4	74.6	
20:45	15:00	54.8	56.0	43.4	76.6	
21:00	15:00	56.4	59.0	43.8	75.7	
21:15	15:00	57.6	59.2	43.8	77.4	
21:30	15:00	56.3	56.8	42.4	76.9	
21:45	15:00	57.3	59.5	44.7	78.9	
22:00	15:00	56.4	58.6	46.0	75.2	
22:15	15:00	54.8	57.6	45.1	71.4	
22:30	15:00	53.6	55.2	45.4	76.0	
22:45	15:00	53.7	54.1	43.9	77.4	
Log Average 1500-2300		58.7	59.8	48.0	71-90	
Average 1500-2300		58.1	59.4	47.2	71-90	

Noise Survey Results

Date: Sunday 3rd - Monday 4th April 2022
 Location: Kronospan Ltd, Off Holyhead Road, Chirk
 Client: Kronospan Ltd
 Project: Access Road & Lorry Park
 Data: **Baseline Sound Survey: Position 11 - Opposite Lodge Farm Cottage**
 Instrumentation: Cirrus 171B Real Time Analyser (G066350)
 Calibration: 94dB

TABLE 22

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	53.8	54.2	43.6	75.5	
23:15	15:00	52.5	53.5	42.8	73.7	
23:30	15:00	49.7	52.6	42.4	65.8	
23:45	15:00	44.7	46.9	39.7	63.2	
00:00	15:00	49.2	51.0	42.9	66.7	
00:15	15:00	48.6	51.4	44.2	64.4	
00:30	15:00	55.2	50.8	41.6	79.9	
00:45	15:00	49.4	51.7	43.6	67.9	
01:00	15:00	49.1	50.4	41.9	69.4	
01:15	15:00	50.5	50.6	38.8	73.1	
01:30	15:00	47.8	46.5	38.9	66.8	
01:45	15:00	47.5	48.1	41.9	63.0	
02:00	15:00	52.0	55.5	45.4	66.2	
02:15	15:00	52.6	52.4	46.2	76.0	
02:30	15:00	51.2	51.0	44.9	73.1	
02:45	15:00	52.1	53.5	45.9	71.6	
03:00	15:00	52.9	54.8	45.4	74.4	
03:15	15:00	51.2	52.7	45.8	68.8	
03:30	15:00	49.9	51.7	46.0	66.8	
03:45	15:00	52.8	56.1	46.4	66.0	
04:00	15:00	54.0	57.2	46.7	68.3	
04:15	15:00	52.0	55.0	45.2	67.2	
04:30	15:00	54.5	58.8	45.6	67.7	
04:45	15:00	54.5	58.7	44.3	67.7	
05:00	15:00	58.6	62.1	46.8	76.5	
05:15	15:00	57.9	61.9	47.5	70.3	
05:30	15:00	57.5	61.1	47.9	67.3	
05:45	15:00	59.4	62.4	48.3	77.5	
06:00	15:00	58.9	62.0	51.3	76.4	
06:15	15:00	57.5	61.3	48.5	69.8	
06:30	15:00	60.9	63.5	51.0	80.1	
06:45	15:00	60.4	63.0	50.3	77.3	
Log Average 2300-0700		54.9	57.7	46.1	63-80	
Average 2300-0700		53.1	55.1	45.1	63-80	
Average 0700-2300		60.7	63.0	49.3	71-90	
Log Average 2300-0700		54.9	57.9	45.5	63-80	Excluding Rain

Noise Survey Results

Date: Monday 4th April 2022

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 23

Client: Kronospan Ltd

Project: Access Road & Lorry Park

Data: **Baseline Sound Survey: Position 11 - Opposite Lodge Farm Cottage**

Instrumentation: Cirrus 171B Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
07:00	15:00	61.6	62.8	51.6	83.1	
07:15	15:00	61.5	64.0	54.3	77.2	
07:30	15:00	62.1	64.3	55.6	77.4	
07:45	15:00	63.6	65.2	56.7	80.0	
08:00	15:00	63.4	65.2	56.1	79.2	
08:15	15:00	61.4	63.5	54.7	77.9	
08:30	15:00	62.0	64.3	54.2	77.6	
08:45	15:00	62.5	64.8	54.6	79.6	
09:00	15:00	62.5	63.9	51.5	80.1	
09:15	15:00	60.8	63.0	52.8	76.4	
09:30	15:00	62.7	64.3	54.3	81.7	
09:45	15:00	63.7	65.5	54.8	83.2	
10:00	15:00	60.9	63.2	53.3	77.4	
10:15	15:00	61.9	64.2	54.5	76.5	
10:30	15:00	61.2	63.4	53.3	76.3	
10:45	15:00	62.9	64.7	52.8	79.0	
11:00	15:00	64.0	64.2	53.4	89.1	
11:15	15:00	61.4	63.5	53.5	77.6	
11:30	15:00	64.7	64.6	52.7	91.0	
11:45	15:00	62.3	64.5	53.4	78.8	
12:00	15:00	62.0	63.8	52.3	78.8	
12:15	15:00	63.6	66.1	53.9	78.5	
12:30	15:00	62.1	64.3	53.6	78.6	
12:45	15:00	63.5	64.8	54.8	83.9	
13:00	15:00	61.7	63.5	52.6	80.9	
13:15	15:00	62.1	64.1	54.0	77.7	
13:30	15:00	62.2	63.5	53.3	81.1	
13:45	15:00	60.8	63.2	53.0	75.4	
14:00	15:00	60.7	63.3	52.2	74.9	
14:15	15:00	61.5	63.4	54.0	78.1	
14:30	15:00	67.8	69.8	57.0	84.4	
14:45	15:00	62.1	63.8	56.2	78.8	
Log Average 0700-1500		62.6	64.5	54.1	75-91	
Average 0700-1500		62.4	64.3	53.9	75-91	

Log Average 0700-1500	62.7	64.5	53.8	76-91	Excluding Rain
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Noise Survey Results

Date: Monday 4th April 2022

TABLE 24

Location: Kronospan Ltd, Off Holyhead Road, Chirk

Client: Kronospan Ltd

Project: Access Road & Lorry Park

Data: **Baseline Sound Survey: Position 11 - Opposite Lodge Farm Cottage**

Instrumentation: Cirrus 171B Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
15:00	15:00	62.8	65.3	55.9	77.4	
15:15	15:00	62.9	64.8	55.2	81.8	
15:30	15:00	62.7	65.1	54.7	76.9	
15:45	15:00	63.0	64.7	56.9	78.1	
16:00	15:00	62.5	64.8	53.7	80.7	
16:15	15:00	62.0	64.1	55.8	78.4	
16:30	15:00	62.5	64.3	55.6	78.9	
16:45	15:00	61.5	63.5	54.3	76.3	
17:00	15:00	62.6	64.3	56.7	78.4	
17:15	15:00	61.8	63.5	56.0	79.0	
17:30	15:00	61.7	64.1	54.9	75.7	
17:45	15:00	62.3	64.0	53.7	82.5	
18:00	15:00	61.9	64.0	55.3	76.2	
18:15	15:00	60.8	62.8	51.3	77.8	
18:30	15:00	61.4	63.5	52.2	76.4	
18:45	15:00	60.3	62.3	50.7	78.7	
19:00	15:00	61.7	63.9	49.5	79.5	
19:15	15:00	59.1	61.1	47.3	80.1	
19:30	15:00	58.2	60.3	46.8	76.4	
19:45	15:00	58.6	60.6	49.5	75.7	
20:00	15:00	58.6	61.5	48.8	74.5	
20:15	15:00	57.0	59.5	45.7	76.1	
20:30	15:00	60.2	61.4	46.7	79.6	
20:45	15:00	56.8	58.6	42.9	77.2	
21:00	15:00	57.1	59.8	45.7	76.4	
21:15	15:00	57.3	60.3	44.6	76.4	
21:30	15:00	59.1	61.1	43.6	76.7	
21:45	15:00	58.0	59.6	43.2	77.7	
22:00	15:00	56.8	58.3	42.3	78.8	
22:15	15:00	53.9	56.2	43.3	76.3	
22:30	15:00	51.2	53.9	42.2	75.0	
22:45	15:00	54.4	56.8	41.5	75.5	
Log Average 1500-2300		60.5	62.5	52.3	75-83	
Average 1500-2300		59.7	61.8	49.9	75-83	
Log Average 1500-2300		61.0	63.1	53.4	75-83	Excluding Rain

Noise Survey Results

Date: Monday 4th - Tuesday 5th April 2022

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 25

Client: Kronospan Ltd

Project: Access Road & Lorry Park

Data: **Baseline Sound Survey: Position 11 - Opposite Lodge Farm Cottage**

Instrumentation: Cirrus 171B Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	55.8	55.5	41.6	77.5	
23:15	15:00	51.0	53.6	40.3	72.1	
23:30	15:00	53.3	55.2	41.0	70.2	
23:45	15:00	53.2	53.7	39.8	75.4	
00:00	15:00	55.3	55.0	39.9	75.2	
00:15	15:00	51.3	53.8	38.7	72.8	
00:30	15:00	48.5	52.4	39.7	63.9	
00:45	15:00	53.0	49.7	40.0	68.7	
01:00	15:00	48.9	45.6	40.2	73.4	
01:15	15:00	46.7	47.3	40.5	64.9	
01:30	15:00	49.2	48.5	39.9	71.7	
01:45	15:00	47.4	46.9	39.3	67.6	
02:00	15:00	42.0	43.8	39.3	51.5	
02:15	15:00	46.8	47.2	38.9	66.3	
02:30	15:00	46.4	45.0	40.3	66.5	
02:45	15:00	51.2	48.9	40.8	77.5	
03:00	15:00	44.7	45.8	40.1	60.1	
03:15	15:00	49.3	50.7	40.5	68.2	
03:30	15:00	48.3	50.9	39.6	65.4	
03:45	15:00	51.5	54.3	39.8	67.9	
04:00	15:00	50.8	54.2	40.5	67.3	
04:15	15:00	52.0	55.7	40.9	66.2	
04:30	15:00	55.8	58.8	42.4	77.9	
04:45	15:00	53.9	57.9	42.0	68.6	
05:00	15:00	57.0	60.9	46.4	69.9	
05:15	15:00	57.3	61.0	46.8	69.4	
05:30	15:00	58.5	61.9	49.4	71.0	
05:45	15:00	57.8	61.4	48.0	69.6	
06:00	15:00	58.4	61.6	50.5	73.3	
06:15	15:00	58.9	61.6	50.8	74.3	
06:30	15:00	61.3	63.4	53.7	80.0	
06:45	15:00	59.9	62.7	51.5	78.2	
Log Average 2300-0700		54.7	57.3	45.3	52-80	
Average 2300-0700		52.4	53.9	42.6	52-80	
Average 0700-2300		61.7	63.6	53.3	75-91	
Log Average 2300-0700		54.1	56.9	45.1	52-80	Excluding Rain

Noise Survey Results

Date: Tuesday 5th April 2022

Location: Kronospan Ltd, Off Holyhead Road, Chirk

TABLE 26

Client: Kronospan Ltd

Project: Access Road & Lorry Park

Data: **Baseline Sound Survey: Position 11 - Opposite Lodge Farm Cottage**

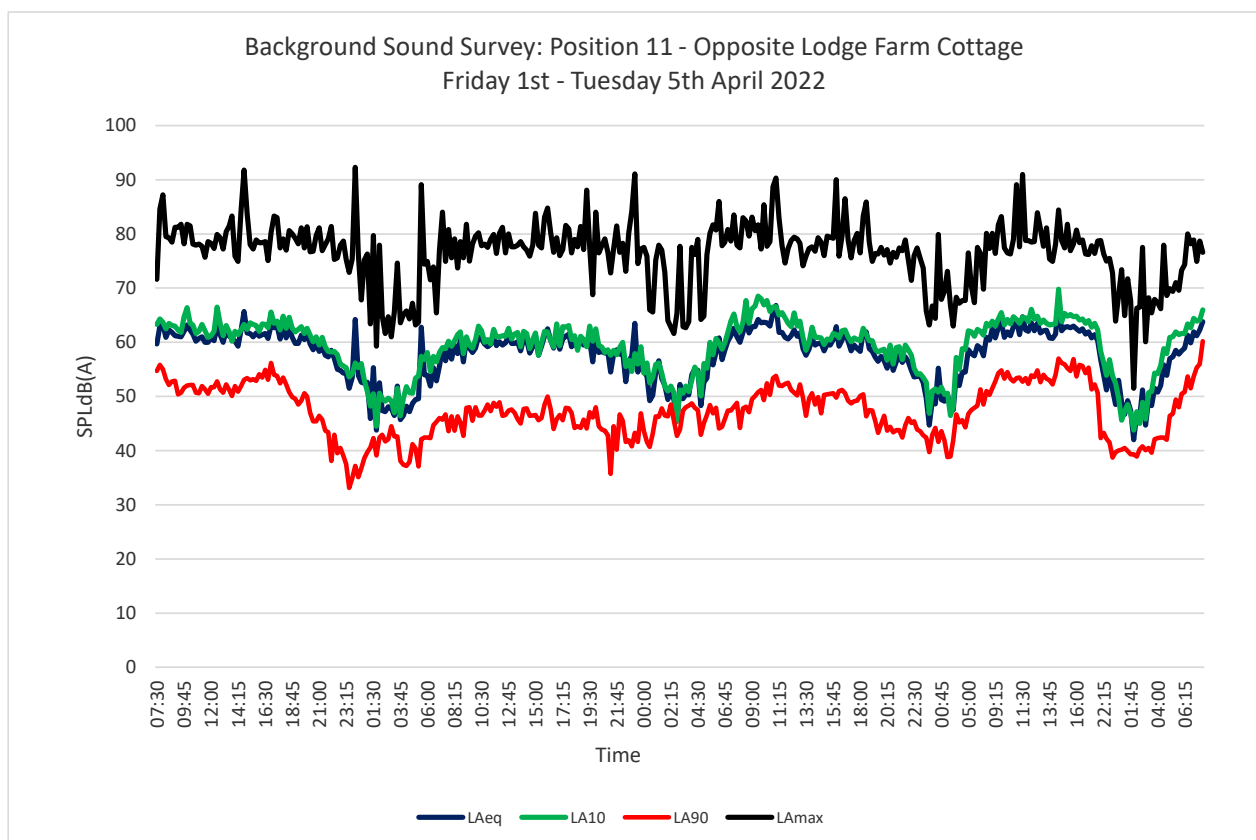
Instrumentation: Cirrus 171B Real Time Analyser (G066350)

Calibration: 94dB

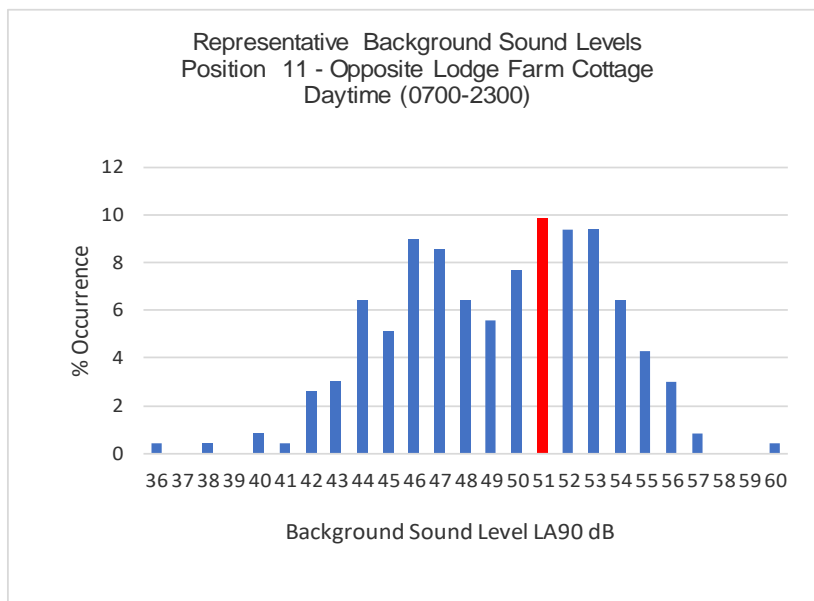
Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
07:00	15:00	61.9	64.4	53.7	78.9	
07:15	15:00	61.2	63.9	55.3	74.9	
07:30	15:00	62.3	64.1	56.0	78.7	
07:45	15:00	63.8	66.0	60.2	76.6	
Log Average 0700-0800		62.4	64.6	57.0	75-79	
Average 0700-0800		62.3	64.6	56.3	75-79	

Overall Log Average	57.7	60.8	49.1	52-92	
Overall Log Average	60.1	60.3	50.1	69-92	

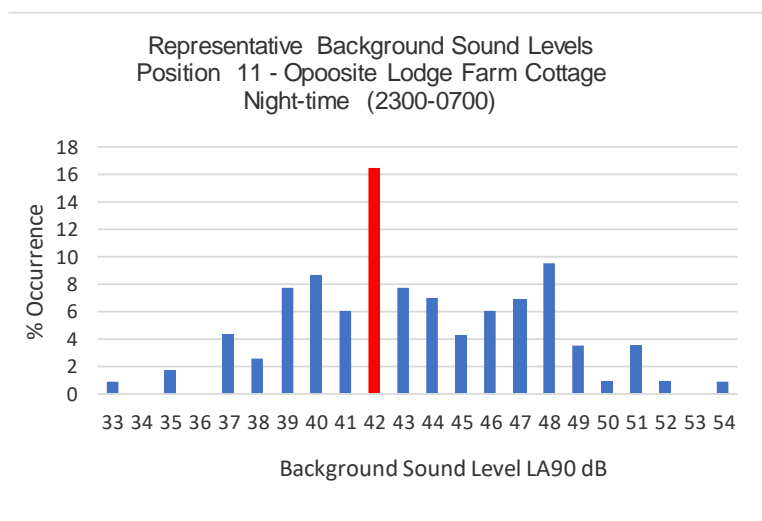
Overall Log Average	54.8	56.2	44.7	52-92	Excluding Rain
Overall Log Average	60.8	62.6	50.9	69-92	Excluding Rain



LA90	% Occurrence
36	0.4
37	0.0
38	0.4
39	0.0
40	0.9
41	0.4
42	2.6
43	3.0
44	6.4
45	5.1
46	9.0
47	8.5
48	6.4
49	5.6
50	7.7
51	9.8
52	9.4
53	9.4
54	6.4
55	4.3
56	3.0
57	0.9
58	0.0
59	0.0
60	0.4



LA90	% Occurrence
33	0.9
34	0.0
35	1.7
36	0.0
37	4.3
38	2.6
39	7.8
40	8.7
41	6.1
42	16.5
43	7.8
44	7.0
45	4.3
46	6.1
47	7.0
48	9.6
49	3.5
50	0.9
51	3.5
52	0.9
53	0.0
54	0.9



APPENDIX 4

OPERATIONAL NOISE LEVELS (INCLUDING MITIGATION) & NOISE MODEL INPUTS

Plant	Design Sound Pressure Levels LAeq dB	Assumed Sound Power Level dBA
Area 2. Access Road & Lorry Park		
HGV movement on access road	75 @ 10m	103
HGV movement into parking area	72 @ 10m	100
HGV Tick-over	63 @ 10m	91
Transformer	63 @ 2m	75
Log loader	78 @ 10m	106
Area 3. Flaker Building & Rail Sidings		
Flaker Building	65 @ 1m	106
Flaker Infeed	75 @ 1m	101
Area 4. Chip Prep Building Extension & Additional Silos		
Chip Prep Building Wall	56 @ 1m	92
Chip Prep Building Roof	70 @ 1m	91
Chip Prep Conveyor System	79-80 @ 1m	84
Chip Prep Reverse Jet Filter	85 @ 1m	96
Conveyor motor	74 @ 1m	85
Door	77 @ 1m	90
Areas 6 & 7. OSB Dryers		
Dryer drum	70 @ 1m	94
Ducting & Associated Plant	67-73 @ 1m	82
Area 8. OSB Gluing		
Sifter/Screen Enclosure	65 @ 1m	98
OSB Plant & Conveying Enclosure	60 @ 1m	97
Area 9. OSB Press		
Vertical extension to existing building OSB Press	80 (reverberant SPL inside)	-
OSB Press	83 (reverberant SPL inside)	-
Area 10:		
OSB Sanding, T&G Line, Warehousing (within existing building)	75 (reverberant SPL inside)	-
Covered Loading Area	75 (reverberant SPL inside)	-
Area 11: Engineering Stores		
Inside building	80 (reverberant SPL inside)	-
Area 12: New Warehouse		
Inside warehouse	75 (reverberant SPL inside)	-

Sound Reduction Index

Wall/Roof Construction	ID	31.5	63	125	250	500	1000	2000	4000	8000	Rw
Single Skin Clad	SK	4	4	6	12	18	24	30	36	37	22
solid brick, calcareous/chalky sandstone 240 mm	R14			43	45	51	57	63	66		55
steel sheet with trapezoidal corrugations 45 mm	R26			14	16	20	25	29	23		25
steel sheet with double-trapezoidal corrugations 190 mm	R27	10	14	17	31	40	48	46	50	50	40
steel sheet with double-trapezoidal corrugations mineral fiber 190 mm	R29			20	29	43	48	56	57		41
Composite Panel with bonded 80mm rockwool Rw32	COM80	8	15	21	25	27	32	45	50	50	32
Composite Panel with bonded rockwool Rw31	COM100		17	23	26	25	30	40	58	55	31

Plant Sound Power Levels & Sound Pressure Levels

Plant Equipment	ID	Type	31.5	63	125	250	500	1000	2000	4000	8000	A
Conveyor	CON	Lw	97	99	94	91	92	91	90	90	87	97.2
Dryer Plant motor platform	DRYERm	Lw	89	83	76	79	85	80	81	79	72	87.3
Existing Silos	SILO	Lw	96	96	93	90	86	83	81	74	67	89
Air cooled condensers	ACC	Lw	106	106	107	102	103	98	94	90	88	103.9
Flaker Building Wall	FLAKER1	Li		90	99	101	98	95	93	92	83	101.1
HGV Movement	HGV	Lw	97	110	106	102	101	97	95	90	86	103
HGV Parking	HGV1	Lw	94	107	103	99	98	94	92	87	83	100
HGV Tickover	HGVTICK	Lw	97	91	80	82	87	86	85	79	69	90.8
ID Fans	IDF	Lw	96	94	96	95	99	93	89	86	81	99
Rotating Drum	DRYER_1	Lw	101	97	94	91	89	88	88	86	80	94.3
Rotating Drum Dryer Ducts	DRYER_2	Lw	89	85	82	79	77	76	76	74	68	82.3
Rotating Drum Dryer	DRYER_3	Lw	98	94	91	88	86	85	85	83	77	91.3
Existing Sifters	SIFT_5	Lw	96	101	103	95	97	90	90	89	84	98.4
Traffic	H	Lw	87	88	84	81	80	85	81	78	70	88.1
Log Loader	LOG	Lw	106	104	106	103	101	102	99	92	81	105.8
Warehouse with Forklift	WARE	Li	77	75	78	75	72	70	68	63	55	75.4
WoodChipPrepBuildDoor	WCPBd	Lw	92	89	85	82	85	82	85	82	79	90.1
Wood Chip Prep Building Wall	WCPBw	Lw	96	90	90	88	88	88	86	80	72	92.3
WoodChipPrepBuildingConveyor	WCPBc	Lw	90	86	81	78	80	76	76	76	75	83.6
WoodChipPrepBuildingConveyorWall	WCPBcw	Lw	100	96	91	88	90	86	86	86	85	93.6
WoodChipPrepBuildingReverseJet	WCPBjet	Lw	103	95	90	87	89	88	87	91	88	95.9
WoodChipPrepBuildingReverseJet	WCPBjet1	Lw	96	93	90	86	87	84	84	85	83	91.6
WoodChipPrepBuildingRoof	WCPBr	Lw	96.5	92.5	90.5	88.5	86.5	86.5	83.5	80.5	71.5	90.9

Noise Model Sources

Point Source	ID	Result. PWL	Lw / Li
		Day	Type
Noise Source		(dBA)	
HGV Tickover	HGV	90.8	Lw
HGV Tickover	HGV	90.8	Lw
HGV Tickover	HGV	90.8	Lw
HGV Tickover	HGV	90.8	Lw
HGV Tickover	HGV	90.8	Lw
HGV Tickover	HGV	90.8	Lw
HGV Tickover	HGV	90.8	Lw
HGV Tickover	HGV	90.8	Lw
HGV Tickover	HGV	90.8	Lw
HGV Tickover	HGV	90.8	Lw
HGV Tickover	HGV	90.8	Lw
HGV Tickover	HGV	90.8	Lw
HGV Tickover	HGV	90.8	Lw
HGV Tickover	HGV	90.8	Lw
HGV Tickover	HGV	90.8	Lw
HGV Tickover	HGV	90.8	Lw
HGV Tickover	HGV	90.8	Lw
HGV Tickover	HGV	90.8	Lw
Wood Chip Prep Building Reverse Jet	WCPBjet	95.9	Lw
Wood Chip Prep Building Reverse Jet	WCPBjet	91.6	Lw
Wood Chip Prep Building Reverse Jet	WCPBjet	91.6	Lw
Wood Chip Prep Building Reverse Jet	WCPBjet	91.6	Lw
Conveyor Motor	CONM	85	Lw
Conveyor Motor	CONM	85	Lw
Conveyor Motor	CONM	85	Lw
Gantry Crane	GANTRY	103	Lw
6. Wood Chip Dryer Motors	DRYER	87.3	Lw
6. Wood Prep Dryer Motors	DRYER	87.3	Lw
7. Wood Chip Dryer Motors	DRYER	87.3	Lw
7. Wood Chip Dryer Motors	DRYER	87.3	Lw

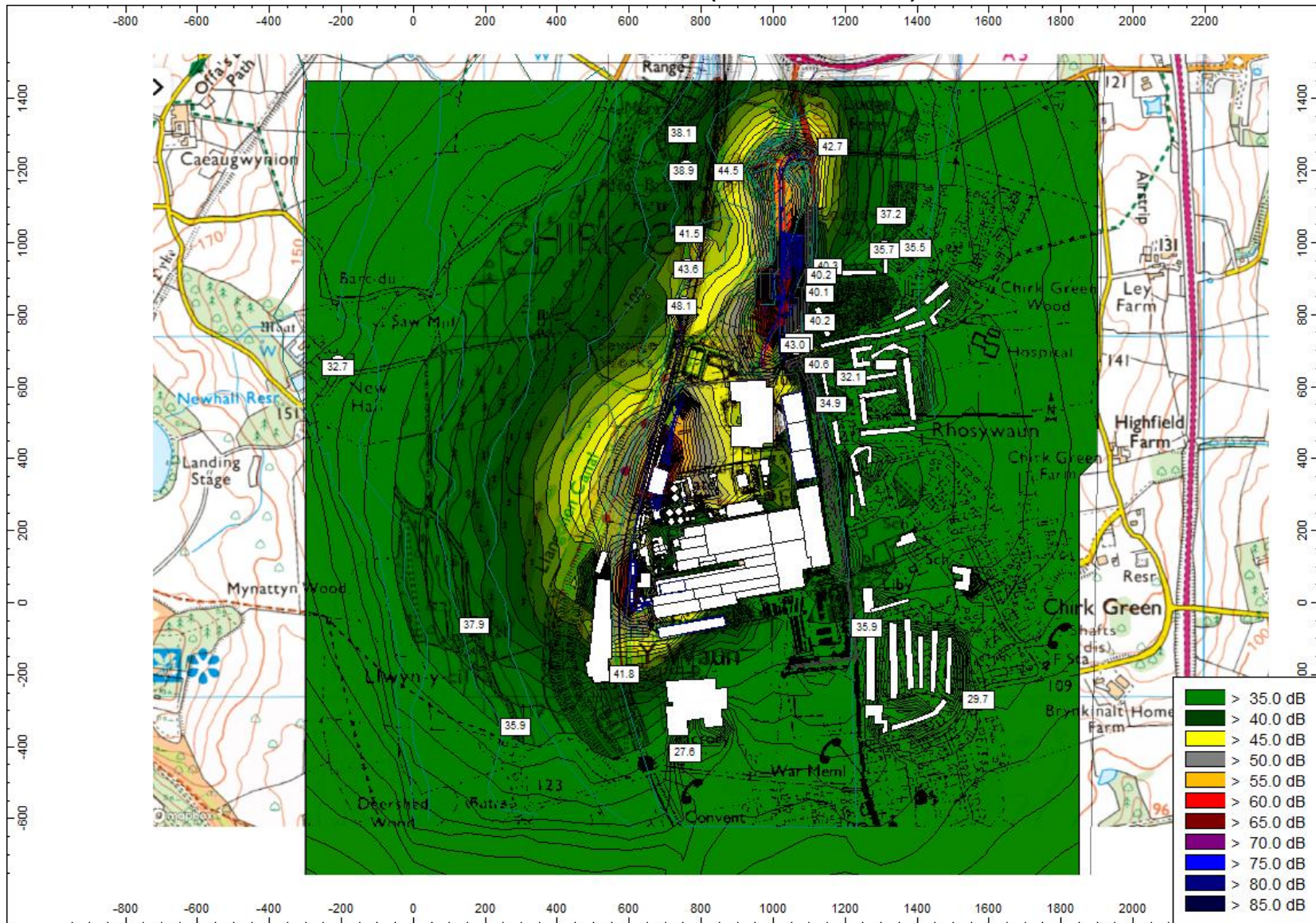
LINE SOURCE	ID	Result. PWL	Moving Pt. Src	
		Day	Number	Speed
Noise Source		(dBA)		(km/h)
HGV	HGV	99.6	54	30
HGV	HGV	102.4	54	40
HGV	HGV	97.2	54	25
HGV	HGV	77.2	2	15
HGV	HGV	77.4	2	15
HGV	HGV	78.1	2	15
HGV	HGV	78.9	2	15
HGV	HGV	79.1	2	15
HGV	HGV	80	2	15
HGV	HGV	80.6	2	15
HGV	HGV	80.8	2	15
HGV	HGV	84.5	4	15
HGV	HGV	84.8	4	15
HGV	HGV	75.5	2	15
HGV	HGV	76.4	2	15
HGV	HGV	77.6	2	15
HGV	HGV	78.7	2	15
HGV	HGV	79.3	2	15
HGV	HGV	79.9	2	15
HGV	HGV	80.4	2	15
HGV	HGV	81	2	15
HGV	HGV	81.4	2	15
HGV	HGV	81.7	2	15
HGV	HGV	82.1	2	15
HGV	HGV	82.3	2	15
HGV	HGV	82.4	2	15
HGV	HGV	82.4	2	15
HGV	HGV	82.6	2	15
HGV	HGV	80.7	2	15
HGV	HGV	89	24	15
HGV	HGV	81.4	2	15
HGV	HGV	80.1	2	15
HGV	HGV	79.5	2	15
HGV	HGV	79	2	15
HGV	HGV	78.2	2	15
HGV	HGV	77.3	2	15
HGV	HGV	76.6	2	15
HGV	HGV	77.9	4	15
HGV	HGV	75.8	4	15
HGV	HGV	82.4	2	15
HGV	HGV	81.3	2	15
HGV	HGV	80.8	2	15
HGV	HGV	80.1	2	15
HGV	HGV	79.5	2	15
HGV	HGV	78.8	2	15
HGV	HGV	78.1	2	15
HGV	HGV	77.5	2	15
HGV	HGV	76.3	2	15
HGV	HGV	73.1	2	15
HGV	HGV	73.9	2	15
HGV	HGV	71.3	2	15
HGV	HGV	76.8	2	15
HGV	HGV	73.3	2	15
TRAIN	TRAIN	97.3	1	10
Forklift	FORKLIFT	99.8	20	10
Hi Lift Log Loader	HILIFT	96.2	20	10
Log Loader	LOG	99.7	10	15
Log Loader	LOG	98.1	10	15
Cars	H	80	4	15

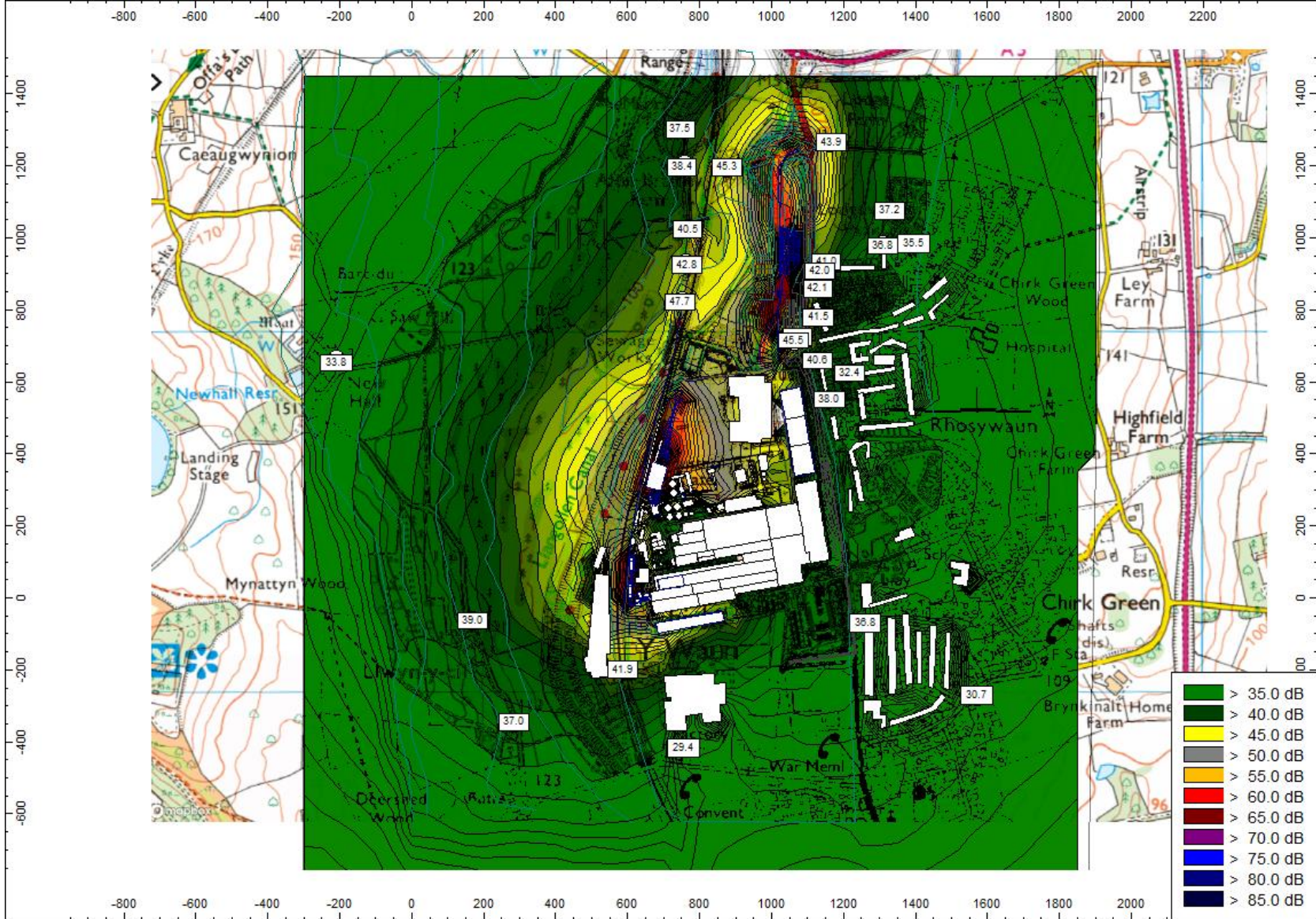
HORIZONTAL SOURCE	ID	Result. PWL	Result. PWL"					
		Day	Day	Type	Value	R	Area	
		(dBA)	(dBA)				(m²)	
2. Transformer	TRANS1	75	63.4	Lw	75			
2. Transformer	TRANS1	75	63.4	Lw	75			
2. Transformer	TRANS1	75	63.4	Lw	75			
2. Transformer	TRANS1	75	63.4	Lw	75			
3. Flaker Building Roof	FLAKERr	99.7	65.4	Li	FLAKER1+5	R29	2685.92	
3. Flaker Infeed	FLAKEINFEED	100.6	75	Li	99	R26	365.65	
4. Wood Chip Prep Building Conveyor System	WCPBc	83.6	79.4	Lw	WCPBc			
4. Wood Chip Prep Building Conveyor System	WCPBc	83.6	79.7	Lw	WCPBc			
4. Wood Chip Prep Building Conveyor System	WCPBc	83.6	79.9	Lw	WCPBc			
4. Wood Chip Prep Building Roof	WCPBr	90.9	69.5	Lw	WCPBr			
4. Pre Crush	PRECRUSH	96	77.6	Lw	101			
6. OSB Dryer 2 Drum (Bab3)	OSBDRYER	94.3	70	Lw	DRYER_1			
6. OSB Dryer 2 Drum (Bab3)	OSBDRYER	94.3	70.6	Lw	DRYER_1			
6. OSB Dryer2	OSBDRYER	82.3	66.5	Lw	DRYER_2			
6. OSB Dryer Duct	OSBDUCT	82.3	67	Lw	DRYER_2			
6. OSB Dryer Duct	OSBDUCT	82.3	67	Lw	DRYER_2			
6. OSB Dryer Duct	OSBDUCT	82.3	72.8	Lw	DRYER_2			
6. OSB Dryer Duct	OSBDUCT	82.3	72.8	Lw	DRYER_2			
6. OSB Dryer Duct	OSBDUCT	82.3	67	Lw	DRYER_2			
6. OSB Dryer Duct	OSBDUCT	82.3	67	Lw	DRYER_2			
7. OSB Dryer Duct	OSBDUCT	82.3	67	Lw	DRYER_2			
7. OSB Dryer Duct	OSBDUCT	82.3	67	Lw	DRYER_2			
7. OSB Dryer Duct	OSBDUCT	82.3	67	Lw	DRYER_2			
7. OSB Dryer 2 Drum (Bab3)	OSBDRYER	94.3	70.6	Lw	DRYER_1			
7. OSB Dryer 2 Drum (Bab3)	OSBDRYER	94.3	70.6	Lw	DRYER_1			
7. OSB Dryer	OSBDRYER	82.3	66.5	Lw	DRYER_2			
8. OSB Drive	CON	75	60.1	Li	CON	COM80	30.47	
8. OSB Drive	CON	80.1	60.1	Li	CON	COM80	99.45	
8. OSB Drive	CON	75.3	60.1	Li	CON	COM80	33.15	
8. OSB Drive	CON	82	60.1	Li	CON	COM80	154.11	
8. OSB Drive	CON	80.1	60.1	Li	CON	COM80	98.44	
8. OSB Drive	CON	73	60.1	Li	CON	COM80	19.58	
8. OSB Drive	CON	73	60.1	Li	CON	COM80	19.58	
8. OSB Drive	CON	74.3	60.1	Li	CON	COM80	26.08	
8. OSB Drive	CON	74.3	60.1	Li	CON	COM80	26.08	
8. OSB Screen/Sifter	SIFT	84.7	64.7	Li	SIFT_5	COM80	99.27	
8. OSB Screen/Sifter	SIFT	84.5	64.7	Li	SIFT_5	COM80	96.19	
9. OSB Press	OSBPRESS	79.1	49	Li	80	COM80	1019.88	
9. OSB Press	OSBPRESS	79.2	49	Li	80	COM80	1037.02	
9. OSB Press	OSBPRESS	96.9	61	Li	83	SK	3860.78	
9. OSB Press	OSBPRESS	96.9	61	Li	83	SK	3887.98	
9. OSB Press	OSBPRESS	90.6	61	Li	83	SK	915.32	
9. OSB T & G Line	OSBT&GLINE	86	53	Li	75	SK	2003.27	
9. OSB T&G Line	OSBT&GLINE	86.3	53	Li	75	SK	2142.19	
10. OSB Warehousing	OSBWARE	80.9	53	Li	75	SK	610.2	
10. OSB Warehousing	OSBWARE	82.4	53	Li	75	SK	862.29	
10. OSB Warehousing	OSBWARE	84.3	53	Li	75	SK	1345.44	
10. OSB Warehousing	OSBWARE	83.6	53	Li	75	SK	1148.71	
10. OSB Warehousing	OSBWARE	83.4	53	Li	75	SK	1090.56	
10. OSB Warehousing	OSBWARE	82.4	53	Li	75	SK	861.27	
10. OSB Warehousing	OSBWARE	84.8	53	Li	75	SK	1530.88	
10. OSB Warehousing	OSBWARE	83.7	53	Li	75	SK	1178.64	
10. OSB Warehousing	OSBWARE	83.9	53	Li	75	SK	1236.95	
11. Engineering Stores Roof	ENGSTOREROOF	78.2	44	Li	80	COM80+5	2616.42	
11. Engineering Stores Roof	ENGSTOREROOF	78.1	44	Li	80	COM80+5	2559.95	
12. WarehouseRoof	WAREr	74.6	41.4	Li	WARE	COM100	2082.91	
12. WarehouseRoof	WAREr	74.6	41.4	Li	WARE	COM100	2088.19	
12. WarehouseRoof	WAREr	74.7	41.4	Li	WARE	COM100	2121.67	
12. WarehouseRoof	WAREr	74.5	41.4	Li	WARE	COM100	2031.46	
12. WarehouseRoof	WAREr	74.6	41.4	Li	WARE	COM100	2091.1	
12. WarehouseRoof	WAREr	74.8	41.4	Li	WARE	COM100	2178.39	

VERTICAL AREA SOURCE	ID	Result. PWL	Result. PWL"	Lw / Li		Sound Reduction	
		Day	Day	Type	Value	R	Area
		(dBA)	(dBA)				(m²)
2. Transformer	TRANS1	79.8	63	Lw	79.8		
2. Transformer	TRANS1	79.8	63	Lw	79.8		
2. Transformer	TRANS1	79.8	63	Lw	79.8		
2. Transformer	TRANS1	79.8	63	Lw	79.8		
3. Flaker Building Wall	FLAKERw	92.3	65.4	Li	FLAKER1+5	R29	493.62
3. Flaker Building Wall	FLAKERw	92.3	65.4	Li	FLAKER1+5	R29	486.77
3. Flaker Building Wall	FLAKERw	94.4	65.4	Li	FLAKER1+5	R29	790.35
3. Flaker Building Wall	FLAKERw	94.4	65.4	Li	FLAKER1+5	R29	793.05
4. WoodChipPrepBuildingWall	WCPBw	79.7	56.1	Li	WCPBw	COM80	228.6
4. WoodChipPrepBuildingWall	WCPBw	79.6	56.1	Li	WCPBw	COM80	224.08
4. WoodChipPrepBuildingWall	WCPBw	83.4	56.1	Li	WCPBw	COM80	535.73
4. WoodChipPrepBuildingWall	WCPBw	83.5	56.1	Li	WCPBw	COM80	545.58
4. Roller Door	ROLL	90.1	77.4	Lw	WCPBd		
4. Conveyor	WCPBcw	93.6	69.9	Lw	WCPBcw		
4. Conveyor	WCPBcw	93.6	70	Lw	WCPBcw		
4. Conveyor	WCPBcw	93.6	70	Lw	WCPBcw		
6. OSBDryer2 Drum	OSBDRYER	91.3	70.6	Lw	DRYER_3		
6. OSBDryer2 Drum	OSBDRYER	91.3	70.5	Lw	DRYER_3		
6. OSBDryer2 Drum	OSBDRYER	84.3	70.1	Lw	DRYER_2+2		
6. OSB Dryer2 Drum	OSBDRYER	84.3	70.6	Lw	DRYER_2+2		
6. OSB Dryer 2 Duct	OSBDRYER	88.3	65	Lw	DRYER_2+6		
6. OSB Dryer2 Duct	OSBDUCT	82.3	66.8	Lw	DRYER_2		
6. OSB Dryer2 Duct	OSBDUCT	82.3	72.6	Lw	DRYER_2		
6. OSB Dryer2 Duct	OSBDUCT	82.3	65.3	Lw	DRYER_2		
6. OSB Dryer SILO	OSBSILO	89	63.8	Lw	SILO		
6. OSB Dryer2 Duct	OSBDUCT	82.3	58.1	Lw	DRYER_2		
6. OSB Dryer2 Duct	OSBDUCT	82.3	67.6	Lw	DRYER_2		
6. OSB Dryer2 Duct	OSBDUCT	82.3	72.6	Lw	DRYER_2		
6. OSB Dryer2 Duct	OSBDUCT	82.3	68.1	Lw	DRYER_2		
6. OSB Dryer2 Duct	OSBDUCT	82.3	69	Lw	DRYER_2		
6. OSB Dryer 2	OSBDRYER	88.3	65	Lw	DRYER_2+6		
6. OSB Dryer Duct	OSBDUCT	82.3	68	Lw	DRYER_2		
6. OSB Dryer Duct	OSBDUCT	82.3	68	Lw	DRYER_2		
7. OSB Silo	OSBSILO	89	63.8	Lw	SILO		
7. OSBSILO	OSBSILO	82.3	58.2	Lw	DRYER_2		
7. OSB DRYER DUCT	OSBDUCT	82.3	72.6	Lw	DRYER_2		
7. OSB DRYER DUCT	OSBDUCT	82.3	72.6	Lw	DRYER_2		
7. OSBDryer Drum	OSBDRYER	91.3	70.5	Lw	DRYER_3		
7. OSBDryer Drum	OSBDRYER	91.3	70.5	Lw	DRYER_2+9		
7. OSB Dryer2 Drum	OSBDRYER	84.3	70.6	Lw	DRYER_2+2		
7. OSB Dryer2 Drum	OSBDRYER	84.3	70.6	Lw	DRYER_2+2		
7. OSB2 Dryer Duct	OSBDRYERDUCT	82.3	65.3	Lw	DRYER_2		
7. OSB Dryer Duct	OSBDUCT	82.3	67.6	Lw	DRYER_2		
7. OSB Dryer Duct	OSBDUCT	82.3	67.6	Lw	DRYER_2		
8. OSB Gluing Wall	SIFT	93	64.7	Li	SIFT_5	COM80	672.28
8. OSB Gluing Wall	SIFT	92.9	64.7	Li	SIFT_5	COM80	656.11
8. OSB Gluing Wall	SIFT	85.1	64.7	Li	SIFT_5	COM80	108.63
8. OSB Gluing Conveyor	CON	70.8	60.1	Li	CON	COM80	11.7
8. OSB Gluing Conveyor	CON	87.7	60.1	Li	CON	COM80	570.04
8. OSB Gluing Conveyor	CON	84.8	60.1	Li	CON	COM80	293.91
8. OSB Gluing Conveyor	CON	83.8	60.1	Li	CON	COM80	234.97
8. OSB Gluing Conveyor	CON	70.8	60.1	Li	CON	COM80	11.67
8. OSB Gluing Conveyor	CON	70.8	60.1	Li	CON	COM80	11.64
8. OSB Gluing Conveyor	CON	70.8	60.1	Li	CON	COM80	11.64
8. OSB Gluing Conveyor	CON	89.9	60.1	Li	CON	COM80	955.61
8. OSB Gluing Conveyor	CON	85	60.1	Li	CON	COM80	310.29
8. OSB ID Fan	IDF	73.4	74.9	Li	IDF	SK	0.69
8. OSB ID Fan	IDF	74.3	74.9	Li	IDF	SK	0.87
8. OSB ID Fan	IDF	80.5	74.9	Li	IDF	SK	3.58
9. OSB Press Wall	OSB	76.9	49	Li	80	COM80	616.72
9. OSB Press Wall	OSB	73.1	49	Li	80	COM80	255.99
9. OSB Press Wall	OSB	80	49	Li	80	COM80	1254.3
9. OSB Press Wall	OSB	77.5	49	Li	80	COM80	705.56
12. Engineering Stores Lower Wall	WALL	50.8	25	Li	80	R14	380.29
12. Engineering Stores Lower Wall	WALL	42.2	25	Li	80	R14	52.34
12. Engineering Stores Lower Wall	WALL	42.5	25	Li	80	R14	55.96
12. Engineering Stores Lower Wall	WALL	50.8	25	Li	80	R14	375.85
12. Side Wall Engineering Stores	WALL	76.1	44	Li	80	COM80+5	1610
12. Side Wall Engineering Stores	WALL	76	44	Li	80	COM80+5	1602.6
12. End Wall Engineering Stores	ENDWALL	69.2	44	Li	80	COM80+5	328.62
12. End Wall Engineering Stores	ENDWALL	69	44	Li	80	COM80+5	316.02
12. Roller Shutter Door Eng Stores	RSD	81	66	Li	80	10	31.34
12. Roller Shutter Door Eng Stores	RSD	81.9	66	Li	80	10	39.33
12. Roller Shutter Door Eng Stores	RSD	81	66	Li	80	10	31.34
4. Pre Crush	PRECRUSH	100	77.8	Lw	100		
4. Pre Crush Side Door	PRECRUSH	96	83.4	Lw	96		

APPENDIX 5

NOISE MAPPING RESULTS





APPENDIX 6

CONSULTANTS' EXEPERIENCE & QUALIFICATIONS

**Consultant: Dean Robert Kettlewell - MSc MIOA MAE I.Eng
(Director - Principal Acoustic Consultant)**

Précis

As Director and Principal Acoustic Consultant with Noise & Vibration Consultants Ltd, Dean has over 40 years background experience in a wide range of issues relating to environmental, industrial and commercial noise and vibration assessment. He currently manages corporate and unit specific contracts for:

- Assessment of Environmental & Industrial Noise
- Environmental Noise Impact Assessments
- Expert Witness representation for Planning Appeals |& Hearings
- Integrated Pollution Prevention and Control (IPPC) Applications
- Industrial Noise Assessment and Control
- Planning Issues for Residential and Commercial Development
- Noise at Work Regulations Assessments
- Building Acoustics and Sound Insulation Tests
- Wind Farm Noise Impact Assessments
- Entertainment Noise Assessment and Control
- Architectural Acoustics
- Specialist knowledge in the Design of Noise Control Systems
- Ground borne vibration measurement and assessment
- Project Management of Noise Control Systems

Relevant Work Experience

Director & Principal Consultant - Noise & Vibration Consultants Ltd	2001- to date
Senior Acoustic Consultant - Vibrock Limited	1998 - 2001
Associate & Principal Acoustic Consultant - John Savidge & Associates	1994 - 1998
Technical Manager – LBJ Limited (Noise Control Division)	1990 - 1994
Technical Engineer/Technical Manager (1988) - Vibac (Noise Control) Ltd	1982 - 1990

Qualifications and Education

M.Sc. Applied Acoustics (Derby University – Distinction)
HNC Electrical & Electronic Engineering
IOA Diploma in Acoustics & Noise Control
IOA Certificate in Law and Administration
Certificate of Competence in Workplace Noise Assessment
Certificate of Competence in Ground Vibration Monitoring

Affiliations: Member of Institute of Acoustics (MIOA)
Member of Academy of Experts (MAE)
Member of Association of Noise Consultants (ANC) Incorporated Engineer (I.Eng)