



Acoustics Environment

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Maelor Foods Ltd. Pickhill Lane, Wrexham LL13 0UE

Planning Application P/2022/0820
Wrexham Borough Council

Noise Impact Assessment: APPENDICES

Night-time HGV movements on Pickhill Lane

26 June 2024

1 INSTRUMENTATION AND FIELD CALIBRATIONS

1.1 Bruel & Kjaer Type(s)

Set 1

2250 G4 Analyser / Sound Level Meter s/n 3027786

4189 Pre-polarised Free-field ½" Microphone Type 4189 s/n 1869166 4321 Acoustics
Calibrator s/n 228802

DANAK Accredited Certificate of Calibration No. CDK2203638 5th May 2022

Set 2

2250 Analyser / Sound Level Meter s/n 2754230

4189 Pre-polarised Free-field ½" Microphone Type 4189 s/n 2748425 4321 Acoustics
Calibrator s/n 2218236

DANAK Accredited Certificate of Calibration No. CDK2203619 5th May 2022

Meteos Type:

Skywatch Thermo-Anemometer

1.2 14 June 2024

Set 1

Start 93.9 dB

Set 2

Start 93.9 dB

15 June 2024

Set 1

End 93.9 dB Deviation -0.014 dB

Set 2

End 93.9 dB Deviation -0.05 dB

19 June 2024

Set 1

Start 93.9 dB

Set 2

Start 93.9 dB

20 June 2024

Set 1

End 93.9 dB Deviation -0.03 dB

Set 2

End 93.9 dB Deviation -0.02 dB

2 METEOROLOGICAL MEASUREMENTS

2.1 14 June 2024 23.24 hours

Air temperature 17.8 °c. Wind Speed (Max. Gust) 0.1 m/s. Cloud Cover 8 Oktas. Low cloud cover. Dry.

2.2 14 June 2024 23.44 hours

Air temperature 13.2 °c Wind Speed (Max. Gust) 0.0 m/s still. Cloud Cover 8 Oktas. Low cloud cover. Dry.

2.3 14 June 2024 23.44 hours

Air temperature 13.2 °c Wind Speed (Max. Gust) 0.0 m/s still. Cloud Cover 8 Oktas. Low cloud cover. Dry.

2.4 15 June 2024 00.25 hours

Air temperature 10.9 °c Wind Speed (Max. Gust) 0.0 m/s still. Cloud Cover 8 Oktas. Low cloud cover. Dry.

2.5 15 June 2024 02.16 hours

Air temperature 13.9 °c Wind Speed (Max. Gust) 0.0 m/s still. Cloud Cover 8 Oktas. Low cloud cover. Dry.

2.6 15 June 2024 03.48 hours

Air temperature 13.4 °c Wind Speed (Max. Gust) 0.2 m/s . Cloud Cover 8 Oktas. Low cloud cover. Dry.

2.7 15 June 2024 06.00 hours

Air temperature 12.5 °c Wind Speed (Max. Gust) 0.8 m/s . Cloud Cover 3 Oktas. Low cloud cover. Dry.

2.8 15 June 2024 07.00 hours

Air temperature 13.8 °c Wind Speed (Max. Gust) 0.4 m/s . Bright. Cloud Cover 1 Okta. Low cloud cover. Dry.

- 2.9 19 June 2024 23.00 hours
Air temperature 14.9 °c Wind Speed (Max. Gust) 0.2 m/s . Moon-lit skies. Cloud Cover 1 Okta. Dry.
- 2.10 19 June 2024 24.00 hours
Air temperature 9.5 °c Wind Speed (Max. Gust) 0.0 m/s still. Moon-lit skies. Cloud Cover 1 Okta. Dry.
- 2.11 20 June 2024 01.00 hours
Air temperature 8.9 °c Wind Speed (Max. Gust) 0.0 m/s still. Moon-lit skies. Cloud Cover 1 Okta. Dry.
- 2.12 20 June 2024 02.00 hours
Air temperature 7.9 °c Wind Speed (Max. Gust) 0.0 m/s still. Moon-lit skies. Cloud Cover 2 Oktas. Dry.
- 2.13 20 June 2024 03.07 hours
Air temperature 7.6 °c Wind Speed (Max. Gust) 0.2 m/s. Moon/star-lit skies. Cloud Cover 2 Oktas. Dry.
- 2.14 20 June 2024 03.07 hours
Air temperature 8.4 °c Wind Speed (Max. Gust) 0.1 m/s. Cloud Cover 4 Oktas. Dry.
- 2.15 20 June 2024 04.00 hours
Air temperature 8.4 °c Wind Speed (Max. Gust) 0.1 m/s. Cloud Cover 4 Oktas. Dry.
- 2.16 20 June 2024 05.15 hours
Air temperature 8.5 °c Wind Speed (Max. Gust) 0.0 m/s still. Cloud Cover 5 Oktas. Dry.
- 2.17 20 June 2024 06.00 hours
Air temperature 9.1 °c Wind Speed (Max. Gust) 0.2 m/s. Cloud Cover 4 Oktas. Dry.
- 2.18 20 June 2024 07.00 hours
Air temperature 11.4 °c Wind Speed (Max. Gust) 0.0 m/s still. Cloud Cover 5 Oktas. Dry.

3 CONTEXT CONSIDERATIONS

Overview

- 3.1 The context in which noise occurs is critical to assessing the severity of its likely impact. Not every (sensitive) receptor will have the same response to the same noise. In a particularly sensitive situation for example, noise may result in a 'significant adverse impact', whereas it could be an 'adverse impact' in another, comparatively less sensitive, situation.
- 3.2 Whilst context allows for an interpretation of impact thresholds to an extent, there are practical limits to the extent of the interpretation, and no exact or strict rules on what elements can make a given context more or less sensitive.
- 3.3 Consideration of context is in part opinion driven, and so demands experience in applying it in a balanced manner. The idea is that every situation is different, and hence there is a need to apply professional judgement and not simply rely on measurements and rating numbers so produced.
- 3.4 Operations conducted by Maelor Foods so far as determining context is concerned can encompass some or all of the following points (in no order of relative importance):
- Time of day – daytime, evening and night-time, in respect of when processing and site operations are conducted
 - Days of the week versus weekends in terms of changes to likely impacts
 - The characteristics and nature of the immediate area
 - The prevailing and future soundscape
 - The history of the site and its operations (longevity, preceding activities and operations, if any)
 - Benefits of planning permission (planning status) and any applicable constraints
 - The fact that an Environmental Permit is currently in place and the legitimacy of Maelor Foods' operations
 - Sensitivity of receptors to noise and what exactly is, or is likely to be, impacted (e.g. sleep interference).
 - Land use of noise receptors

- Existing noise sources at the site and any relevant diurnal activities
- Audibility (of noise sources).
- Other prevailing sound sources
- Reasoning and need for the permit variation
- Absolute sound (noise) levels produced.
- Noise policies and regulatory requirements for compliance or otherwise.
- Local attitudes (where known) and the meaning of sound(s) - what is conveyed and understood by its presence and content
- Whether changes to processing and site operations etc. are intended to be permanent or temporary/transient
- Whether noise impacts occur externally and/or internally (where sound/noise occurs)
- Mitigation - existing and proposed
- Possible seasonal variations
- Plant and machinery - existing and proposed
- Any new or proposed planning developments

Historical Planning Uses

- 3.5 The site of Maelor Foods Ltd. is a former (rail-served) creamery built in 1936 by Cadbury's. Prior to this it was a greenfield site.
- 3.6 The site was bought by the Milk Marketing Board and opened in 1973 to provide butter and skimmed milk powder, and from 1976 to 1992 cheese manufacturing took place.
- 3.7 In 1993 the site was converted into a pre-packing site by the owners Dairy Crest as one of the most advanced cheese packaging plants in the UK, storing up to 2000 tonnes of cheese under temperature-controlled conditions. Alongside this, Dairy Crest also manufactured a range of dairy ingredients from whey, for use by major food manufacturers.
- 3.8 In 2006 the site was acquired by First Milk. The site supplied one of the largest retailers in the UK employing up to 500 staff working in partnership with Lloyd Fraser transport company. The

site produced and distributed over 30,000 tonnes of produce annually, with c.182 vehicle movements per day.

- 3.9 Maelor Foods acquired the site in 2014, and through planning permission granted in 2015 and a subsequent series of permissions for supplemental buildings / plant / machinery over 2-3 years thereafter, a substantial redevelopment has provided for a modern, state-of-the-art poultry processing facility, that officially opened on 23 November 2017. Planning permission originally allowed for processing of 400,000 birds per week, which was then amended on appeal to allow for an increase to 1 million birds per week.
- 3.10 As part of redevelopment under Maelor Foods, environmental betterment was achieved in regard to historical vehicle movements associated with Lloyd Fraser, who were permitted, under Vehicle Operator Licences, 46 vehicles on the site from 2009. The change removed independent commercial transport operations not associated with Maelor Foods, and effectively tied the transport logistics aspect in planning land use terms in perpetuity. Further historical information on Lloyd Fraser activity associated with their dairy services business indicates vehicle movements may have been in the region of 140 to 160 per day for their own HGVs, subcontractors and other deliveries. In addition, Lloyd Fraser operated a heavy vehicle servicing facility, which is estimated to have resulted in an additional 20-40 movements, including assorted vans and other commercial vehicles (some HGVs). This is in contrast to the current operations of Maelor Foods, which operates 72 HGVs per day (in-bound and out-bound) using Pickhill Lane as part of processing 1 million birds per week, which is projected would rise to 142 HGVs. Both current and proposed vehicle activities at Maelor Foods amount to less than the combined activities for previous uses on the site.
- 3.11 It is evident the site has a substantive history of manufacturing and transport operations over many decades, which will invariably have also incorporated use of various plant and machinery and attendant sound (noise) emissions.

Operational Times / Time of Day

- 3.12 Production at Maelor Foods is undertaken on a 24 hour basis, although this is limited

by a constraint on HGV movements into and from the site between midnight Saturday to midnight Sunday, administered via a planning condition. This requires Maelor Foods to balance its raw produce and product/stock to ensure normal production activities recommence on Monday.

- 3.13 It is necessary for plant to run continually or on a continuous cycle, which includes (but is not limited to) boilers; compressors; refrigeration/chiller units; effluent treatment systems (including pumps, aeration blowers, air scrubbers / air extraction, air and effluent treatment).
- 3.14 Maelor Foods is to some degree omnipresent in the noise climate and soundscape of the areas adjoining its site, which features noise-sensitive receptors in the form of residential development. This interface requires a certain acceptance and tolerance between competing needs, which is common-place where industrial, commercial, agricultural and leisure uses directly interface with other development. This is an accepted facet within communities throughout the UK.

Legitimacy of Operations

- 3.15 This is expounded by the existing planning permissions and environmental permit. These are designed to ensure the site operates in a 'fit-for-purpose' manner, and to afford commensurate safeguards exist to protect people and the environment. It also benefits from the provenance of extensive previous industrial/commercial development on the site dating back to 1936.

Character of the Locality

- 3.16 Maelor Foods at first-sight may appear to be set within an agricultural backdrop. It is nonetheless subject to traffic noise from major arterial roads along with localised traffic, and is under a commercial aircraft flight path. A variety of rural sounds interlace with commercial/industrial sounds and transport noise sources, and Maelor Foods is not incongruous, not least when considering the extensive previous planning uses of the site. The immediate locality is part mixed residential and industrial.

New or Proposed Planning Developments

- 3.17 No new or proposed planning developments are known that have a bearing on the permit variation sought by Maelor Foods.

Land Use of Noise Receptors and Sensitivity to Noise and what exactly is, or is likely to be, impacted (e.g. sleep interference)

- 3.18 Land use of noise-sensitive receptors under consideration is residential.
- 3.19 The impact of noise therefore centres on typical and expected uses of such premises, and can be categorised as potential sleep interference and amenity.

3.20 Seasonal Variations

- 3.20 The 24 hours pattern of operation at the Maleor Foods site week-on-week is not influenced by seasonal variations. Seasonal variations nevertheless impact upon how residential amenity is perceived and use of amenity spaces at noise-sensitive receptors (residencies).

Mitigation - Existing and Proposed

- 3.21 Maelor Foods is already subject to the requirements of Best Available Techniques (BAT) for negating and/or mitigating noise impacts by virtue of its environmental permit, and in-turn, the Noise Management Plan that falls under the permit. The latter is a dynamic document and subject to change to reflect BAT, whilst also responding to process and other changes at the permitted installation. Consideration of improvements to noise control is thus an on-going theme and will be intrinsically linked to changes associated with the permit variation. To clarify, there is an extant Noise Mangement Plan in regard to Phase 1 (current) operations, and an updated Noise Management to serve Phase 2 (proposed) operations.

Plant and Machinery - Existing and Proposed

- 3.22 It is pertinent to highlight that changes sought under the environmental permit variation do not bring about different types of noise sources. The fundamental intention is to duplicate and/or augment existing plant and machinery to increase production capacity.

Soundscape – Existing and Future

- 3.23 A soundscape is the acoustic environment as perceived by humans, in context. The acoustic environment is the combination of all the acoustic resources, natural and artificial, within a given area as modified by the environment.
- 3.24 A soundscape can be considered as a sound or combination of sounds that forms, or arises, from an immersive environment. The notion of soundscape refers to both the natural acoustic environment, comprising natural sounds (including animal vocalisations etc.), the sounds of weather and other natural elements, and environmental sounds created by human activities. Importantly, the term soundscape also includes a listener's perception of sounds heard as an environment.
- 3.25 Noise-sensitive receptors are exposed to an existing soundscape comprising natural and artificial (environmental) sounds, which includes Maelor Foods along with other industrial/commercial, transportation and other human activities. The future soundscape that arises from the proposed permit variation does not change in terms of the elements in its composition. This accommodates the character of sounds (noise) under consideration that are produced.

4 FIELD NOTES – MOVEMENTS

14 to 15 June 2024

- 4.1 23:14 HGV in
23:45 HGV in
00:04 HGV out
00:10 HGV out
00:32 HGV out
00:33 HGV in
00:59 HGV in
01:26 HGV out
01:31 HGV in
02:30 HGV out
02:24 HGV out
02:44 HGV out
03:14 HGV in
03:23 HGV in
04:04 HGV out
04:20 HGV out
04:26 HGV out
04:36 HGV out
04:46 HGV in
05:01 HGVs out (2 of)
05:08 HGV out
05:25 HGV out
05:29 HGV in
05:37 HGV in
05:56 HGV out
06:23 HGV out
06:25 HGV in
06:28 HGV out
06:33 HGV in
07:00 HGV in

4.2 19 to 20 June 2024

- 23:12 HGV in
23:24 HGV out
23:42 HGV in
00:10 HGV out
00:17 HGV in

00:27 HGV out
00:29 HGV out
00:30 HGV out
00:31 HGVs out (2 of)
01:25 HGV out
01:31 HGV in
01:36 HGV out
02:18 HGV in
02:32 HGV out
03:07 HGV out
03:25 HGV out
03:42 HGV in
03:52 HGV out
04:08 HGV out
04:42 HGVs out (2 of)
04:51 HGV in
05:45 HGV out
05:47 HGV in
05:59 HGV out
06:14 HGV in
06:16 HGV in
06:32 HGV out
06:37 HGV in
06:40 HGV out
06:52 HGV out

[Times are approximate]

5 World Health Organisation Guidelines – Additional Considerations

- 5.1 WHO offer that their guidelines can serve as the basis for policy-making processes, in making policy decisions on reference values - as could be the case for noise limits used in a possible standard or legislation – though additional considerations are merited. These include feasibility, costs and preferences, which can feature in, and notably influence, ultimate values chosen as a ‘limits’.

WHO Guidelines 1999

- 5.2 The 1999 WHO Guidelines lists a series of ‘Guideline Values for Specific Environments’ that are associated with ‘Critical Health Effects’, including:

Specific environment	Critical Health Effect(s)	L_{Aeq} , dB	Time base [hours]	$L_{A,F Max}$ [dB]
Inside bedrooms	Sleep disturbance, night-time	30	8	45
Outside bedrooms	Sleep disturbance, window open (outdoor values)	45	8	60

- 5.3 WHO comment that Guideline Values typically correspond to the *lowest effect level for general populations*, and for each environment and situation they take into consideration the identified health effect based on the lowest levels of noise that affect health. Consequently, they apply to the *onset* of critical health effects from noise exposure, at which point, those persons in noise-exposed communities who are most sensitive are duly catered for. In principle, this does not therefore address the responses of the majority of a population exposed to noise who exhibit a range of ‘normal’ sensitivities.

WHO Guidelines 2018

- 5.4 The WHO 2018 Guideline Development Group (GDG) has made a series of recommendations on publication of the 2018 guidelines. In relation to traffic noise they incorporate:

- i. For average noise exposure, the GDG strongly recommends reducing noise levels produced by road traffic below 53 dB L_{den} , as road traffic noise above this level is associated with adverse health effects.
- ii. For night noise exposure, the GDG strongly recommends reducing noise levels produced by road traffic during night time below 45 dB L_{night} , as road traffic noise above this level is associated with adverse effects on sleep.

No economic cost-benefit assessment of setting values at these levels has informed the recommendations.

- 5.5 On publication of the 2018 WHO Guidelines, the Institute of Acoustics arranged a seminar to examine the document and to consider the implications. In particular, it was emphasised how the (then) new Guidelines at least provided starting points from which to consider preventing unacceptable adverse effects, avoidance of significant adverse effects and mitigating and minimising the adverse effects of noise.

Consideration of $L_{AF, Max}$

- 5.6 With respect to maximum sound levels, WHO criteria have long presented highly demanding criterion. $L_{AF, Max}$ dB values are cited for internal and external environments at 45 dB and 60 dB respectively.
- 5.7 The Critical Health Effects stated in WHO 1999 guidelines do not explicitly qualify the number of exceedances this relates to. For the outdoor value, an allowance for an open window is specifically featured.
- 5.8 WHO guidelines are problematic in that they do not stipulate how $L_{AF, Max}$ is to be measured, and there is no conclusive explanation or definition as to what comprises this metric. To illustrate anomalies that can be produced, for the measurement exercises conducted 28,800 $L_{AF, Max}$ values were recorded across each night-time period by resolving the sampling timeframe to 1 second. Conversely should a contiguous 8 hour measurement period have been used, this can only produce a solitary $L_{AF, Max}$ value; 1 hour periods would otherwise produce 8 results, and so forth. It is equally possible to resolve measurements to even shorter

contiguous periods of 100 milliseconds or even 10 milliseconds, which further increases data yield by factors of 10 and 100.

- 5.9 The situation is further compromised when considering noise events such as HGV pass-bys. A finer resolution of measurement periods produces more $L_{AF,Max}$ values that are technically attributable to each event, which can then excessively penalise the noise event.
- 5.10 For each measurement exercise in this case, the number of occurrences of maximum sound levels exceeding 60 dB(A) extremally has been considered. At 1 second resolution, for 14-15 June this produces 1341 exceedance instances, and for 19-20 June, 1099 exceedance instances. This is illustrative of how a range of varying sound sources is readily shown to contribute to breaching the criterion, dependent upon measurement technique.
- 5.11 Adopting a practical approach and treating each HGV pass-by as an event to which a single $L_{AF,Max}$ value is attributed, each pass-by will exceed the criterion, albeit there are substantially more non-HGV related exceedances over the course of 8 hours night-time.
- 5.12 In this case, $L_{AF, Max}$ does not therefore provide for a meaningful technique to appraise the impact of HGV pass-bys.

6 STATEMENT OF QUALIFICATIONS, COMPETENCY, COMPETENCY, PROFESSIONAL MEMBERSHIPS AND EXPERIENCE

ACADEMIC

6.1	Master of Science Degree	Environmental Pollution Control (<i>Pass with distinction</i>). 1997.
	Master of Science Degree	Acoustics, Vibration & Noise Control. 1991.
	Diploma	Institute of Acoustics - Acoustics & Noise Control. 1985.
	Certificate (Polytechnic)	Environmental Noise. (Pass with distinction). 1984
	Diploma	Royal Society of Health - Air Pollution Control. 1983.
	Certificate (University)	Air Pollution Control. 1983.

PROFESSIONAL MEMBERSHIPS & AFFILIATIONS

6.2	Institute of Acoustics	Grade: Corporate - Member
	The Royal Society for Public Health	Grade: Corporate - Fellow
	The Institution of Environmental Science	Grade: Corporate - Member

Chartered Scientist

Chartered Environmentalist

EMPLOYMENT

6.3	<u>Current Positions</u>	<u>Employer</u>	<u>Date(s)</u>
	Acoustics & Environmental Consultant	Independent (Self)/ Ltd. Company	1991 <i>to date</i>
	Environmental Protection Manager	Walsall Metropolitan Borough Council	June 2021 - <i>to date</i>

<u>Previous Positions</u>	<u>Employer</u>	<u>Date(s)</u>
Team Leader – Pollution Control	Walsall Metropolitan Borough Council	July 2014 to May 2021
Scientific Manager	Council	March 2006 - July 2014
Associate Lecturer – Institute of Acoustics Diploma Acoustics & Noise Control	University of Derby	September 2002 – September 2014
Visiting Lecturer - BSc(Hons) Environmental Health	University of Wolverhampton	October 2010 – September 2014
Visiting Lecturer - BSc(Hons) Environmental Health	Coventry University	October 2011 – September 2014
Pollution Control Manager (<i>Acting</i>)	Walsall Metropolitan Borough Council	April 2003 – May 2005
Principal Pollution Control Officer	Walsall Metropolitan Borough Council	April 1995 – March 2003 & May 2005 – February 2006
Sessional Lecturer – BTEC Environmental Health	Matthew Boulton College Birmingham	October 1992 – June 2000
Pollution Control Officer	Walsall Metropolitan Borough Council	May 1998 – April 1995
Technical Officer (Pollution Control)	Walsall Metropolitan Borough Council	August 1987 – May 1988
Technical Assistant (Pollution Control)	South Staffordshire District Council	October 1982 – August 1987

6.4 EMPLOYMENT SUPPLEMENTARY

Guest Lecturer – MSc Environmental Pollution Control	University of Derby	1996
Guest Lecturer – Environmental Noise and Air Pollution Measurement & Control	NEBOSH Certificate in Environmental Management	1994
Industrial Placement Supervisor for Graduate and Post Graduate students	Walsall Metropolitan Borough Council	<i>Ad hoc</i>

Independent Expert Witness 1991 *to date*
 Certified in 1990 as a Competent Person for the purposes of the Noise at Work
 Regulations

POSITIONS HELD WITHIN TECHNICAL BODIES & ORGANISATIONS

6.5	Committee Member – EH/1/3 Residential & Industrial Noise EH/1/3/2 BS 4142 Method for rating industrial noise affecting mixed residential and industrial areas revision	British Standards Institution (BSI), UK	2012 <i>to date</i>
	British Standards Institution (BSI) UK Representative - Working Group ISO/TC 43 SC1 WG 51 Noise from shooting ranges	International Standards Organisation (ISO)	2014 <i>to date</i>
	Board Member	West Midlands Low Emissions Towns & Cities Programme	2011 <i>to date</i>
	West Midlands Low Emissions Towns & Cities Programme Representative	West Midlands Integrated Transport Authority Connected Communities Group	2015 <i>to date</i>
	Chairman – Noise Committee	Midlands Joint Advisory Council for Environmental Protection	1996 <i>to date</i>
	Committee Member – Education Committee	Institute of Acoustics	2008 <i>to date</i>
	Chairman	West Midlands Local Air Quality Management Technical Group	2012 <i>to date</i>

West Midlands Representative - National Noise Committee (superseding in 2010 positions on the National Ambient Noise Committee and National Neighbourhood Noise and Nuisance Committee)	Environmental Protection UK	2005 <i>to date</i>
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6.6	<u>Previous Positions</u>	<u>Organisation / Body</u>	<u>Date(s)</u>
	Technical Co-ordinator - Noise	Midlands Joint Advisory Council for Environmental Protection	1996 - 2022
	Technical Secretary - Clay Target Shooting Noise Working Group	Midlands Joint Advisory Council for Environmental Protection	1988 - 2003
	Technical Group Member - Clay Target Shooting Guidance on the Control of Noise	The Chartered Institute of Environmental Health	1997 - 2003
	Secretary – Vibration Working Group	Midlands Joint Advisory Council for Environmental Protection	1991 on
	Committee Member	Institute of Acoustics - Midlands Branch Committee	1999 – 2008
	Representative – Walsall Metropolitan Borough Council / Midlands Joint Advisory Council for Environmental Protection	UK Noise Forum	

Representative - Walsall Metropolitan
Borough Council

Department of Environment, Food and
Regional Affairs / Environment Agency

Process Guidance Note Review Panels
(Environmental Protection Act 1990 Part 1,
Pollution, Prevention and Control Act 1999)

- Furnaces for the Extraction of non-ferrous Metal from Scrap (PG 2/1)
- Hot Dip Galvanising (PG 2/2)
- Electrical and Rotary Furnaces (PG 2/3)
- Ferrous and non-ferrous foundry processes (PG 2/4)
- Hot and Cold Blast Cupolas (PG 2/5)
- Processes for Melting and Producing Magnesium and Magnesium Alloys (PG 2/6a)
- Processes for Melting and Producing Aluminium and Aluminium Alloys (PG 2/6b)
- Zinc and Zinc Alloy Processes (PG 2/7)
- Copper and Copper Alloy Processes (PG 2/8)
- Integrated Pollution Prevention and Control - Guidance for the A2 Ferrous & Non-Ferrous Foundries Sector

SPECIALIST WORK THEMES – *ILLUSTRATIVE*

- 6.6
- ▶ Presentation of evidence to Courts of Law, Planning and Public Inquiries, Ombudsman Investigations and formal appeal hearings
 - ▶ Statutory Nuisances – litigation, enforcement, appeals
 - ▶ Nuisances – Private (Common Law)
 - ▶ Planning and Noise - Town & Country Planning Development, environmental impact assessment, design and mitigation
 - ▶ Industrial noise control
 - ▶ Ferrous and non-ferrous founding – noise, vibration and air pollution control
 - ▶ Environmental Protection Act 1990 / Pollution Prevention and Control Act 1999 - Process Authorisations and Permits, Local Authority Air Pollution Control (assessment, monitoring, regulation and enforcement)
 - ▶ Drop-forging and Press Works (noise/vibration)
 - ▶ Impulsive noise
 - ▶ Low frequency noise measurement, assessment and rating
 - ▶ Shooting / Ballistics Noise
 - ▶ Ground and structure-borne vibration (measurement, assessment and rating)
 - ▶ Open-cast mining - environmental assessment and control of air pollution, noise and vibration
 - ▶ Concert and Entertainment Noise
 - ▶ Road Transportation environmental impact assessments for noise, vibration and air pollution
 - ▶ Motor sports noise

- ▶ Air quality reviews and assessments
- ▶ Industrial air pollution control
- ▶ Environmental impacts of grit and dust
- ▶ Academic tutoring

7 GENERAL DISCLAIMER AND LIMITATIONS

- 7.1 This assessment has been prepared on behalf of Maelor Foods Ltd. in support of a planning application submitted to Wrexham Borough Council, seeking permission to increase production at its poultry processing plant located at Pickhill Lane, Wrexham. Currently the plant processes 1 million chickens per week; it is proposed to double this via a series of phased increases in production.
- 7.2 **It is assumed throughout persons using or interpreting this report for professional and/or other requirements are suitably conversant with terminology, metrics, indices, expressions and content herein, and any associated references, texts and other documentation.**
- 7.3 Comprehensive technical explanations, interpretation and acoustic terminology may therefore be specifically omitted and the reader is directed to: relevant standards; publications; policy and guidance; and technical materials by default, for further information as and where stated, indicated, referenced, or as appropriate. For brevity, glossaries and explanations of terms used might be excluded and are otherwise available on request.
- 7.4 No responsibility or liability rests with Acoustics Environment (or persons or bodies acting on behalf of, or in conjunction with the same) for the consequences of this document if it is used for a purpose other than that for which it has been commissioned. Persons wishing to use or rely upon this report for other reasons must seek written authority to do so from those responsible for commissioning this report and Acoustics Environment Ltd., and agree to indemnify Acoustics Environment Ltd. for any loss or damage resulting therefrom.
- 7.5 The findings and opinions expressed are relevant to any date(s) of site work(s) and/or assessments as befitting, together with information available and/or provided up to the time of its completion. Findings and opinions should not be relied upon to represent conditions or circumstances at later dates or under changed circumstances.
- 7.6 Opinions and statements are subject to information either gathered during attendance at site; and/or measurements undertaken; and/or information supplied by, or on behalf of, any

person(s) commissioning the report; and/or exchanges between other parties; and/or published works; and/or professional knowledge, experience and research. If additional information or knowledge becomes available which affects any reported comments, opinions, conclusions or recommendations, Acoustics Environment Ltd. reserve the right to revise the content of this report accordingly.

- 7.7 Throughout this report there may be reference to 'noise'. Considered as both an acoustic and legal construct, noise is related to human response and is routinely described as 'unwanted sound', or sound that is considered undesirable or disruptive (by the recipient). For the purposes of this report any reference to noise where used is treated within this context, unless it forms part of published material and is applied in regard to the same.