

North Lanarkshire Council Report

Planning Committee

Does this report require to be approved? Yes No

Ref PI/SP/02/03/01/08/EMcC Date 28/03/22

North Lanarkshire Council Draft Statutory Supplementary Guidance Note – SPG 15A Planning and Noise

From Pamela Humphries, Head of Planning and Regeneration

E-mail laingg@northlan.gov.uk **Telephone** Gordon Laing,
07970018874

Executive Summary

The purpose of this report is to seek committee approval to undertake external consultation with stakeholders for new statutory Supplementary Guidance Note – SPG 15A Planning and Noise, relating to the assessment of noise impacts arising from new development. Thereafter, the document will be finalised and submitted for further committee approval prior to submission to the Scottish Government. On Scottish Government approval the guidance document will be published and become part of the Council's Local Development Plan.

Recommendations

It is recommended that the Committee:

- 1) agree the draft policy guidance appended to this report and proposed consultation arrangements.
- 2) Note that the final policy guidance on noise will be subject to a future report to committee for approval.

The Plan for North Lanarkshire

Priority Improve the health and wellbeing of our communities

Ambition statement (14) Ensure the highest standards of public protection

1. Background

- 1.1 The main purpose of this guidance is to assist developers, decision makers, agents, residents and others to identify issues to be addressed in any application for development in which noise will be an important consideration when assessing that application.
- 1.2 Noise is likely to be an important consideration where noise sensitive developments are planned near to existing noise sources, or where potentially noisy developments are introduced into existing noise sensitive areas.

2. Report

- 2.1 This statutory Supplementary Guidance Note aims to promote good acoustic design in planning developments, where noise is considered at the very beginning of the design process. In this way the best possible acoustic environment for both future and current residents can be assured as well as protecting existing noise producing development from complaints from new noise sensitive neighbours.
 - 2.2 The document outlines the legislative and planning framework with regards to noise guidance and assessment and identifies North Lanarkshire Council plans and policies where noise may be an important consideration.
 - 2.3 The draft guidance seeks to ensure that new development is of good acoustic quality while still enabling the council to deliver its regeneration and growth ambitions.
 - 2.4 Guideline noise levels for different forms of development are detailed as well as providing information and assistance regarding assessment of these noise sources.
 - 2.5 An internal stakeholder consultation event was carried out on 17th March 2021 and feedback from this event has informed the draft submitted to the Planning Committee.
 - 2.6 The Council has to publicise the statutory Supplementary Guidance Note – SPG 15A Planning and Noise to make people who may wish to comment aware of the guidance and give them an opportunity to comment. The Council will consider any timeous representations made to it on the proposed Supplementary Guidance Note.
 - 2.7 Following the conclusion of the consultation and assessment of the responses a report will be submitted to the Committee for approval of the finalised Supplementary Guidance Note.
 - 2.8 The Council will send the Scottish Ministers a copy of the guidance it has approved and intends to adopt. At that time the Council will also send the Scottish Ministers a Statement setting out the publicity measures undertaken, the comments received, and an explanation of how these comments were taken into account. After a period of 28 days from submission has elapsed, the Council may adopt the Supplementary Guidance Note unless the Scottish Ministers direct otherwise.
-

3. Measures of success

- 3.1 The measures of success would include:
 - Clearer guidelines for applicants to help ensure noise is appropriately considered at the earliest stage of design development.
 - Gives the Service a framework to offer advice on the likely impacts of development in terms of noise and consistency of approach.
 - Less likelihood of noise complaints associated with new developments.
 - Aligns with Government Guidance on health impacts of development which will be a key consideration under Draft NPF4.
 - It offers the Council a more robust framework to support the Council's decisions in relation to any appeals referencing noise grounds.
-

4. Supporting documentation

- 4.1 Draft Supplementary Guidance Note – SPG 15A Planning and Noise, Version 1.1 (January 2022).

A handwritten signature in black ink, appearing to read 'P. Humphries'.

Pamela Humphries
Head of Planning and Regeneration

5. Impacts (<http://connect/report-template-guidance>)

<p>5.1 Public Sector Equality Duty and Fairer Scotland Duty Does the report contain information that has an impact as a result of the Public Sector Equality Duty and/or Fairer Scotland Duty? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, please provide a brief summary of the impact? If Yes, has an assessment been carried out and published on the council's website? https://www.northlanarkshire.gov.uk/your-community/equalities/equality-and-fairer-scotland-duty-impact-assessments Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>5.2 Financial impact Does the report contain any financial impacts? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, have all relevant financial impacts have been discussed and agreed with Financial Solutions? Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes, please provide a brief summary of the impact?</p>
<p>5.3 HR policy impact Does the report contain any HR policy or procedure impacts? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, have all relevant HR impacts have been discussed and agreed with People and Organisational Development? Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes, please provide a brief summary of the impact?</p>
<p>5.4 Legal impact Does the report contain any legal impacts (such as general legal matters, statutory considerations (including employment law considerations), or new legislation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, have all relevant legal impacts have been discussed and agreed with Legal and Democratic Solutions? Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes, please provide a brief summary of the impact?</p>
<p>5.5 Data protection impact Does the report / project / practice contain or involve the processing of personal data? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, is the processing of this personal data likely to result in a high risk to the data subject? Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes, has a Data Protection Impact Assessment (DPIA) been carried out and e-mailed to dataprotection@northlan.gov.uk Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>5.6 Technology / Digital impact Does the report contain information that has an impact on either technology, digital transformation, service redesign / business change processes, data management, or connectivity / broadband / Wi-Fi? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, please provide a brief summary of the impact?</p>

Where the impact identifies a requirement for technology, has an assessment been carried out (or scheduled) by the Enterprise Architecture Governance Group (EAGG)?

Yes No

5.7 Environmental / Carbon impact

Does the report / project / practice contain information that has an impact on any environmental or carbon matters?

Yes No

5.8 Communications impact

Does the report contain any information that has an impact on the council's communications activities?

Yes No

If Yes, please provide a brief summary of the impact?

5.9 Risk impact

Is there a risk impact?

Yes No

If Yes, please provide a brief summary of the key risks and potential impacts, highlighting where the risk(s) are assessed and recorded (e.g. Corporate or Service or Project Risk Registers), and how they are managed?



**North Lanarkshire Council Draft Statutory
Supplementary Guidance Note –
SPG 15A Planning and Noise**

Version Control

Author	Moira Cartwright	Contact Details	cartwrightm@northlan.gov.uk
Policy Owner	Andrew McPherson		mcpersona@northlan.gov.uk

Date	January 2022	Version Number	1.1	Document Status	Draft
-------------	-----------------	---------------------------	-----	----------------------------	-------

Governance	Enterprise and Communities	Date Approved	16 February 2022
Review Date	Proposed review date 3 years from adoption of guidance		

Strategic Alignment

Improve the health and care of communities
Improve economic opportunities and outcomes

Consultation and Distribution Record

Consultation Process	Internal stakeholder event , steering group
Internal Stakeholders	Contacts identified for each service
	Local elected members, Managers and members of the New Supply team, Head of Planning and Regeneration, Head of Regulatory Services and Waste Solutions, Planning Managers and officers; Growth Programme manager and team; Property Manager (technical and design); Forward Planning and Specification Manager; Estates Property Manager
Distribution List	To all stakeholders listed above

Change Record

Date	Insert date	Author	Insert details
Change made	No changes – new, draft document		

Statutory Planning Guidance – Planning and Noise

Contents	Page
1 Status	4
2 Introduction	4
3 Legislative Framework and Planning Policy	5
4 Development Management in North Lanarkshire	7
5 Noise Guidance and Criteria	9
6 Noise Impact Assessment	15
Appendix 1 – References	17
Appendix 2 – Contact Details for Specialist Acoustic Help	18
Appendix 3 – Glossary of Acoustic Terms	19
Contact Details for North Lanarkshire Council	21

1. Status

- 1.1. This Statutory Guidance (SG) forms part of the Development Plan and is a material consideration in the determination of planning applications.
- 1.2. The SG expands upon the following North Lanarkshire Council Local Development Plan policies:
 - Policy EDQ 2C – Management Areas
 - Policy EDQ 3C – Quality of Development, Guidance

2. Introduction

- 2.1. The main purpose of this guidance is to assist developers, decision makers, agents, residents and others to identify issues to be addressed in any application for development in which noise will be an important consideration when assessing that application.
- 2.2. Noise is likely to be an important consideration where noise sensitive developments are planned near to existing noise sources, or where potentially noisy developments are introduced into existing noise sensitive areas.
- 2.3. Unwanted sound can have a significant impact upon environmental quality, public health and amenity. ⁽¹⁾ Long term exposure to noise has been linked to increased risk of cardiovascular disease and stroke. Short term exposure has been linked to decreased quality of sleep including night awakenings. Disturbed sleep has been linked to fatigue, accidents and reduced performance ⁽²⁾.
- 2.4. Good acoustic design is imperative in the development of sites in which noise is a consideration. This process should examine the design options available in relation to the location of noise sensitive receptors to a noise source including the possibility of:-
 - reducing the noise at source
 - orientating the proposed buildings to reduce noise impact
 - the use of barriers and bunds to reduce the noise level at the noise sensitive receptor
 - designing the internal layout to place habitable rooms away from the line of site of any noise sources and
 - use of insulation of the building envelope to mitigate noise.⁽³⁾

- 2.5. Early engagement with North Lanarkshire Council's (NLC) Environmental Health Service to discuss the proposal and any noise issues on the proposed site is essential. These discussions should include whether a noise impact assessment report is required to be undertaken as part of the Planning application process and the terms of the assessment methodology as well as the internal and external noise level standards which will be applied by the local authority. Agreeing these matters in advance could prevent unnecessary delays during the planning process should an alternative noise impact assessment methodology or standard be applied. Environmental Health may continue to be involved throughout the process.
- 2.6. The Scottish Environmental Protection Agency (SEPA) regulates noise from certain prescribed industrial processes. Notwithstanding the regulatory role of SEPA, the Council will determine whether any noise impact from an existing or proposed development is significant in terms of the Planning regime and the local authority will liaise with SEPA regarding any Planning application involving a proposed new prescribed process or proposed changes to an existing prescribed process.

3. Legislative Framework and Planning Policy

3.1. Scottish Government Policy

- 3.1.1 **The Environmental Noise (Scotland) Regulations, 2006** requires the production of strategic noise maps for large urban area, transport corridors and large airports within Scotland. From these strategic maps, action plans were drawn up which identified areas where residents were likely to be exposed to the highest levels of noise. These areas are known as Noise Management Areas [NMAs]. These action plans also identified areas where individuals were likely to experience relatively low levels of noise and these are known as Quiet Areas [QAs]. The Scottish Government Action Plans aim to identify noise abatement measures designed to manage, avoid, prevent or reduce the harmful effects of noise exposure in NMA's. These Action Plans also aim to maintain and protect environmental noise quality in QAs. Similarly, through the planning process Local Authorities are required to ensure that new development does not result in increasing numbers of people exposed to adverse noise impacts in both NMAs and

QAs. At the time of publishing this guidance no noise management areas or quiet areas have been declared in North Lanarkshire.

- 3.1.2 **Planning Advice Note (PAN) 1/2011⁽¹⁾** provides guidance for planning authorities in relation to planning and noise and when noise impact assessment (NIA) will be required. The contents of this document have been considered in the development of this guidance together with appropriate European and national guidance on noise.
- 3.1.3 **The Technical Guidance Note⁽⁴⁾** which accompanies PAN 1 offers guidance regarding technical aspects of noise assessment and mitigation but recognises that it is up to each individual local authority to develop their own noise guidance and set appropriate noise standards specific to their local circumstances.

3.2. North Lanarkshire Council Policy and Guidance

- 3.2.1. **Local Development Plan.** The Town and Country Planning (Scotland) Act 1997 (as amended by the Planning etc (Scotland) Acts 2006 and 2019) and its associated regulations requires local authorities to produce a local development plan, setting out the Council's detailed policies and proposals for the use, development, protection and improvement of land. North Lanarkshire Council's proposed Local Development Plan is likely to be adopted in 2022⁽⁴⁾. Section 22 of The Town and Country Planning Act 1997 allows local authorities to adopt and issue guidance attached to a local development plan.
- 3.2.2. **The Business Plan** for North Lanarkshire sets the direction for the council and its partners. Its purpose is to communicate the shared priorities and provide a focus for activities and resources. The plan details North Lanarkshire Council's big ambitions in terms of realising large-scale regeneration and infrastructure projects. As part of these regeneration and infrastructure projects the noise impact of any development will be one of the many considerations.
- 3.2.3. **The Economic Regeneration Delivery Plan** for North Lanarkshire sets out a high-level framework for improving economic opportunities and outcomes for all by delivering an integrated approach to investing in four key, inter-related areas: Housing supply; Town centres; Business and



industry; Infrastructure. As part of this integrated approach the impact of noise on sensitive developments will require to be considered. Good acoustic design can provide a solution to potential noise impact issues when noise sensitive receptors and noise generating sources require to co-exist in the same location.

4. Development Management in North Lanarkshire

4.1. Noise is likely to be a material consideration in any planning application when:

- Noise sensitive development (NSD) is proposed close to an existing noise source.
- Noise generating development (NGD) is planned next to an existing noise sensitive development.

4.2. Noise sensitive uses may include a residential area, school or hospital while noise generating uses are likely to be noisy roads, railways, industrial and commercial sites.

4.3. Where it is not possible to separate noisy and noise sensitive land uses, developers will have to incorporate good acoustic design and a sensitive approach to any new development proposals. This approach will be key in Town Centre locations where North Lanarkshire's ambition is to create vibrant places with mixed use spaces which maximise social, economic and environmental opportunities. The planning authority will look favourably on acoustically well designed buildings, in town centre locations, to enable noise sensitive and noise generating development to succeed in these areas while maintaining good acoustic conditions for residents.

4.4. In a very small minority of areas which already have an unacceptably high noise level it may not be possible to mitigate the adverse effects of noise. In such circumstances noise sensitive development may not be appropriate.

4.5. The Environmental Protection Act, 1990, places a duty on Local Authorities to investigate noise complaints from, among others, industrial and commercial sources. Where statutory nuisance conditions exist, a Local Authority must serve Notice requiring the business to take action to reduce noise levels. This requirement may result in a company having to reduce their operations or in extreme cases close their business. Therefore, in considering a NSD close to industrial/commercial sources there is an obligation on the planning authority to protect existing commerce and industry from complaints from residents of new housing development.

4.6. Developers should agree representative noise standards and the site-specific NIA methodology with the planning authority in advance of undertaking the assessment.

- 4.7. It is recognised by the World Health Organisation (WHO) that a large proportion of the public wish to sleep with their window open, slightly, for ventilation⁽⁶⁾. For this reason, it is required that developers seek to use good building design to allow the windows of habitable rooms (bedrooms, living rooms and dining rooms) to be open slightly for ventilation while providing satisfactory internal noise levels.
- 4.8. Pan 1/2011 and BS 8233:2014 both recognise, in some areas where development is desirable, while it is preferable to have open windows in habitable rooms of a new noise sensitive development, this might not always be possible where external noise levels are high, and still achieve satisfactory internal noise levels⁽¹⁾⁽³⁾.
- 4.9. In North Lanarkshire developers will be expected to aim to achieve satisfactory internal noise levels with room window open slightly for ventilation. The developer must demonstrate that they have explored all potential mitigation options to try and achieve this goal on sites where noise levels are an issue. At the very least this should include exploring the potential for:
- a) reducing the noise at source.
 - b) orientating the proposed buildings to reduce noise impact.
 - c) the use of barriers and bunds to reduce the noise level at the noise sensitive receptor.
 - d) designing the internal layout to place habitable rooms away from the line of site of any noise sources and
 - e) use of insulation of the building envelope to mitigate noise.⁽³⁾

Only after the applicant has provided justification to the satisfaction of the Council that these mitigation options have been exhausted, it may be possible to consider some proposals with 'closed windows' being part of an overall agreed noise mitigation strategy. Each site will be considered by the Planning Authority, on its own merits. The number of affected properties and the level to which the guideline is exceeded will be considered by the planning authority when determining the suitability of a development where 'closed windows/alternative ventilation' is a **limited part** of an overall agreed noise mitigation strategy. This approach is highly likely to be more acceptable to NLC for anonymous transport noise sources without distinctive noise characteristics than for industrial/commercial noise sources for reasons which are outlined below.

- 4.10. The internal noise standards quoted within the various WHO documents and within BS 8233:2014 relate only to anonymous noise sources such as road and rail traffic. WHO research finds that residents consider these types of noise to be less annoying

than noise from discrete known sources which often generate a stronger emotional response⁽⁶⁾. WHO 1999, indicates that a window, open for ventilation, will provide attenuation of between 10 – 15 dB⁽⁶⁾. WHO Environmental Noise Guidelines for the European Region, 2018 provides guidance regarding attenuation which may be provided by windows within structures “*The differences between indoor and outdoor levels are usually estimated at around 10 dB for open, 15 dB for tilted or half-open and about 25 dB for closed windows*”⁽⁷⁾. This is based on research on attenuation of road traffic noise and consequently NLC will apply a 15dB attenuation for window open for ventilation when transport noise sources are being assessed.

- 4.11. Noise from industrial and commercial sources is not anonymous in nature and is often more variable in level and character. It often contains discrete tones, impulsive and intermittent noise. As such it is considered to cause greater annoyance and disturbance to receptors. Due to the nature and character of industrial/commercial noise, which can include externally sited fan or plant noise, when assessing indoor noise levels within a noise impact assessment, an open window should be considered to give the lower end of the spectrum of attenuation at 10 dB.

5. Noise Guidance and Criteria

- 5.1. A quantitative assessment of noise levels impacting a site will be required as part of an application where noise is a material consideration. A qualitative assessment may also be required.

5.2. Anonymous Road and Rail Traffic Noise

- 5.2.1. The WHO Guidelines for community noise 1999⁽⁶⁾, Night noise for Europe 2009⁽²⁾ and Environmental Noise Guidelines for Europe, 2018⁽⁷⁾ provide information about appropriate external and internal noise levels in relation to anonymous noise from road and rail traffic. These noise levels have then been transposed into UK guidance in the form of BS 8233:2014⁽³⁾

- 5.2.2. The indoor ambient noise levels for new dwellings planned next to an existing road or rail noise source are given in BS 8233:2014 Table 4 which is reproduced below together with the accompanying notes:-

Table 4 Indoor ambient noise levels for dwellings

Activity	Location	07:00 to 23:00	23:00 to 07:00
Resting	Living room	35 dB $L_{Aeq,16hour}$	—
Dining	Dining room/area	40 dB $L_{Aeq,16hour}$	—
Sleeping (daytime resting)	Bedroom	35 dB $L_{Aeq,16hour}$	30 dB $L_{Aeq,8hour}$

NOTE 1 Table 4 provides recommended levels for overall noise in the design of a building. These are the sum total of structure-borne and airborne noise sources. Groundborne noise is assessed separately and is not included as part of these targets, as human response to groundborne noise varies with many factors such as level, character, timing, occupant expectation and sensitivity.

NOTE 2 The levels shown in Table 4 are based on the existing guidelines issued by the WHO and assume normal diurnal fluctuations in external noise. In cases where local conditions do not follow a typical diurnal pattern, for example on a road serving a port with high levels of traffic at certain times of the night, an appropriate alternative period, e.g. 1 hour, may be used, but the level should be selected to ensure consistency with the levels recommended in Table 4.

NOTE 3 These levels are based on annual average data and do not have to be achieved in all circumstances. For example, it is normal to exclude occasional events, such as fireworks night or New Year's Eve.

NOTE 4 Regular individual noise events (for example, scheduled aircraft or passing trains) can cause sleep disturbance. A guideline value may be set in terms of SEL or $L_{Amax,P}$ depending on the character and number of events per night. Sporadic noise events could require separate values.

NOTE 5 If relying on closed windows to meet the guide values, there needs to be an appropriate alternative ventilation that does not compromise the facade insulation or the resulting noise level.

If applicable, any room should have adequate ventilation (e.g. trickle ventilators should be open) during assessment.

NOTE 6 Attention is drawn to the Building Regulations [30, 31, 32].

NOTE 7 Where development is considered necessary or desirable, despite external noise levels above WHO guidelines, the internal target levels may be relaxed by up to 5 dB and reasonable internal conditions still achieved.

If there is noise from a mechanical ventilation system, the internal ambient noise levels should be reported separately with the system operating and with it switched off. If the room contains items such as fridges, freezers, cookers and water heaters, these should be turned off during measurement. Shorter measurement periods such as $L_{Aeq, 1 \text{ hour}}$ may be used by agreement, provided the selected shorter measurement period is shown to be representative of the entire night or day period.

5.2.3. To prevent sleep disturbance at night, as well as considering the equivalent sound pressure level (L_{Aeq}) of the sound source, the maximum indoor sound pressure level ($L_{A,fast,max}$) and the number of those maximum sound events should be assessed. WHO, 1999 suggests an $L_{A,fast,max}$ of 45 dB should not be exceeded for any single event more than 10-15 times per night, to prevent sleep disturbance⁽¹⁾. While WHO, 2009 suggests an $L_{A,fast,max}$ of 42 dB has been found to show no detectable adverse alteration in the sleeping individual⁽²⁾.

5.2.4. It is desirable that external noise levels in gardens, patios and amenity space of residential properties do not exceed 50 dB $L_{Aeq, T}$, with an upper

guideline value of 55 dB $L_{Aeq,T}$, where T is the daytime period of 16 hours, 07:00 to 23:00. Where proposed development cannot meet these criteria with the provision of the most effective noise mitigation measures in place, the number of affected properties and the level to which the guideline is exceeded will be considered by the planning authority when determining the suitability of the development.

5.2.5. Relevant Target Noise levels for Road, Rail and Aircraft Traffic

Sound Source	Relevant Standard for Assessment	Target Levels	Standard from which target levels are derived
Road Traffic	Calculation of Road Traffic Noise 1998 [CTRN]; Design Manual for Roads and Bridges 2012	External Day time: $L_{Aeq[16hours]}=50 - 55 \text{ dB}^*$; or $L_{den} < 53 \text{ dB}$ External Night time: $L_{Aeq[8hours]}= 45\text{dB}^{**}$; or $L_{night} < 45 \text{ dB}$ Internally Night time: $L_{Amax}= 45 \text{ dB}^{***}$	WHO Guidance for Community Noise 1999, WHO Night Noise Guidelines for Europe, 2009, BS 8233:2014; WHO Environmental Noise Guidelines for Europe, 2018
	Calculation of Railway Noise 1995[CRN]	External Day time: $L_{Aeq[16hours]}=50 - 55 \text{ dB}^*$; or $L_{den} < 54 \text{ dB}$ External Night time: $L_{Aeq[8hours]}= 45\text{dB}^{**}$; or $L_{night} < 44 \text{ dB}$	WHO Guidance for Community Noise 1999, WHO Night Noise Guidelines for Europe, 2009, BS 8233:2014; WHO Environmental Noise Guidelines for Europe, 2018
Air Traffic	Guidance in BS 8233:2014; Civil Aviation Authority	$L_{den} < 55 \text{ dB}$ $L_{night} < 40 \text{ dB}$	WHO Environmental Noise Guidelines for Europe, 2018

*BS8233:2014 recognises that it may not always be possible to meet 55 dB in residential gardens, but that good design should be used to reduce noise levels in external amenity areas to the lowest possible level.

**when assessed externally 1 m from the facade

*** No more that 10 – 15 times per night. When considering the number of times per night each situation will be assessed on site by site basis and will be determined by the number of events and the levels of each event.

5.2.6 Any increase in traffic caused by a proposed development and assessment of its effect on noise levels at exiting residential properties should be included with in the NIA.

5.3 Industrial and Commercial Noise Sources

5.3.1 Noise from industrial and commercial sources is often varying in nature can be complex to assess. The most relevant standard for assessing new industrial and commercial development is BS 4142:2014+A1:2019. Methods for rating and assessing industrial and commercial sound ⁽⁸⁾.

5.3.2 BS 4142:2014 provides a methodology of assessment and rating of commercial and industrial sound externally and gives an indication of whether that sound is likely to have an adverse effect on the residents of nearby dwellings both externally and internally. The standard is used to determine the impact of noise from a new industrial/commercial noise source on existing residential properties or from an existing industrial/ commercial noise source on a new residential development. This is achieved by determining: -

- a) The ambient, residual and background noise levels
- b) The rating level of the sound source, which may include penalties for the tonal, impulsive, intermittent or otherwise distinctive character of the sound
- c) The context in which the sound is occurring
- d) The significance of impact of the sound source by determining the level by which the rating level exceeds the background noise level
- e) An exceedance of +10 dB or more is considered to be an indication of likely significant adverse impact dependant on the context of the noise
- f) An exceedance of +5 dB or more is considered to be an indication of likely adverse impact dependant on the context of the noise
- g) The lower the rating level is relative to the measured background level the less likely it is that the specific noise source will have an adverse impact or a significant adverse impact.

5.3.3 Relevant Noise Standards for Industrial/Commercial Noise

BS 4142 Outcome	Planning Advice
$L_{Ar(T)} - L_{A90,T} \text{ is } > 0$	Noise is unlikely to be a consideration
$L_{Ar(T)} - L_{A90,T} \text{ is } > 0 \text{ and } < +5$	Where the rating level is above the background noise level by up to 5 dB it is an indication that the noise may not be acceptable from a noise perspective depending on the context. Further noise mitigation is likely to be required to reduce $L_{Ar(T)} - L_{A90,T}$ to as close to 0 as reasonably practicable.
$L_{Ar(T)} - L_{A90,T} > + 5$	Where the rating level is 5 dB or more above the background noise level this is an indication that the development is unlikely to be acceptable from a noise perspective. Further mitigation will be necessary to reduce the $L_{Ar(T)} - L_{A90,T}$ to as close to 0 as reasonably practicable.

5.4 Entertainment Noise

- 5.4.1 New commercial developments where amplified music or any broadcasting is a likely activity should be designed to ensure that this noise is contained within the development boundary and is inaudible within any neighbouring noise sensitive property.
- 5.4.2 New residential developments planned near venues where amplified music or broadcasting is likely, should be designed to ensure that noise from these sources is inaudible within the proposed noise sensitive properties and where appropriate in their gardens or amenity space.

5.5 Noise from Externally Sited Plant and Ventilation Systems

- 5.5.1 Noise from new or altered ventilation systems must be designed so that it meets the appropriate Noise Rating (NR) Curve in the nearest residential property.
- Where new NSD is located next to existing ventilation system noise the development should be designed to allow the noise standards detailed in 5.5.3 to be met.
- 5.5.2 Noise Level Standards for Ventilation Noise

Noise Rating (NR) Curve	Time of day
NR 30	07:00-23:00
NR 25	23:00 – 07:00
NR20 (quieter areas)	23:00 – 07:00

- 5.5.3 For externally sited plant or ventilation systems which are located adjacent to:
- amenity areas where the background noise level is relatively low or
 - high background noise levels where noise above NR 30 may be acceptable

an assessment in terms of BS 4142:2014+A1:2019 may be more appropriate. Where either of these situations arise agreement should be sought from Environmental Health on the appropriate methodology prior to assessment.

5.6 Development where for traffic, industrial- commercial, entertainment and ventilation noise is material consideration will only be permitted where the planning authority is satisfied that the criteria outlined in 5.2 – 5.5 above have been achieved and that a development does not give rise to significant adverse impacts on health and quality of life and/or does not require businesses to have unreasonable restrictions put on them because of changes to nearby land uses.

5.7 Wind Turbine Noise

- 5.7.1 Wind turbine development applications are not considered in this guidance.

Advice on this topic can be found on our website at

<https://www.northlanarkshire.gov.uk/pests-and-pollution/pollution/noise/noise-guidance-wind-turbine-developments>.

5.8 Construction and Demolition Noise

- 5.8.1 In general control of noise from construction and demolition works in NLC is by means of guidelines on restricting the hours of operation of noisy equipment.

These guideline times are:

- Mondays to Fridays - 8am to 7pm
- Saturdays - 8am to 1pm
- Sundays and Bank Holidays - no noise should be audible at the site boundary.

- 5.8.2 The Control of Pollution Act, 1974⁽⁹⁾ (CoPA) Sections 60 and 61 may be used by the council to control noise from construction and demolition works.

- 5.8.3 Section 61 of the CoPA allows the person(s) carrying out the works to apply to the Council for permission to undertake these works at specified dates and



times, in a specific manner, using specified equipment/methods. The Council has 28 days to decide upon any application they receive.

- 5.8.4 Section 60 of the CoPA allows the Council to place restrictions on any construction/demolition works where it has had or believes it is likely to have complaints regarding noise. Any aspect of the site works can be restricted for example hours of operation, equipment used, work methods etc.
- 5.8.5 BS5228-1:2009 +A1:2014 *Code of practice for noise and vibration control on construction and open sites* provides guidance for those undertaking this work. This document discusses noise mitigation controls, best practice in relation to communication with local residents, etc.⁽¹⁰⁾

6 Noise Impact Assessment

6.1 Noise impact assessment should be carried out by a suitably qualified and competent noise consultant. The consultant would be expected to hold membership of the Institute of Acoustics or the Association of Noise Consultants.

6.2 As a minimum a noise impact assessment report should include: -

- a) An Introduction
Statement of qualifications, competency, professional memberships, experience, professional indemnity, etc.
- b) A description of site and proposal including the relevant noise source and associated detail
- c) Identification of the receptor, their proximity to source and their sensitivity
- d) The acceptable noise criteria agreed with the authority in advance
- e) Details of noise measurement survey undertaken should as a minimum include (but not limited to) details of the: -
 - device(s) used, assessment methodology, location, duration, meteorological conditions
 - interpretation of results, data summary, and any additional calculations
 - Any assumptions made
 - Impact assessment – analysis of results against acceptability criteria
 - Noise mitigation measures – discussion of any need for, the options available to mitigate
 - observed noise levels, and the improvement various options might provide.

- f) Conclusions
- g) Recommendations
- h) Appendices, for raw measurement data, calibration certificates, calculations, if modelling used input parameters, additional maps and plans, details and specifications for mitigation measures.

6.3 Where there is significant night time noise in the area under consideration an attended night time noise survey is likely to be required.

6.4 Where noise mitigation measures are conditioned as part of the planning consent, the applicant may be required to validate that the measures detailed in the planning condition have been installed to the satisfaction of a suitably qualified acoustic consultant. It is likely that a report detailing these validation works will require to be submitted to, and approved by, the Planning Authority i.e. NLC before any such condition can be discharged.

Appendix 1

References

1. Planning Advice Note (PAN) 1/2011, Scottish Government 2011
2. World Health Organisation, Night noise guidelines for Europe 2009
3. BS 8233: 2014 Guidance on sound insulation and noise reduction for buildings
4. Assessment of noise: technical advice note, Scottish Government 2011
5. North Lanarkshire Local Development Plan, 2021
6. World Health Organisation, Guidelines for Community Noise 1999
7. World Health Organisation Environmental Noise Guidelines for the European Region 2018
8. BS 4142:2014+A1:2019. Methods for rating and assessing industrial and commercial sound
9. The Control of Pollution Act, 1974
10. BS5228-1:2009 +A1:2014 Code of practice for noise and vibration control on construction and open sites

Appendix 2

Contact details for acoustics organisations

- 1 Institute of Acoustics
Sidbury Court
406 Sidbury Boulevard
Milton Keynes
MK9 2AF
T: 0300 999 9675
E: ioa@ioa.org.uk
IOA web site link to assist in finding a suitable noise consultant
<https://www.ioa.org.uk/find-acoustics-specialist-or-supplier>
- 2 The Association of Noise Consultants
19 Omega Business Village
Thurston Road
Northallerton
DL6 2NJ
T: 020 8253 4518
E: info@theanc.co.uk
ANC web site link to assist in finding a suitable noise consultant
<https://www.association-of-noise-consultants.co.uk/>
- 3 Building Research Establishment
Red Tree Magenta
Red Tree Business Centre
270 Glasgow Road, Rutherglen
Glasgow, G73 1UZ
T: +44 (0)1414 474999
E: enquiries@bregroup.com



Appendix 3 Glossary of Acoustic Terms

'A' weighting (dB(A)): A frequency dependent correction which weights sound to correlate with the sensitivity of the human ear to sounds of different frequencies.

Ambient Noise: A measure of the typical noise (excluding any unusual events) present at a site. This is usually described in terms of $LA_{eq,T}$.

Anonymous noise: Noise that cannot be attributed to a single (specific source). For example, noise from cars on a road would be considered anonymous whereas a noisy ventilation unit would not.

Audible: Sound that can be heard or is perceptible by the human ear.

Background Noise: A measure of the underlying noise (excluding any unusual events) which is present at a site before a new noise source is introduced. This is usually described in terms of the LA_{90} level: the sound pressure level exceeded for 90% of the time.

Decibel (dB): A unit used for many acoustic quantities to indicate the level of sound with respect to a reference level.

Façade measurement: Noise measurements made outside an external wall of a structure (usually 1 metre from the wall).

Good Acoustic Design: focuses on the techniques and principles employed in acoustic design, as well as room acoustics, hearing, speech, sound insulation, and noise control and design. Further details can be found in ProPG: Planning & Noise Professional Practice Guidance on Planning & Noise New Residential Development SD2-i SUPPLEMENTARY DOCUMENT 2 GOOD ACOUSTIC DESIGN at <https://www.ioa.org.uk/sites/default/files/14720%20ProPG%20Supplementary%202.pdf>

Habitable room: A room used for sleeping or recreation / relaxation.

Inaudible: Sound that cannot be heard or is imperceptible to the human ear.

Industrial-type noise sources: Noise sources that are industrial in character. For example, noise from plant and machinery, materials handling operations, or manoeuvring of heavy vehicles.

Institute of Acoustics: A professional body representing persons at all levels working in the field of acoustics.

$LA_{90,T}$: Sound pressure level exceeded for 90% of the measurement period "T" or 'background level'.

$LA_{eq,T}$: Equivalent continuous sound pressure level measured over the time period T

L_{Amax} : The maximum RMS A weighted sound pressure level

Noise: Unwanted sound.



Noise assessment: Evaluation of noise climate by a suitably qualified person to assist in the determination of a planning application.

Noise-sensitive premises /developments: Principally comprising residential premises, hospitals, schools and hotels. Other premises types may be deemed such depending upon circumstances.

Noise Nuisance: A legal term used to describe noise at a level that is disturbing as perceived by a reasonable person. The meaning of nuisance is defined by precedent in common law.

Outdoor Amenity Area: An outdoor area adjacent to a residential building which is designed and intended primarily for the leisure and recreation of the occupants of the dwelling. This will include gardens, landscaped areas, balconies.

Rating Level: The noise level of an industrial noise source which includes an adjustment for the character of the noise. Used in BS4142:2014.

Suitably qualified person: A person having a suitable combination of formal training and experience in the assessment of noise.



If you require further information or assistance, please contact North Lanarkshire Council using the details provided below:

Planning Authority

Address: Civic Centre
Windmillhill Street
Motherwell
ML1 1AB
Telephone: 01236 632500
Email: esplanning@northlan.gov.uk

Environmental Health

Address: Ground Floor, Civic Centre
Windmillhill Street
Motherwell
ML1 1AB
Telephone: 01236 856300 or 01236 856361
Email: Environmental-Health@northlan.gov.uk

Or visit our website at <https://www.northlanarkshire.gov.uk/>