**FIFE COUNCIL**

**Economy, Planning and Employability Services**

**Environmental Health Noise and Planning Guidance**

**NOISE GUIDANCE FOR NEW DEVELOPMENTS**

**1. Introduction**

* 1. This document is based on a template produced by the Royal Environmental Health Institute of Scotland working group, which has been edited for ease of use in Fife. If you are employing a suitably qualified and experienced acoustic consultant, they will be familiar with the requirements herein.
  2. Unwanted sound can have a significant impact upon environmental quality, public health and amenity (Planning Advice Note 1/2011, Scottish Government, 2011 <http://www.scotland.gov.uk/Resource/Doc/343210/0114180.pdf> ). This guidance is to provide developers with information when dealing with the planning process where noise sensitive developments are planned near to existing noise sources, or where potentially noisy developments are introduced into existing noise sensitive areas.
  3. This guidance has been developed in response to Planning Advice Note 1/2011 (PAN) and should be read in conjunction with this document and the accompanying Technical Advice Note ‘Assessment of Noise’ (TAN). It takes into account current policy in relation to planning and noise and provides guidance on undertaking noise assessments, which may be required for any potential development to help determine a planning application.
  4. Where noise is a consideration in a planning application, planning officers will consult with Environmental Health (EH). In the first instance, EH will advise whether a noise impact assessment (NIA) is required and review any noise information submitted by the applicant. Environmental Health will then consider whether the information provided is sufficient to accurately characterise the noise impact of the proposed development.
  5. EH may advise the planning officer that noise is not a significant issue or that mitigation measures will be required. In some cases, the noise impact may be so significant that EH will recommend against the granting of planning permission.
  6. The developer should liaise with the Local Authority’s Environmental Health Officer in the early stages of the planning process via the Council’s formal pre-planning application process. Discussions can be very useful to determine the risk of noise being a significant consideration and to identify the supporting information and detail on noise likely to be required. Prior to commencing any noise impact assessment, it is vital the appointed noise consultant contact Environmental Health to agree the relevant noise assessment methodology and establish appropriate noise assessment criteria to avoid unnecessary delay in the planning process.
  7. Exceptional Circumstances – Fife Council Planning will decide, on receipt, whether the criteria for accepting “Exceptional Circumstances” has been met (See para.3.5).

**2. When Noise Should Be Considered in the Planning Process**

* 1. There are two types of development for which noise impact assessments will be required. These are:

i) Proposed Noise Generating Development (NGD) (noise brought to people)

ii) Proposed Noise Sensitive Development (NSD) (people brought to noise)

* 1. Where it is not practical 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.
  2. Where areas already have an unacceptable noise level it may not be possible to mitigate the adverse effects of noise. In such circumstances noise sensitive development may not be appropriate; in some cases, there is a need to protect existing commerce and industry from complaints made by residents of new housing developments.

**3. Noise Assessment and Methodology**

3.1 Before undertaking any assessment, the developer(s) should identify and agree all relevant noise generating sources and noise sensitive receptors with Fife Council; methodology of assessment and noise target levels should also be agreed. These details should be confirmed in writing, which should include a map with the locations of:

* Noise monitoring points
* Noise sensitive receptors
* Noise sources

3.2 Where a noise impact assessment is required, it must be undertaken by a suitably qualified and competent person. Noise reports must be comprehensive and contain enough information for the Local Authority to assess the likely noise impact of the proposed development. Failure to produce enough detail with regard to methodology and calculations will result in a delay in the planning process. Noise measurements will generally be required to establish the noise environment at the site of proposed development. Noise monitoring should be conducted in accordance with BS7445-1:2003.

3.3 Any assumptions used in the prediction of noise levels must be clearly stated in the noise report. The submitted report must also provide a sample calculation to demonstrate how the noise figures have been attained. Detailed raw data must be made available upon request.

3.3 The following table outlines the relevant assessment methodology and target noise levels for the most common noise sources. See TAN Appendix 1 for more comprehensive information on further technical standards and codes of practice.

*Table 1 Main Noise Targets and Methodology*

|  |  |  |  |
| --- | --- | --- | --- |
| Noise Sources | 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 <http://www.dft.gov.uk/ha/standards/dmrb> | External Day time: LAeq[16hours]=50 dB  Internal Daytime  LAeq[16hours]=35 dB  Internal Night time: LAeq[8hours]= 30dB  LAmax= 42dB  (No more than 10-15times in any 8hour period) | World Health Organisation Guidelines for Community Noise 1999  BS8233:2014 Sound insulation and noise reduction for buildings  WHO Environmental Noise Guidelines for the European Region 2018 |
| Rail Traffic | Calculation of Railway Noise 1995 [CRN] <http://www.chiltern-evergreen3.co.uk/uploads/09Sep2010/5.12.pdf> |
| Industrial or  Commercial Noise | BS4142:2014 is a method of rating industrial and commercial noise. | Rating Level - Background Noise  Level [LA90] < 5dB | BS4142:2014 Method for rating industrial  noise affecting mixed residential and  industrial areas |
| Construction/ Demolition Sites | The Control of Pollution Act 1974 <http://www.legislation.gov.uk/ukpga/1974/40>  BS5228:Code of practice for noise and vibration control | Construction site noise may be controlled by restricting the hours of operation of the site and/or by setting acceptable noise levels described in Annex E of the code of practice. | BS5228:2009Code of practice for noise and vibration control |
| Fan, air conditioning  units, ventilation  systems etc. | Noise Rating Curves | Internal Noise levels: Appropriate NR for area and time of day | BS8233:2014 Sound insulation and noise reduction for buildings |

*Note:*

1. *Noise monitoring should be conducted in accordance with BS7445-1:2003*.
2. *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.*
3. *Where a noise generating source is assessed, the potential for likely expansion (and therefore increase in noise levels) must be taken into account and discussed within the noise report.*

3.4 In the case of NSD brought to an existing transport noise source, developers will need to demonstrate that all mitigation methods have been considered to achieve both satisfactory internal noise levels within any noise sensitive property and protect external amenity areas.

**3.5 Only in exceptional circumstances should satisfactory internal noise levels only be achievable with windows closed and other means of ventilation provided. Predictions of internal noise levels within noise sensitive premises must be calculated based on an open window scenario. The degree of sound reduction afforded by a partially open window should be taken as 13dB (as calculated from the façade level).**

3.6 It must be noted that the Scottish Environmental Protection Agency (SEPA) regulate noise from certain prescribed industrial processes. Despite this regulatory role by SEPA, the Local Authority will determine whether any noise impact on residential developments from such industrial processes is significant. Liaison between SEPA and the Local Authority must be undertaken

**3.7 When new NSDs are proposed near to NGDs BS4142:2014 must be used. Furthermore, the assessment must include a comparison of the background level with the rated level. Fife Council will not accept noise reports without this assessment being carried out.**

**4 Determining the Magnitude of Noise Impact**

4.1 For steady continuous noise The World Health Organisation document ‘Guidelines for Community Noise’ (1999) recommends an indoor guideline value for bedrooms of 30dB LAeq (8h), to prevent sleep disturbance and 45 dB LAmax for single sound events. However, WHO NNGE 2009, which is an extension of the guidelines recommends that the single event noise level, the noise level below which there are no observed effects, is reduced to 42 dB LAmax (no more than 10 to 15 times a night) to protect occupants from sleep disturbance. WHO ‘Guidelines for Community Noise’ further recommends a daytime level below 50 dB LAeq(16h) on balconies, terraces and outdoor living areas to protect receptors from moderate annoyance. WHO also indicates that an outdoor, daytime level below 55 dB LAeq(16h) will protect most people from being seriously annoyed. Therefore, levels predicted to be above 55 dB LAeq(16h) are likely to have a major impact.

*Table 2: Examples of the use of these target noise levels to determine the magnitude of noise impact, as described in PAN 1/2011/TAN*

|  |  |  |  |
| --- | --- | --- | --- |
| Noise Sources | Target Levels | Change in Noise Level [predicted/existing noise - target] | Magnitude  of Impact |
| Road Traffic | External Day time:  LAeq[16hours]= 50 dB Internal  Night time:  LAeq[8hours]= 30 dB | > 5 | Major Adverse |
| ≤5 but ≥3 | Moderate Adverse |
| <3 but ≥1 | Minor Adverse |
| <1 but ≥0 | Negligible Adverse |
| 0 | No Change |
| Rail Traffic | External Day time:  LAeq[16hours]= 50 dB Internal  Night time:  LAeq[8hours]= 30 dB | > 5 | Major Adverse |
| ≤5 but ≥3 | Moderate Adverse |
| <3 but ≥1 | Minor Adverse |
| <1 but ≥0 | Negligible Adverse |
| 0 | No Change |
| Industrial or  Commercial Noise | Rating Level( LAr)- Background Noise  Level [LA90] < 5 | > 10 | Major Adverse |
| ≤10 but ≥5 | Moderate Adverse |
| <5 but ≥3 | Minor Adverse |
| <3 but ≥0 | Negligible Adverse |
| 0 | No Change |

*Notes:*

*External levels are free field noise measurements.*

**5. Qualitative Assessment**

5.1 Following the quantitative determination of the magnitude of noise impact, a qualitative assessment should be undertaken to assess the effect on the amenity value of the existing or proposed noise sensitive receptor. The qualitative assessment will either confirm the quantitative assessment or indicate that additional factors need to be considered when describing the magnitude of impact. The additional factors to be considered will depend on the type of the noise sensitive receptor e.g. the potential for sleep disturbance, effects on ability to relax, concentrate or converse use of outdoor space. Examples of descriptors for qualitative impact of noise are given in Table 2.5 of Technical Advice Note: Assessment of Noise.

5.2 Once the magnitude of noise impact has been appropriately described, the level of significance of the impact can be determined. The significance of the impact will depend on the sensitivity of the existing or proposed noise receptor(s). TAN advises that noise assessments should include a Summary Table of Significance to show the number of NSRs likely to be subjected to significant noise impacts. Although the overall number of NSRs which will be affected is obviously important, the EHO reviewing the noise assessment will also pay heed to the effect on individual NSRs. A large negative noise impact on any one individual NSR will be of concern to the EHO and this will be reflected in the advice the EHO gives to the planning officer.

5.3 In some circumstances, it may also be appropriate to consider the cumulative impact of the proposed development. Such circumstances may arise where other developments in the surrounding area have received consent but have not yet been completed. The developer or their noise consultant should discuss this with the EHO/planning officer during the pre-application discussions.

5.4 The noise assessment should detail any mitigation measures necessary to achieve satisfactory target noise levels.

**6. Summary**

6.1 PAN 1/2011 introduced a new approach to the assessment of noise. It is strongly recommended that developers and/or their noise consultants contact the local authority prior to conducting any noise assessment to agree the assessment methodology and relevant noise sensitive receptors. The local authority will also advise on the relevant noise targets.

CHECKLIST

1. Contact Planning via the formal pre-application process and Environmental Health to discuss the scope of any noise assessments.
2. Identify Noise Sensitive Receptors
3. Where a Noise Impact assessment is required instruct a suitably qualified and competent person.
4. Determine Noise Sensitive Receptors and Noise Generating Development in area and agree in writing with Environmental Health.
5. In consultation with Environmental Health determine appropriate noise criteria and targets for assessment.
6. Carry out assessment in adherence with BS7445 and other relevant standards as determined by noise criteria agreed for assessment.
7. Determine Magnitude of Noise Impact using table 2.
8. Carry out qualitative assessment.
9. Determine level of significance
10. Mitigations measures if required to meet target levels (eg. including barrier calculations)
11. Include all uncertainties and assumptions in the published report.

**Appendix 1**

**Level of Sensitivity Associated with Various Examples of NSRs**

|  |  |  |
| --- | --- | --- |
| **Sensitivity** | **Description** | **Examples of sensitive receptor.** |
| **High** | Receptors where people or operations are particularly susceptible to noise | * Residential, including private gardens where appropriate. * Quiet outdoor areas used for recreation * Conference facilities * Theatres/Auditoria/Studios * Schools during the daytime * Hospitals/residential care homes * Places of worship |
| **Medium** | Receptors moderately sensitive to noise, where it may cause some distraction or disturbance | * Offices * Bars/Cafes/Restaurants where external noise may be intrusive. * Sports grounds when spectator noise is not a normal part of the event and where quiet conditions are necessary ( e.g. tennis, golf, bowls) |
| **Low** | Receptors where distraction or disturbance from noise is minimal | * Buildings not occupied during working hours * Factories and working environments with existing high noise levels * Sports grounds when spectator noise is a normal part of the event * Night Clubs |

**Annex 1**

Requirements for specific applications.

Wind Turbines

For the assessment of noise from wind turbines ETSU-R-97 should be used, along with the IOA guidance “A GOOD PRACTICE GUIDE TO THE APPLICATION OF ETSU-R-97 FOR THE ASSESSMENT AND RATING OF WIND TURBINE NOISE” and its supplementary guidance documents.

Mineral Extraction

For the assessment of mineral workings (e.g. Open cast mines and quarries) PAN 50 and BS 5228-1:2009 should be the used for guidance.

Annex 2

Construction Noise

To minimise noise disturbance at nearby premises it is generally recommended that activities relating to the erection, construction, alteration, repair or maintenance of buildings, structures or roads shall not take place outside the hours of:

08.00 and 18.00 hours Mondays to Fridays

08.00 and 13.00hours Saturdays

With no working Sundays or Public Holidays

In some cases, different site-specific hours of operation may be appropriate.

Under the Control of Pollution Act 1974, Section 60 Fife Council Protective Services can control noise from construction sites by serving a notice. This notice can specify the hours during which work may be carried out.

Scheme of works

On larger sites, it is recommended that the applicant submit a Scheme of Works designed to mitigate the effects on sensitive premises/areas (i.e. neighbouring properties and road) of dust, noise and vibration from construction of the proposed development.

The use of British Standard BS 5228: Part 1: 2009 “Noise and Vibration Control on Construction and Open Sites” and BRE Publication BR456 – February 2003 “Control of Dust from Construction and Demolition Activities” should be consulted.