



Response to comments on the Noise Impact Assessment for the Station

Hotel, Hatton Peterhead dated 6 April 2023

APP/2022/2370

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The information below addresses the most recent response from the Environmental Health Service, Aberdeenshire Council (appended).

1. On-Time

Noise levels from any activity vary. At times the sound levels will be higher, at other times lower. The assessment averages these out over the reference period to give a value on which the assessment can be based. BS4142 states that the daytime period reference period is one hour. During part of this hour the sound will be louder, whilst at other times there may be no sound from the noise source being assessed.

The only on-time that is relevant is one hour. To state the duration of a visit from the forklift, when a higher level of noise will be created would be incorrect. It would also require definition of the sound emissions, which will vary as the distance from source to receptor changes as the vehicle drives in, then out.

If the above information is in any way incorrect then the author of this report would appreciate a referenced explanation of how the assessment could be done more accurately.

On consideration of the EHO's request it may be that more detail of the data used by SoundPLAN would resolve the concern. The output that the model provides, following the revisions described below, is appended.

2. Ground Levels

The SoundPLAN model has been updated to use the ground heights in Table 1.

Table 1: Revised ground levels used in SoundPLAN

| | |
|---------------------------|---------|
| Proposed Ground Level | 43.25 m |
| Ground Level at barrier | 43.25 m |
| Top of barrier | 45.25 m |
| Ground level at house | 44.5 m |
| Ground level at receivers | 46 m |

3. Character correction

The response to the EHO previous comments made it clear that the author considered that a 1 dB character correction was appropriate. This was based on the belief that a sound heard for a small

proportion of the reference period must be less disturbing than the same sound heard for the whole of the reference period.

The author is unaware of any document giving specific levels of character correction for this activity. It is understood that the assignation of “penalties” is based on professional opinion. If the EHO knows of references which would be useful it would be good if these were shared. The bottom line though is that this process aims to predict whether disturbance will be caused. If the EHO has experience that indicates that disturbance from the activity described in this noise assessment will cause more disturbance than the author predicts then he can suggest that a higher level of character correction be applied. The effect of this on the rating level is shown in Table 2.

Table 2: Rating level with increasing levels of character correction

| | | |
|---|----|-------|
| Background sound level | 42 | dB(A) |
| Predicted sound level at receiver in garden | 39 | dB(A) |
| Rating level with 1 dB character correction | -2 | dB |
| Rating level with 3 dB character correction | +1 | dB |
| Rating level with 6 dB character correction | +4 | dB |

4. Sound level limit

British Standard 4142 clearly states that whilst a rating level of +5 dB may indicate an adverse impact this depends on the context of the site. The high traffic noise levels and the short duration of use of the storage pad are suggested as relevant context.

Other sources of information may be a useful guide of what sound levels are generally acceptable.

4.1. From the World Health Organisation (WHO)

The WHO document “Guidelines for Community Noise” gives the following indication of maximum daytime noise:

35 dB(A) L_{eq} in living rooms over a 16 hr day

50 to 55 dB(A) L_{eq} as in gardens and amenity areas over a 16 hr day

Assuming the character correction level of the previous report, the resultant predicted sound level will be 40 dB(A) in the garden, over the reference period. (As only a few hours a day are to have

visits from the forklift truck, the 16 hr L_{eq} level will be less than 40 dB(A).) The absolute outdoor sound level of the forklift truck is clearly less than the maximum suggested by the WHO. Also, the predicted internal sound level will be well below the WHO maximum.

4.2. From Planning Advice Note 1 PAN: 2011

Planning Advice Note 1 Para 3.20 is noted: *“In deciding if a significant impact occurs in regard to the assessment of industrial noise, or noise of an industrial nature, using the methodology of BS 4142 (where appropriate); the Scottish Government consider impacts are normally not significant (in a quantitative sense only) the difference between the Rating and background noise levels is less than 5 dB(A), and that usually the threshold of minor significant impacts is when the difference between the Rating and background noise levels is at least 5 dB(A); and commonly do not become sufficiently significant to warrant mitigation until the difference between the Rating and background noise levels is more than 10 dB(A).”*

Planning Advice Note 1 advises that BS4142 be used to give a quantitative assessment of the noise impact. It gives additional guidance on how the result should be applied:

The receptor is residential, so its sensitivity is High.

The magnitude of noise impact is determined by the change in sound levels before and after the storage pad being used.

- The residual sound level was measured to be 50 dB(A), by the previous noise consultants.
- The predicted sound level is 40 dB(A).
- The log sum of 50 and 40 is 50.4 dB(A).
- The magnitude of noise impact 0.4 is therefore given as **Negligible** by Table 3.4.

The consequence of a Negligible change is given as:

“Noise can be heard, but does not cause any change in behaviour or attitude, e.g. increasing volume of television; speaking more loudly; closing windows. Can slightly affect the character of the area but not such that there is a perceived change in the quality of life.”

5. Qualitative assessment

With the previously used ground levels it was considered that the quantitative assessment would suffice to show the sound levels of the described activity to be acceptable. However, as the sound immissions are now predicted to be higher a qualitative assessment, as described in PAN 1/2011, has been considered.

This quantitative assessment above has shown that the sound inside the house, after subtracting 10 dB to account for the sound reduction from the window, open for ventilation, is 28.1 dB(A). This is sufficiently low that disturbance would not normally be expected, especially during the day, with a background of traffic noise. This needs no further consideration.

The sound level in the garden do not have the benefit of the window reduction so will be the focus of the qualitative assessment.

The process evaluates the effect of the use of the proposed storage pad will have on the amenity value of the neighbouring house.

From Table 3.5 of PAN1, with the magnitude of change = 0.4 dB, a negligible change, and the rating level less than +5, the significance of the predicted sound of use of the storage pad is **Neutral**.

This means that for the predicted sound in the neighbouring amenity area *“no effect, not significant. Noise need not be considered as a determining factor in the decision-making process.”*

6. Conclusion

- Whilst the requested on-time cannot be provided for the reason explained above data used in the SoundPLAN model is appended.
- The ground levels have been adjusted and these have been used in the most recent run of the SoundPLAN model.
- The predicted level has had a 1 dB addition for character correction, scaled in proportion to the time that the forklift is to be accessing the storage pad during the one-hour reference period. If there is evidence that the addition needs to increase, then it would be useful to see it, but even with an increased character correction, the final result of this assessment is unlikely to be altered.
- Based on the results a comparison with the WHO maximum sound levels shows that both inside and outside the neighbouring house, the predicted sound levels are well below the recommended maximum levels..
- Following the procedure in PAN 1 2011 the result of the quantitative assessment indicates that the change in sound due to this proposal will be **Negligible**.

- When this is used in the qualitative assessment the result is a significance of **Neutral**.
- The proposed development will therefore have no effect, not significant, and noise need not be considered as a determining factor in the decision-making process.

7. Appendices

7.1. SoundPLAN data

7.2. Comments from EHO

Data from most recent run of SoundPLAN for the storage pad at the Station Hotel, Hatton.

| Source | Source type | Receptor | L'w dB(A) | Lw dB(A) | I or A m,m ² | KI dB | KT dB | Ko dB | S m | Adiv dB | Agr dB | Abar dB | Aatm dB | Amisc dB | ADI dB | dLrefl dB | Ls dB(A) | dLw dB | Cmet dB | ZR dB | Lr dB(A) |
|--------|-------------|----------|-----------|----------|-------------------------|-------|-------|-------|-------|---------|--------|---------|---------|----------|--------|-----------|----------|--------|---------|-------|----------|
| FLT | Line | Garden | 53 | 71.7 | 74 | 0 | 0 | 0 | 27.31 | -39.7 | 1.2 | -2 | -0.9 | | 0 | 1.8 | 32.1 | 7 | 0 | 0 | 39 |
| FLT | Line | House | 53 | 71.7 | 74 | 0 | 0 | 0 | 30.33 | -40.6 | 1.2 | -3.5 | -1 | | 0 | 3.3 | 31.1 | 7 | 0 | 0 | 38.1 |

PLANNING CONSULTATION

RECOMMENDATION: Objection subject to further information

APPLICATION REF: APP/2022/2370

PROPOSAL: Full Planning Permission for Change of Use of Land from Class 7 (Hotels and Hostels) to Class 6 (Storage and Distribution) at Station Hotel, Hatton, Aberdeenshire, AB42 0RX
Grid Reference: 405451.836870

LOCATION: Station Hotel
U79b A975 Near Kiplaw To C80b At Cruden
Church Branch Mains Of Ardiffery To A90t At Hatton
Hatton
Aberdeenshire
AB42 0RX

AGENT: Mantell Ritchie

DATE RECEIVED BY EH: 15 November 2022

Environmental Health Service has received a further consultation on the 30 March 2022 with an updated Noise Impact Assessment (NIA) which has been reviewed. I would make the following points and requests for information on behalf of Environmental Health:

1. The information provided still does not adequately address my previous response comments which are as follows: "The response document does not state the on-time timescale used and the dB reduction achieved i.e., what is the on-time in the 60min BS4142 reference period and what is the dB reduction achieved. Further information is required in this respect". The number of minutes used as the on time must be provided. If it is not, Environmental Health object to the proposal.
2. The information provided does not adequately reflect the ground levels at the receptor. The site sections show that the receptor ground level is substantially below the existing fence and proposed 2m acoustic barrier. However, from site visits the ground level at the receptor is higher than the existing fence and likely to be around the same level as the top of the acoustic barrier. Therefore, this may affect the insertion loss of the barrier and under predict the noise levels at the receptor. Updated site sections and NIA is requested showing the true site levels and noise levels at receptor.
3. The information provided presents three options for character corrections of the noise source. It is not clear which option is used as the information is presented in an option format. The NIA should be clear on what character corrections have been applied and show the rated level of noise of the source. The report is

requested to be updated showing the rating level and the character corrections used with robust justification. If links to outside materials are used to justify character corrections, then they should be appropriately referenced ideally with a link so they can be accessed.

Notwithstanding the points above it is noted that the Aberdeenshire roads department have a holding objection for information regarding a proposed loading bay. The position of this loading bay may materially affect the outcome of the noise impact assessment and therefore this information must be provided and approved by the roads department before a determination can be made by Environmental Health.

Paul Couper
Environmental Health Officer
Date: 6 April 2023