

21 Little Peter Street, Manchester, M15 4PS

T 0161 242 7900

F 0161 235 8407

E manchester@hepworth-acoustics.co.uk

www.hepworth-acoustics.co.uk

Offices across the country

Our ref: 22104.2/1

5 March 2014

Mrs J Egan
Parish Clerk
Hale Bank Parish Council

via email only to: julieshan@blueyonder.co.uk

Dear Mrs Egan,

Re: Proposed Single Rail Served Building for Storage and Distribution Purposes at HBC Field, Hale Bank Road, Hale Bank, Widnes (Application No. 11/00269/FULEIA)

In January 2014 The Parish Council commissioned Hepworth Acoustics Ltd to carry out an independent 'desk top' review of the noise assessment work that was carried out by Amec in connection with the proposed warehouse development at Hale Bank. Our findings were set out in a letter dated 10 January 2014.

You have now asked us to study and comment on 3 new documents that have been issued by Amec in advance of the Planning Committee meeting on 10 March 2014.

The 3 documents are:-

Document 1 - Amec letter to Isobel Mason, Environmental Protection Officer at Halton Borough Council dated 24 January 2014;

Document 2 - Amec Response to Parish Council dated January 2014;

Document 3 - Amec Technical Note dated February 2014.

My comments on the main aspects of the 3 documents are set out below.

Document 1

The first document contains three paragraphs which cover averaging of background noise levels, assessment to British Standard 4142, and assessment to British Standard 8233.

Background Noise

Amec have carried out baseline monitoring over 5 days which I agree is extensive. In my January letter I acknowledged that it would be overly restrictive to work on the basis of the lowest period noise level and that some averaging is necessary. However, since the proposed operations will take place on a 24 hours basis it is the background noise levels in the quieter middle part of the night that are of paramount importance in terms of potential noise impact. It appears that Amec have averaged the noise levels over the whole of the night (i.e. not just the quietest hours of the night) and over several nights. This means that the average background noise levels used by Amec in their BS4142 assessment tend to err on the high side.

BS4142:1997 'Method for rating industrial noise affecting mixed residential and industrial areas'

In previous reports Amec described how, in order to safeguard the amenity of local residents, they recommended, and agreed with the Environmental Protection Officer, that the noise from HGV loading activities carried out on the on the site (rated according to BS4142) should be controlled so as to be at least 10 dB(A) below the background noise level.

However, even by not adding the 5dB 'acoustic feature' penalty (that is required to take into account the character of the noise) and using their adopted background noise levels, Amec found that noise from the proposed development will not meet the agreed assessment criterion at all residential locations.

In fact, applying the 5 dB(A) acoustic feature correction to the figures in the November 2013 report, rather than being 10 dB(A) below the background noise, the noise rating level from HGV activities at night will be at least 10 dB(A) above the background noise at Linner Farm Cottages. According to BS4142 this means a likelihood of noise complaints.

Subsequently the proposed height of the noise barrier in the Linner Farm area has been increased (to 5 metres) in order to reduce the noise impact as far as is practicable.

However as it is clear that the BS4142 acoustic design criterion that Amec recommended to the Council cannot be met, Amec state that the noise impact should instead be assessed to an alternative British Standard, BS 8233. It is stated that this 'new criterion' has been agreed with the Council.

BS 8233:1999 'Sound insulation and noise reduction for buildings – Code of practice'

British Standard 8233:1999 is currently under revision and publication of a new version is imminent.

BS8233 contains recommended acceptable noise levels for inside dwellings in absolute terms i.e. unrelated to the background noise climate of the area. The noise criteria are expressed in terms of 'reasonable' and 'good' standards of noise climate in L_{Aeq} , and there is also an L_{Amax} criterion for peaks of noise at night. These criteria are applied more commonly for proposed new dwellings rather than for existing dwellings, but there is no reason why they should not be used for existing houses. However, the criteria apply for 'anonymous' sources of noise such as general road traffic rather than noise from an adjacent warehouse site. Therefore if the criteria are to be applied here, the more onerous 'good' standard should be adopted.

Document 1 states that based on a worst case 5 minute assessment, with the proposed increased height acoustic fence, the internal 'good' standard will be achieved in all of the assessed residential locations. (In Document 3 it is stated that the noise levels will achieve both the L_{Aeq} and L_{Amax} night-time criteria in BS8233).

If it is the case that the Environmental Protection Officer has agreed with Amec that meeting the noise criteria in BS 8233 criteria would safeguard the amenity of local residents, I would recommend that this is formalised by setting appropriate noise limits in a planning condition (as set out later in this letter). Local residents would then have the re-assurance that should the noise from the site operations be found to exceed the BS8233 noise limits, planning enforcement action could be taken against the operator to ensure the noise levels specified in the planning condition are met.

Document 2

In this document Amec respond to the points requiring clarification that were raised in my January letter.

From their responses I note the following points:-

- Amec confirm that the original Environmental Assessment was based on the wrong assumption that there would be no loading/unloading at night outside the southern elevation of the warehouse.

- Amec advise that the sentence in the Environmental Statement stating that loading bays on the south side will be restricted to between 0700 and 21:00 hours was an error and in fact HGV movements may occur at night.
- Amec now state *“the nature of HGV movements will typically be infrequent during the night”*. It is not clear on what basis this statement is made, or how local residents can be ensured of this without a planning condition restricting the numbers of HGV movements at night.
- Amec confirm that fork lift trucks will only be used inside the warehouse and not outside – this is something that can be the subject of a planning condition.
- Amec confirm that HGV reversing alarms have not been taken into account in the noise assessment.
- In their response to point 7, Amec have not answered the question as to whether or not the BS4142 assessment of HGV movements/loading operations in their November 2013 report included the necessary 5 dB(A) acoustic feature correction to take into account the irregular nature of the noise. I have therefore assumed they have not. Therefore the BS4142 noise rating levels in the Amec November Technical Report are 5 dB too low and under-predict the likely noise impact. (The figures in the latest February 2014 report have increased by 5dB so now appear to include the 5 dB correction).
- Amec have agreed to examine the noise impact of traffic between 05:00-06:00 which was identified by the Parish Council as a particular concern. (This is included in the new February 2014 Technical Report and on the basis of the results presented, which include the effect of the 5m high acoustic fencing, the findings are satisfactory).
- Amec state that the ‘new criterion’ of using the internal noise guidelines in BS 8233 instead of the BS 4142 approach is acceptable to the Council.
- Amec have provided improved cross sections as requested.

Document 3

In many parts the February 2014 Amec Technical Report is identical to the previous November 2013 version. The differences occur in parts of Sections 4, 5, and 6.

The 5 dB acoustic feature correction has now been applied to the predicted noise levels from HGV/loading operations in Section 4.

Consequently the predicted noise impact at Linner Farm has increased. For various calculation scenarios (HGVs waiting at entrance gate, HGVs loading, on-site HGV movements) the noise rating levels exceed the background noise level by 10 dB(A) or more. Therefore Amec conclude that according to BS 4142 there is a likelihood of complaints about the noise.

In Section 5 the effect of increasing the acoustic fencing to 5 metres in height is investigated. This is shown to result in a 5 dB(A) reduction. With the higher noise barrier, the noise rating levels are predicted to be up to 6 dB above the Amec background noise level. Amec conclude that, in terms of likelihood of complaints, this is ‘of marginal significance’. However, if a more conservative late night background noise level is adopted for Linner Farm (as recommended in my January letter) the noise rating level would be 9dB(A) above the background noise level which would mean a likelihood of complaints about the noise.

Later in Section 5 Amec suggest that a further reduction could be achieved by ensuring that HGVs have their engines switched off whilst parked at the loading bays. Also Amec recommend that loading should only take place at the east bays during the night-time period.

In Section 6 the noise impact is analysed with respect to BS 8233 looking at individual elevations of Linner Farm. The results indicate that the noise levels are expected to be within the 'good' standard of 30 $\text{dB}_{\text{L}_{\text{Aeq}}(8 \text{ hrs})}$ inside bedrooms at night and within 45 $\text{dB}_{\text{L}_{\text{Amax}}}$. Therefore if reliance on BS 8233 for control of noise at this development has now been agreed by the Environmental Protection Officer, rather than the BS4142 approach that was agreed previously, it would appear that the noise impact as predicted by Amec will be acceptable to the Borough Council. Moreover, as the noise impact is predicted to comply with BS8233 (a fully adopted British Standard) it would be difficult for the Parish Council to object to the development proposal on technical aspects of the noise assessment, subject to appropriate noise planning conditions.

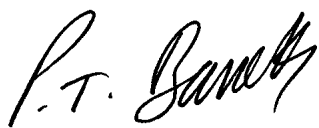
Planning Conditions

Should the Planning Committee of the Borough Council be minded to approve the proposed warehouse development it would be necessary that suitable planning conditions are imposed which would adequately protect the amenity of local residents from noise.

Based on the latest Amec documents provided, and the recommendations in my January letter, the following issues need to be addressed by planning conditions or the Noise Management Plan:-

- Noise from all on-site HGV movements and HGV loading/unloading operations between 23:00-07:00 hours to be controlled so as not to exceed 30 $\text{dB}_{\text{L}_{\text{Aeq}}(8\text{hrs})}$ inside bedrooms (equivalent to 40 $\text{dB}_{\text{L}_{\text{Aeq}}(8\text{hrs})}$ outside bedrooms) and 45 $\text{dB}_{\text{L}_{\text{Amax}}}$ inside bedrooms (equivalent to 55 $\text{dB}_{\text{L}_{\text{Amax}}}$ outside bedrooms) of dwellings.
- Provision of Acoustic Barriers in accordance with the latest Amec recommendations, including the 5m high acoustic fencing.
- Engines of HGVs to be switched off when parked at the loading/unloading areas in the southern elevation of the warehouse building between 23:00 – 07:00 hours.
- HGVs to use east bays of the southern elevation of the warehouse building between 23:00 – 07:00 hours.
- Vehicles on the site to be fitted with 'broadband' white noise reverse warning systems rather than 'bleepers'.
- No use of the site by refrigerated vehicles.
- No use of the site by lorry trailer 'shunters'.
- All loading/unloading of HGVs to be carried out from inside the warehouse building.
- Method to be deployed to avoid, or minimise impact noise from drop-down dock levellers at loading bays.
- Use of loading dock shelters/seals to minimise breakout of noise from within warehouse.
- General management measures to prevent unnecessary revving or idling of HGV engines, unnecessary use of horns, shouting of drivers/staff, etc.
- Access road to have specialist 'low noise' road surface.
- Specific environmental noise limits for mechanical services equipment based on BS 4142.

For Hepworth Acoustics Ltd.
Yours sincerely,

A handwritten signature in black ink, appearing to read 'P. T. Bassett', written in a cursive style.

Paul Bassett BSc MSc FIOA
Technical Director