

**Applicant's Post Hearing Submissions  
(CAH, ISH 2 and ISH3)  
Noise Submission**

The West Midlands Rail Freight Interchange Order 201X

Four Ashes Limited

# **WEST MIDLANDS INTERCHANGE**

## **NOISE - ADDITIONAL INFORMATION IN RESPONSE TO ENVIRONMENTAL MATTERS HEARING (6 JUNE 2019)**

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## **1 Construction Noise Impacts: duration**

- 1.1** A detailed construction programme would be required to offer precise comment on the likely duration of any construction noise impacts. However, the Applicant confirms that the highest predicted construction noise levels, which are based on all of the assessed plant being located as close as possible to the receptor, would not be maintained for a significant period of time. Paragraph 13.188 of Chapter 13 of the ES [Doc 6.2 APP-046] indicates that the site preparation works or landscaping works might only last for one to two days at the highest predicted noise levels. Certainly, the expectation is that the period of the highest predicted sound levels would be less than one week.
- 1.2** The majority of the works would tend towards the lower end of the range of predicted sound levels at each receptor.
- 1.3** The Applicant notes that draft DCO Requirement 2(g) requires the phasing of the landscaping, including mounding and acoustic fences, to be agreed prior to commencement of the authorized development. It is expected that the outcome of this process will be to normally require and agree the early construction of the perimeter mounding under this requirement to maximise the benefit of the acoustic mitigation measures.
- 1.4** Draft Requirement 4(a) requires details of noise monitoring for the construction works to be included in the Demolition and Construction Environmental Management Plan (DCEMP).
- 1.5** Draft Requirement 20(1) requires the construction works to not exceed a level of 65dB(A), determined over the working day, unless prior approval is granted by the local planning authority.
- 1.6** It is expected that prior approval will be sought for the worst-case construction works, which are likely to be those linked with the ground works before the bunds are constructed, and the construction of the bunds themselves. In those cases, methods of working to limit effects are anticipated to be required as part of any approval.

## **2 Acceptability of Noise Effects- External Areas**

- 2.1** While the noise assessment presented in Chapter 13 of the ES [Doc 6.2 APP-046] and the addendum to the ES [Doc 6.2 REP2-014] correctly relied on the assessment method set out in British Standard 4142: 2014, it is noted that in all instances except one, the daytime sound levels would meet the WHO external guideline value of 55dB, and at the one non-residential location where the criterion is not met, the predicted level was 56dB, which would be indistinguishable from a level of 55dB. These values include corrections for acoustic character, as applied under British Standard 4142: 2014.
- 2.2** To place these levels in context, the Government's former planning guidance document Planning Policy Guidance Note (PPG) 24 Planning and Noise, set out four Noise Exposure Categories (NECs) for use when assessing proposals for new residential properties close to road, rail, aircraft or a mix of sources (including industrial sources in that mixed scenario), that ranged from NEC A, where noise need not be considered a determining factor, through to NEC D, where planning permission should normally be refused on the basis of noise.

- 2.3 The daytime sound levels at the site, even allowing for the retention of the acoustic character corrections, would fall into NEC A at all locations except one non-residential location (Canal Towpath (Gravelly Way)), where it would fall into the lower end of NEC B.
- 2.4 At night, the key effects are within residential properties, rather than in external spaces, and the internal sound levels all meet the WHO guideline values.

### 3 Bespoke Noise Insulation Scheme

3.1 The Applicant has prepared a draft leaflet which could be circulated or made available to interested parties to explain the scheme – a draft is attached to this document. The details of this can be finalised once the detailed terms of the s.106 are agreed and with the benefit of any feedback on the draft leaflet, which is included with these submissions. In principle, however, the main elements are described below.

3.2 The bespoke noise insulation scheme should provide improvements to the sound insulation of individual properties, so that the internal sound levels are lower and more controllable than at present. Although the detail of what would be installed at any particular property has been left open to provide flexibility in each case, it is broadly expected that the scheme will consider two aspects of a property:

The sound reduction provided by windows; and

The provision of methods of ventilating properties so that windows do not need to be opened to achieve this.

3.3 The assessment of qualification for construction noise involves comparing the expected construction noise levels and the duration of exposure for each receptor, with a table of criteria, which are taken from Part 1 of British Standard 5228: 2009+A1:2014. Exceeding the criteria for 10 or more days in any consecutive 15 days, or for a total of 40 days in any 6 consecutive months will result in qualification for noise insulation.

3.4 There are three routes to qualification for operational noise:

- Route 1: Sound levels from the development exceed thresholds that are equivalent to the statutory Noise Insulation Regulations, as assessed outside the property
  - It is not expected that any properties will qualify under this route, as sound from the development will not reach these levels
- Route 2: Sound levels from the development (including any corrections that are necessary to account for distinctive acoustic characteristics) exceed the existing background sound levels by 8dB or more during the day or night, as assessed outside the property
  - It is expected that the majority of qualifying properties will do so via this route
- Route 3: Internal sound levels (including any corrections that are necessary to account for distinctive acoustic characteristics) exceed thresholds of 40dB during the daytime and 35dB at night
  - It is expected that some properties that do not meet the “+8dB” test will qualify via this route.

#### **4 Revised s106**

- 4.1 The Applicant remains in discussion with SSDC to agree the mechanisms for delivering the bespoke noise insulation scheme. In particular, adjustments are currently being made to the timings set out in the scheme so that the occupants of properties that qualify have a reasonable amount of time to install the insulation before the noise is generated.
- 4.2 The SoCG with SSDC concludes that all matters are agreed on noise, and the Applicant welcomes SSDC's verbal confirmation at the hearing that the bespoke noise insulation scheme reduces the significance of the noise impacts from the development.

#### **5 Crateford Lane and Station Drive**

- 5.1 The Applicant confirms that properties along Crateford Lane and Station Drive are both considered in the noise assessment presented in the addendum to Chapter 13 of the ES [Doc 6.2 Rep2-014].
- 5.2 There is significant noise mitigation, in the form of landscaping mounding, to reduce noise propagating towards these receptors. The bunds are significant in terms of their height and length, running along the entirety of the western boundaries of Zones A1 and A2, with heights of 4.5 to 6 metres. The southern boundary of the rail terminal will be shielded by further bunding of between 6 and 8 metres in height, screening the entirety of the southern boundary.
- 5.3 The properties in question are located some distance from WMI (the properties on Station Drive are approximately 320 metres from the southern edge of the rail freight terminal, and the properties on Crateford Lane are approximately 225 metres to the west of Zone A2) and significant noise mitigation has been embedded into the scheme in the form of landscaped areas and bunds. It is likely that that a number of properties in each location will qualify for noise insulation under the bespoke noise insulation scheme but, in absolute terms, the operational sound levels, and the sound levels during the majority of the construction works, will be below the World Health Organisation's daytime 55dB guideline value.

#### **6 Mechanical ventilation**

- 6.1 The need for an alternative means of ventilating properties, i.e. to avoid the occupants needing to open their windows, will be considered at each property qualifying under the bespoke noise insulation scheme. It is expected that ventilation would be a key benefit of the scheme, allowing occupants to keep their windows closed.

#### **7 Canal Moorings**

- 7.1 It was discussed during the hearing that CRT did not feel the assessment reasonably reflected the status of the moorings at Gailey Marina, where annual leases are available that could result in boats being occupied at any time during that year. CRT has suggested that these moorings could be considered similar to holiday homes.
- 7.2 There are two aspects to how the sensitivity of a particular receptor is judged. The first relates to human sensitivity to sound, which has been applied the same way to all receptors, irrespective of their permanence.

- 7.3 The second aspect is the duration of their exposure, and the moorings were regarded as being less sensitive as they are not permanent receptors. The moorings were ascribed 'medium' sensitivity instead of 'high' sensitivity, as was ascribed to permanent residential receptors.
- 7.4 The combination of 'high' impacts and 'medium' sensitivity, results in a 'moderate adverse' effect, which is considered significant in EIA terms, and has been declared as such in the submitted noise assessments.
- 7.5 'Medium' sensitivity was applied to all holiday accommodation, as was set out in Table 13.5 of Chapter 13 of the ES [Doc 6.2 APP-046]. Taking account of CRT's further submissions on the Gailey Marina moorings would not alter the sensitivity ascribed to them; they would be regarded as holiday accommodation.
- 7.6 Both moderate adverse and major adverse outcomes are regarded as significant in EIA terms, but neither outcome alters the practical issues with applying the bespoke noise insulation scheme to a boat. Notwithstanding the issue of potentially treating a large number of boats, which might only be moored in the area for a year, altering the glazing of a boat may not improve its overall sound insulation as the rest of its super-structure may be acoustically weaker than the windows. Changing the windows could have little effect.
- 7.7 Altering the walls of a boat is possible, but there may be weight and space limitations on what can be achieved.
- 7.8 It should be noted that the external sound levels along the canal during both the majority of operations at site, and during the majority of the construction works, would meet the World Health Organisation's 55dB daytime guideline value for external amenity space.

## 8 Transient Use of Canal Path

- 8.1 The same approach in terms of quantifying human sensitivity to sound is used, even though that method specifically relates to residential properties.
- 8.2 The transience of users of the canal towpath is accounting for in ascribing a lower sensitivity than would be ascribed for permanent receptors. In this instance, they are deemed to be 'medium' sensitivity receptors, as they are within a designated area.
- 8.3 The time period used in the assessment was one hour for the daytime, which would cover the likely noise exposure of all but the fastest transient users moving through the area.
- 8.4 The absolute sound levels during the majority of both construction and operation would meet the World Health Organisation's 55dB daytime guideline value for external amenity space, which suggests that the acoustic climate would be broadly acceptable along the canal.

## 9 Complaints and Monitoring

- 9.1 While the Applicant correctly noted that SSDC would retain their ability to rely on statutory nuisance as a mechanism for resolving excessive noise from WMI, discussions with SSDC have resulted in the following clause being drafted for inclusion in the next version of the DCO Requirements.

*"In the event that complaints for noise nuisance are received by the local planning authority which considers those complaints justified, the undertaker must unless otherwise agreed by the local planning*

*authority, at its own expense, employ a consultant approved by the local planning authority to carry out an assessment of noise from the development, whether relating to noise from construction or operation of the site. The assessment will be carried out to an appropriate methodology agreed in writing by the local planning authority and the results of the assessment will be submitted to the local planning authority within 28 days of the assessment. If it is found that the effect of noise from the authorised development is greater than was anticipated, recommendations for appropriate remedial measures must be made and those recommendations, where reasonable, implemented in accordance with a programme agreed between the local planning authority and the undertaker.”*

**13<sup>th</sup> June 2019**

# NOISE INSULATION SCHEME

Information leaflet June 2019



**West Midlands  
Interchange**

DRAFT












# THE WEST MIDLANDS RAIL FREIGHT INTERCHANGE ORDER

## Green Infrastructure Parameters Plan

### Key

-  Order Limits
-  Canal
-  New road infrastructure and improvements to existing infrastructure.
-  Landscaping
-  Mounding
-  Dry Attenuation (precise location and extent to be approved at time of submission of details for approval post DCO approval)
-  Wet Attenuation Ponds (precise location and extent to be approved at time of submission of details for approval post DCO approval)
-  Community Park Boundary
-  Acoustic Fencing
-  Ecological Corridor Linking Calf Heath Wood and Calf Heath Reservoir
-  Existing Conserved Woodland / Trees to be retained

-  Existing Conserved Hedgerows to be retained
-  Existing Veteran Trees to be retained
-  Plot Access Points through Green Infrastructure. (precise location and extent to be approved at time of submission of details for approval post DCO approval)
-  Height of mounding (relative to the adjoining development zone's finished floor level (FFL) as shown on document 2.6)
-  Note: Height of mounding to the eastern side of the canal is relative to the new road infrastructure
-  Note: All AOD levels shown for the new on-site road infrastructure are subject to a vertical deviation of 0.5 metres upwards or downwards
-  Bat Hopover - Precise location and extent to be approved at time of submission of details for approval post DCO approval.
-  Bat Hopover and Wildlife Crossing - Precise location and extent to be approved at time of submission of details for approval post DCO approval.
-  Wildlife Crossing - Precise location and extent to be approved at time of submission of details for approval post DCO approval.







## INTRODUCTION

As part of its application for development consent at West Midlands Interchange, Four Ashes Limited (FAL) has put forward proposals for a Noise Insulation Scheme to fund insulation to those properties likely to be most affected by either the construction or operation of WMI.

The proposals for West Midlands Interchange contain a number of noise mitigation measures to limit the noise from the development (and these are described at the end of this note for information) but in certain circumstances noise insulation to individual properties is also proposed.

This leaflet explains the principles of the Noise Insulation Scheme, the full detail of which can be found within Chapter 13 of the submitted WMI Environmental Statement (and addendum) and within the draft Section 106 obligations proposed to accompany the DCO application for WMI, which sets out the detailed terms that would be legally enforceable on the applicant.

The Noise and Vibration chapter of the Environmental Statement (Chapter 13 and addendum) explains that the forecast noise levels from the operation of WMI generally fall below those at which noise

insulation would be triggered by government regulations. Nevertheless, FAL has put forward a bespoke Noise Insulation Scheme in recognition of the fact that there will be impacts on local properties. This is consistent with FAL's vision to carry out the WMI development responsibly.

It is not possible at this stage to identify with certainty those properties that will qualify for insulation because the scheme relies on detailed assessments being undertaken and agreed with the Council before each phase of development and before each phase of occupation. At this stage there is no boundary within which it can be said with certainty that all eligible properties lie, because the Council has asked FAL not to prescribe an area before the assessments have been undertaken.

The general number of properties potentially eligible can be judged from the assessment undertaken in the WMI Environmental Impact Assessment (EIA) – but it would be wrong to name the properties that will certainly be eligible until further assessments are undertaken with the benefit of detailed plans for construction and operation.



## PRINCIPLES FOR ELIGIBILITY

The scheme is based on the following principles:

- a. eligible properties must be in lawful residential use on the day the DCO comes into force;
- b. eligible rooms to be insulated will be lounges, dining rooms, kitchen-dining rooms, bedrooms, or rooms intended to be a bedroom.

Properties may qualify for insulation because of forecast construction noise or because of the noise forecast from the occupation and operation of WMI (or both).

Assessments have to be carried out before each phase of construction and each phase of occupation identifying those properties that are considered to qualify for noise insulation, and these must be agreed with the District Council.

The criteria are different for forecast construction noise and forecast operational noise, reflecting the different nature of the two activities. The criteria have been directly informed by national standards and guidance but improved upon, as explained opposite.

## CONSTRUCTION NOISE

In principle, eligibility triggered by forecast construction noise follows a regime set out in British Standard BS 5228. The British Standard sets a threshold and eligibility is triggered if those current levels are forecast to be exceeded either for 10 or more days in any 15 consecutive days or for 40 days within a period of 6 months.

Detailed criteria are specified in the draft DCO Obligation (and should be referred to rather than relying on this leaflet) but in general terms, eligibility is triggered if noise is forecast to exceed 70 decibels in the early morning and evening and 75 decibels in the day. Work cannot start before 7:30 am (8 am on Saturdays). Night-time working after 6.30 pm is also prevented by the DCO requirements, as is working after 1 pm on Saturdays. Construction is not allowed on Sundays, bank holidays or outside these hours without the permission of the Council.

In addition, draft DCO requirement 20 forbids construction activities to exceed 65 decibels, without the agreement of the Council. This means in theory that the construction noise levels may never reach the levels necessary to trigger the insulation. However, FAL does anticipate seeking the permission of the Council for them to exceed this limit for specified activities for short periods of time, thereby potentially triggering the need for insulation in certain properties.



## HOW IT WORKS

The draft DCO obligation contains provisions which require FAL to go through the following process:

- using the details of the approved phase one construction plans, undertake a new Noise Impact Assessment (NIA) forecasting noise at residential properties and identify any properties that are forecast to meet the eligibility criteria;
- agree that assessment with the Council – and do not proceed until it is agreed;
- notify all qualifying properties and ask if they would be willing to allow access for the applicants to inspect their property to enable the applicant to put forward

a detailed noise insulation offer, based on the characteristics of the property – parties approached in this way have 36 days to confirm their interest and confirm access;

- visit the properties and then make a formal offer of insulation – the parties offered will have 36 days to accept the offer;
- make the payment and allow a period of 3 months following the payment for the parties to use the money to install the insulation before work starts on site for that phase of work.

This process must then be repeated for each phase of construction.

## HOW MUCH IS THE OFFER?

The offer will depend on the needs of each property but up to £9,000 is available for each property, to cover noise insulation and ventilation (to allow windows to be kept closed).



## OPERATION

A very similar process would be followed for the phased occupation and operation of the development, with the addition of an updated baseline sound level survey, to be undertaken in advance of any operations at the site.

The draft DCO Obligation requires operational noise assessments to be undertaken and the process described above to be followed before the occupation of the first warehouse and then subsequently before occupation of each main phase of warehousing.

Repeating the process in this way, with the benefit of noise information from earlier phases should avoid missing any property that qualifies for noise insulation.

The criteria for the operational assessments are different from those set out above for construction. Properties can qualify if any one of these three criteria are met:

- a. external noise levels are forecast to exceed 66 decibels in the day or 62 decibels at night (this is in line with the statutory Noise Insulation Regulations); or
- b. noise levels are forecast to be 8 or more decibels above background noise levels – given that noise levels locally are relatively quiet compared to other more urban locations, this could trigger insulation at external levels from around 50 decibels in the day or 47 decibels at night (levels which are much lower than those in the Regulations referred to in a. above); or
- c. noise levels inside properties are forecast to be greater than 40 decibels in the day or 35 decibels at night (this is designed to pick up properties that may not be so noisy as to meet criteria (a) or (b), but nevertheless they are in a noisy environment, which WMI would add to and internal noise levels need protecting).

## OTHER MITIGATION

This noise insulation scheme is part of a package of measures designed to limit the noise impacts of the development. Other principal measures include:

- careful design of the development so that buildings are sympathetically sited, often acting as screens to limit noise from on-site activities;
- the use of noise bunds, mounding and acoustic fences to limit noise;
- phasing has to be approved by the Council, including the early phasing of noise mounds and screening so that most operations should be carried out behind noise screening;
- buildings are required to be built to a high standard so that the buildings themselves limit the emission of noise from activities within the building; and
- DCO requirements limit construction hours and place a limit on construction noise.

The applicant will publish regular newsletters and put in place a community liaison service so that information on these matters is communicated as the development progresses.

**All of the matters set out in this leaflet are to be taken as a non-technical introduction or summary to the Noise Insulation Scheme. Full reliance should only be placed upon the detailed explanation of the Scheme set out in the application documents and the Development Consent Obligation.**





Four Ashes Limited will be publishing regular newsletters on this and other matters relating to the progress of the development. For more information please email us:

[contactus@communityrelations.co.uk](mailto:contactus@communityrelations.co.uk)



**West Midlands**  
Interchange