

PINS Reference TR050006 Northampton Gateway RFI

IP REF. SP074 - South Northamptonshire Council SNC ref 20190108/wr/ish2-3

(submitted by email to NorthamptonGateway@pins.gsi.gov.uk)

Date – 8 January 2019

South Northamptonshire Council – Written Submission pursuant to ISH 3.

1 Pursuant to the Issue Specific Hearing 3 held on 20 December 2018 the Council would make the following comments.

Draft S106 document 6.4A

2 With regard to the following provisions set out in the ‘Schedule 0 - Covenants with the District Council’

Community Fund Contribution - paragraph 1

3 The Council welcomes the commitment provided. It does however have a concern that as currently set out the relevance to the proposed development is not clearly established and thus the provision would more appropriately be established by the applicant through an arrangement unrelated to the application determination process.

Employment Scheme - paragraph 2

4 The Council welcomes the commitment provided. This provision could however be secured through an appropriately worded requirement within the DCO. This Council has secured similar commitments within planning permissions through the inclusion of the condition as drafted below.

‘No development shall commence until a Local Employment and Training Strategy along with a timetable for its implementation and monitoring/reporting mechanisms has been submitted to and approved in writing by the Local Planning Authority. The Strategy shall set out initiatives to engage the local labour force and local businesses and to develop training opportunities in construction skills and logistics operations associated with the the development. The approved strategy shall then be implemented.’

‘Reason - In order to secure the promotion of employment opportunities to the local labour force and to support local based skills training to strengthen labour force skills and reduce unemployment.’

Community Liaison Group - paragraph 3

5 The Council welcomes the commitment provided. This provision could however be secured through an appropriately worded requirement within the DCO.

Draft DCO - Document 3.1B

6 The hearing ended due to time constraints without considering oral submissions on matters set out at item 4 of the issued Agenda. The Council would therefore wish to make the following comments on the submitted draft DCO.

7 The Council supports the comments made by Northampton Borough Council with respect to consultation on applications submitted for approval of details pursuant to the Requirements of the DCO. The NBC comments are included below for clarity.

Consultation with Neighbouring Authority on details submitted for Requirements

“Part 1 – Preliminary - Interpretation 2.

“relevant planning authority” – is defined at the district planning authority within whose administrative boundary that part of the authorised development relevant to the operation or enforcement of the provision in question is situated.

The majority of the site is within the administrative boundary of South Northamptonshire District Council (SNC), and therefore the majority of details would be approved by SNC. There is no requirement for consultation on the submitted details with Northampton Borough Council as the neighbouring authority, to enable the authority to assess any potential impacts within the Borough.

Northampton Borough Council would wish to be in a position to comment on any details submitted, particularly in respect of the following requirements:

- 3. – Components of development and phasing
- 8. – Detailed design approval
- 10. – Provision of landscaping
- 12. – Construction and Environmental Management Plan
- 15. – Lighting details

Northampton Borough Council request that the DCO is amended accordingly to allow provision for consultation with the neighbouring authority on the details submitted for Requirements.”

8 SNC would raise the following issues with respect to the current draft DCO Document 3.1B.

Schedule 2 Part 1 - Requirements

9 A number of requirements as drafted include tailpieces, such as the following:

- 3. (3) ‘unless otherwise agreed in writing with the relevant planning authority’.
- 4. (1) ‘unless otherwise agreed in writing with the relevant planning authority’
- 8. (1) ‘The design and access statement can be reviewed and updated by the undertaker in agreement with the relevant planning authority.
- 9. The details in 8(2) (a) to (r) can be subject to alteration by approval in writing from the relevant planning authority. The authorised development must be carried out in accordance with the details as approved in writing by the relevant planning authority from time to time.
- 15. (2) ‘the details can be subject to alteration with the approval in writing of the relevant planning authority’.

Amendments to the DCO under Part 2 – Principal Powers, paragraph 4 allow for an element of control over changes to the parameters of the authorised development that would give rise to significant changes over and above those assessed in the Environmental Statement. The use of tailpieces is however generally not considered good practice and has been held to be inappropriate in cases where this could result in avoidance of provisions that would otherwise be applied, e.g. notification.

The DCO process sets out provisions with respect to variation of proposals put forward. The extent to which the variation of proposals is appropriate outwith these provisions is moot. If variation is appropriate within the DCO process then this should be sought through a formal process that transparently demonstrates the appropriateness of the variation.

With respect to non-material amendment, Section 96A of the Town and Country Planning Act 1990 provides a clear process for the consideration of non-material amendments..

Schedule 2 – Part 2 Procedure for Approvals pursuant to Requirements

Paragraph 1 - Time periods for determination of applications for approvals of details pursuant to Requirements

Under the Town & Country Planning Acts and Regulations the time period allowed for the LPA to determine an application for approval of reserved matters is 8 weeks, 13 weeks for major development or 16 weeks for EIA development. The time period for approval of details required by condition is 8 weeks. See Part 5 - 27(2) & Part 6 34(2) of the Town and Country Planning (Development Management Procedure) (England) Order 2015.

10 The draft DCO sets out a determination period of 42 days. This is a considerably shorter period than those determined within general planning provisions as being appropriate for proper determination.

11 The details include in Requirement 2 are effectively tantamount to reserved matters pursuant to an outline planning permission. The determination of such matters should be subject to a robust and inclusive consideration that should where appropriate include relevant interested parties. The short time scale proposed would constrain this.

12 Whilst the provision allows for extension of time by agreement the appropriate period should be the default period and not subject to further agreement which may not be forthcoming. The timescales proposed seem restrictive compared to the periods allowed within general planning provisions and particularly with respect to facilitating consultation, statutory or otherwise, and to resolving any issues that may emerge.

Paragraph 2 – Further Information

13 This sets out a process related to requests by the LPA for further information pursuant to applications submitted for approval pursuant to requirements or schedules within the DCO.

14 This sets out a period of 10 days within which the LPA to must assess whether it requires further information and request this.. This is an inadequate period to allow time for consultation with any relevant consultee to assess whether the submitted information is appropriate.

15 The provision appears to provide no opportunity to request or for the submission of details that may be required to address issues that arise from consultation or that may have been overlooked in the original submission.

16 It is not clear what this is designed to achieve it is however foreseeable that this could lead to refusal of an application which might otherwise be avoided.

17 The Council understands the applicant is reviewing the draft DCO document and is likely to make amendments. The Council thus reserves the right to submit further comment when it has had opportunity to review the amendments submitted.

ISH 2 – Environmental Matters 19 December 2018

Grange Park ‘Clipper’ building.

18 During the course of ISH 2 the Examining Authority sought clarification of the height of the existing ‘Clipper’ warehouse building. The elevation plans approved by the planning permission granted, SNC reference S/2014/2513/MAF, detail the building with a height of 19-20 metres with eaves at 17-18m.

Noise

19 The Council has identified concerns over aspects of the noise assessment included in the submitted Environmental Statement. These are summarised below. (The review notes (relating ES Chapter 8 Noise) prepared by the Councils Environmental Protection Service and referred to in the comments below are attached separately for clarity).

20 These concerns have been discussed with the applicants and the Council understands the applicant will review these and will include amendments within the draft DCO document to resolve the concerns. The Council thus reserves the right to comment when it has had opportunity to review the amendments submitted.

SNC Environmental Protection Summary of Noise Concerns - John Penny

21 The following comments refer to responses made in the Northampton Gateway RFI DCO examination Document 8.7 Applicants Responses to Written Representations & Other Parties Responses To ExQ1 [South Northamptonshire Council (SNC) [PINS Ref: REP1:-039]

22 The Applicants first response point I think relates to my comments on the noise impact assessment for operational noise from the SRFI Main site.

23 The applicants reply does not answer the points I have raised in respect of the noise assessment for operational sounds from the SRFI activities at the main site (see Section 5.4 of the attached noise assessment review document). In particular, it does not provide sufficient reasoning to support the approach adopted in the BS4142:2014 assessment to address the complexity of the proposed noise sources that will be involved with the development (i.e. adopting +3dB acoustic feature correction combined with separate consideration of a “Maximum Noise Levels at Night” as based on the single event noise level recommended in WHO Guidelines on Community Noise to minimise sleep disturbance). I believe the adopted approach underestimates the potential impact from it for the reasons detailed in Section 5.4 of my review. In summary BS4142:2014 assessment method applies a range of acoustic feature corrections for characters such as tonality, impulsivity, intermittency

and context, and which are cumulative and can total as much as +18 dB to be added to the rated sound level(s) of the source noise(s) under assessment (see Section 9.2 of BS4142:2014). No descriptions or explanation has been provided regarding what the source noise(s) will sound like or typical acoustic features they will exhibit and so it can only be assumed these will include a range of tonal, intermittent and distinct features given the nature of the sound sources outlined in Section 8.3.57 of the applicants noise assessment report (consider Section 12 of BS4142:2014). If any of such characteristics were to be “just perceptible” at a receptor location then this could result in an acoustic feature correction of between +2 dB to +8 dB, depending on the distinctness of the features present, but which could be +4dB above the level predicted in the assessment. That margin increases if any of the acoustic features are more prominent.

24 I disagree with the way the issue of “context” is dealt with by simply comparing predicted rated sound levels against recommended internal ambient sound levels recommended in BS 8233:2014. It appears to have been overlooked that BS4142:2014 is method that uses outdoor sound levels to assess the likely effects of sound on people both inside and outside a dwelling and that the criteria in BS 8233:2014 has been designed for noise sources of a “steady” and “anonymous” character (see paragraph 8.5.153 of the applicants noise assessment report and compare with Section 1 of BS4142:2014, para 7.3, 7.7.1 -7.7.2 of BS 8233:2014). BS8233:2014 recommends that industrial noise should be assessed using methods described in BS4142:2014 (para 6,5,2 of BS8233:2014). BS4142:2014 only mentions use of other guidance in respect of the introduction of a new noise-sensitive receptor close to an existing noise source (para 8.5), and where initial estimates of the impact need to be modified due to the “context” and a particular circumstance detailed in an example where it suggests other guidance might be applicable but not without a range of factors being considered, or to the extent that the BS4142 rating can be ignored (consider para 8.5, Section 11 and Example 6, 7 and 8 of BS4142:2014).

25 The margins of uncertainty associated with the assessment approach in this instance could potentially mean that the significance of the predicted impacts may be greater, and some of which may possibly significant adverse or unacceptable as defined in the Governments Planning Practice Guidance on Noise. This is particularly concerning given that the noise assessment reports that any additional mitigation options may be limited as detailed in the noise assessment report (see para 8.5.57, 8.6.59 and 8.6.60 of Noise Assessment in Appendix 8 of the EIA).

- With regard to the second point which I think relates to my comments concerning the noise impact assessment for the proposed Roade Bypass

26 The guidelines I was referring too in that comment were the World Health Organisations Night Noise Guidelines for Europe which advises that adverse health effects are observed at 40 dB $L_{\text{night, outside}}$, such as self-reported sleep disturbance,

insomnia, and increased use of somnifacient drugs and sedatives and so therefore considers 40 dB $L_{\text{night, outside}}$ as the Night noise guideline (NNG) for the protection of public health. My point was, having regard to the guidance, whether it was possible for an offer of protection to be extended to those affected properties in the form of the provision of suitable glazing and alternative means of ventilation?

27 No other comments are made in respect of the points I had raised regarding the various other noise sources detailed in the noise impact assessment as detailed in my review notes I would re-iterate these as follows:-

- Railway Noise and Vibration :- I raised a concern regarding predicted noise impact for three “exception” receptor locations and queried whether the principle of the “exception” could be extended to include an offer of protection for the occupiers of those properties given the degree of uncertainties involved in their predictions (see Section 2.3 of my Review Note for more detail).
- Road Traffic Noise Around Main Site:- No adverse comment but point I raised was that no consideration appears to have been given any mitigation for Receptor R29? Also, whether further efforts could be made to reduce the significance of temporary significant adverse impacts predicted for Receptors R27, R31 to R33 in respect of the provision of temporary screening (see Section 3.3 of my Review Note for more detail)?
- Operational Sound from SRFI Activities at the Main Site: See above and Section 5.4 of my Review Note.
- Cumulative Effects:- It is clear from this indicative assessment of cumulative impacts of both the RC and NGW development’s has implications in respect of potential adverse impacts and which will need to be considered in detail with respect to the progression of these proposals since each has implications for the other.

NORTHAMPTON GATEWAY RFI

Review of Environmental Statement Chapter 8 – Noise & Vibration

Notes from review of the noise impact assessment submitted for proposed development of a Strategic Rail Freight Interchange (SRFI) together with landscaping, access and other supporting infrastructure works at Land Adjoining A43 Junction M1 at Grange Park, London Road, Courteenhall, Northamptonshire.

1.0 CONSTRUCTION NOISE/VIBRATION (Para 8.5.1 – 8.5.26)

This section deals with the assessment of the potential temporary noise effects at nearby noise sensitive receptors resulting from construction works associated with the Proposed Development as described in section 8.3 (para 8.5.1). It includes noise impacts involved with construction of the SRFI, Roade Bypass and other Highways Works.

The indicative master programme indicates that much of construction activity for the Main Site (bulk earthworks, landscaping, road construction and construction of rail terminal) is expected to be carried out over a period of around two and a half years. Depending on the rate of take-up of development plots, work on constructing the warehouse buildings could extend for around a further three years. The initial works will include the creation of the landscaping bunds around the site. This should provide screening of the construction activities from the receptors and reduce the predicted noise levels from those shown in Table 1 of Appendix 8.12 (para 8.5.8).

The bulk earthworks activity may take up to two years to prepare the entire site, and therefore the time spent in relatively close proximity to any one receptor is expected to be minimal, with daily construction noise levels typically being much lower during this phase of the works than those shown in Table 1 of Appendix 8.12 (para 8.5.9).

Construction working is anticipated to take place between the following hours para 8.5.11):

07:00 – 19:00 hours: Monday to Friday;

07:00 – 16:00 hours: Saturdays.

No works on Sundays or public holidays.

It is expected that all construction related deliveries would also take place during these hours, except for large items of plant which usually have to be transported on the road network at other times when there is minimal traffic (para 8.5.12).

1.1 SRFI Construction

Predicted vast majority receptors below LOAEL. No activities predicted to exceed SOAEL (para 8.5.5).

Receptors R4 & R5 Bulk earthworks-noise levels predicted between LOAEL and SOAEL but levels comparable with existing ambient – consultant considers unlikely that noise from

construction activities will be audible at these locations due constant noise from M1 (para 8.5.6).

Some construction activities taking place outside standard periods (para 8.5.13 and 8.5.14)

Site approach from A508 Roundabout J15 M1 (para 8.5.15). No significant adverse noise impacts expected from construction traffic at relevant receptors.

1.2 Construction Road Bypass

Predicted daily construction noise levels below LOAEL (para 8.5.16).

Small number of receptors falls between LOAEL and SOAEL.

Significant adverse impacts predicted for two receptors R38-Hyde Farm & R41-Blisworth Road exceeding for temporary period (para 8.5.16) during enabling works and 1st phase of construction.

1.3 Construction - Other Highways Works

6 receptors identified, R57 to R62, as being within 300m of boundary (para 8.5.19). Some out-of-hours works expected (para 8.5.20). No data to enable noise impact prediction but will be picked up in detail during production of the relevant phase specific CEMP as required by DCO (para 8.5.21). Possible some of the works could result in adverse noise effects and so will be mitigated to reduce to a minimum (para 8.5.22).

1.4 Construction Vibration

Only piling works identified with potential to give rise to vibration that may cause adverse effects (para 8.5.23). Understood that only element of development where piling might be required is construction of Road Bypass Railway Bridge (para 8.5.24). Difficult to predict level of vibration likely since depends on piling method. However considered no material adverse effect likely to occur due to separation distance to nearest receptor (para 8.5.25).

Construction HGV traffic will be routed away from sensitive receptors where practical to minimise any ground borne vibration (para 8.5.26)

1.5 Mitigation of Significant Impacts: Construction Noise/Vibration

In general, construction noise and vibration will be managed by the use of best practicable means (BPM), i.e. the use of all reasonable measures to minimise construction noise and vibration (para 8.6.2). This will follow the principles of the guidance within BS 5228:2009+A1:2014 parts 1 and 2:

Regarding the results of the predicted construction noise levels, while the majority are below the LOAEL when in close proximity to the relevant receptors, potentially significant adverse temporary noise effects have been predicted at two receptors, R38 Hyde Farm and R41 Blisworth Road – North Façade, when two activities associated with the Road Bypass works are in relatively close proximity: the initial enabling works and the first phase of road construction (para 8.6.3).

The consultant expects that by use of BPM, particularly through use of temporary screens around the construction activities, that the noise from these activities could be attenuated so

that the predicted construction noise levels would be below the SOAEL in all instances (8.6.4).

The use of other specific BPM measures will be considered for all construction works associated with the Proposed Development and described in the relevant Phase specific Construction Environmental Management Plan (P-CEMP) as required by the DCO, when detailed information regarding the proposed construction methods are available (8.6.5).

1.6 Comments Construction Noise/Vibration

It appears that a combination of noise criteria recommended in BS 5228:2009 has been used from Table E.1 and E.2 of Annex E of BS 5228-1:2009. The LOAEL appear to have been based on the lowest levels detailed in Table E.1 which provides examples of thresholds for significant effects at dwellings based on the difference above existing ambient noise, whilst the SOAEL appear to be based on criteria in Table E.2 which provides criteria for determining a receptors eligibility for sound insulation and/or temporary re-housing because of noise from construction works. It is noted that the bulk earthworks are expected to take up to two years to prepare the entire site (para 8.5.9). However, no consideration appears to have been given to the criteria recommended in E5 of BS 5228-1:2009 for construction work involving long-term substantial earth moving.

No SOAEL predicted but two receptors have been identified as being between a LOAEL and SOAEL in respect of the bulk earthworks. However, the consultant comments that the predicted construction noise levels are comparable to existing ambient noise from the M1 and so unlikely to be audible (para 8.5.6).

That would suggest the existing noise climate already exceeds the criteria recommended in E.5 in respect of construction works involving long-term substantial earth moving but I think this question needs to be put to the applicant's consultant for an explanation/clarification?

With regard to the assessment of vibration, not clear why a 0.5mm.s⁻¹ PPV has been used as the LOAEL rather than 0.3mm.s⁻¹ recommended in BS 5228-2:2009 Table B1 and which is identified as being the level at which vibration might just be perceptible. I am wondering if that may be a typo since it states in the report that only piling is identified as a potential vibration source and that no significant adverse impact is expected because the piling works will be located over a 100m from the nearest receptor. However, I think this question needs to be put to the applicant's consultant for an explanation/clarification?

It should be noted that provisions of Sec 60/61 Control of Pollution Act 1974 apply to noise from construction sites.

We would expect the Code of Construction Practice will require the developer and their contractors to undertake measures to control noise and vibration as based on criteria, mitigation, and monitoring in accordance with "Best Practice" as detailed in the following guidance:-

- **BS 5228:2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites,**

- **BS 6472-1 provides best available information on the application of methods of measuring and evaluating vibration in order to assess the likelihood of adverse effects**
- **BS 7385-2:1993 Evaluation and measurement for vibration in buildings. Guide to damage levels from ground borne vibration.**

This should also include timely and appropriate liaison with both the community and local planning authorities throughout the duration of the construction phase of the development.

This should also be the case with respect to Air Quality matters concerning mud/dust and vehicle emissions from the construction phase of the proposed development. In this instance best practice is defined in the following guidance:-

- **Institute of Air Quality Management (IAQM) Guidance on Land Use Planning & Development Control: Planning for Air Quality 2017.**
- **Institute of Air Quality Management (IAQM) Guidance on Assessment of Dust from Demolition & Construction 2014.**
- **Institute of Air Quality Management (IAQM) Guidance on Air Quality Monitoring in the vicinity of Construction & Demolition Sites 2018)**

2.0 Operational Phase – Railway Noise

This section deals with the assessment of the potential change in railway noise as a result of the Proposed Development. Operation of the SRFI will mean that additional freight trains will use the rail network, entering and exiting the site via the Northampton Loop line that runs along the western boundary of the Main Site (para 8.5.27).

The number of freight trains using the railway network will increase as a result of SRFI operations (para 8.3.13 & 8.5.27).

The potential change in average railway noise has been predicted using the environmental noise modelling software IMMI which incorporates the methodology for calculating railway noise set out in the Calculation of Railway Noise (CRN) as required by the NPSNN. This methodology assumes that the receptor is downwind of the source. The source terms for the different types of locomotive and wagon have been taken from CRN and from the 2007 Defra report¹⁶ which provided updated terms for newer rolling stock (para 8.3.14)..

The noise levels arising from passenger and freight train activity on the Northampton Loop and West Coast Main Line have been predicted at the relevant receptor locations for the following Do- Minimum (DM) and Do-Something (DS) scenarios¹⁷: 2017 baseline (para 8.3.15);

- 2021 DM and DS – SRFI opening year;
- 2033 DM and DS – High Speed Two (HS2) Phase 2b opening year; and
- 2043 DM and DS – National Rail long-term planning horizon scenario.

Additional freight will use the railway network entering and exiting the site via the Northampton Loop (para 8.5.27). **Assumes** typical rail operations with no engineering works taking place (para 8.5.30). Predicts railway noise up to the site entrance since considered as part of site noise once within boundary of the site (para 8.5.31).

2.1 Significant Impacts

No SOAEL (Significant Observed Adverse Effect Level) predicted at relevant receptors (para 8.5.34) and also no adverse effect predicted (para 8.5.35). All impacts predicted to be “negligible” or “no change”. Also predicted no receptors will be eligible for offer of mitigation under Noise Insulation Regulations (Railways) (para 8.5.36).

No receptors have been identified as being likely to be eligible for an offer of mitigation under the terms of the Noise Insulation Regulation (Railways) provisions (para 8.5.36).

Railway important areas in the vicinity of proposed development considered in the assessment include R39, R39a, and R54 (para 8.5.37). No significant adverse or adverse impacts predicted for these locations in any future scenario (para 8.5.38). Expected impact magnitude for all future years for all the years are at worst “negligible” during both day and night time. It is not considered that there are any practical opportunities to address existing noise issues associated with the railway with regard to 5.200 NSPNN (para 8.5.39).

It is anticipated that the additional freight train activity resulting from operation of the SRFI would have, at most, a negligible impact on the Roade Cutting Site of Special Scientific Interest (SSSI) encompasses the area around the railway lines between the southern boundary of the Main Site and the centre of Roade. No significant adverse noise effect on any geology or wildlife is expected (para 8.5.40, & 8.5.57).

2.2 Maximum Noise Levels from Railway Movements

The assessment of the potential change in average railway noise as a result of the operation of the SRFI indicates that no significant adverse noise effects or adverse impacts are expected at any of the relevant receptors for all future year scenarios during both the day and night-time periods. The associated impact magnitudes is considered would be, at worst, negligible (para 8.5.47).

This part of the assessment considers both windows closed and windows open scenarios **assuming** bedroom windows are partly open for ventilation providing an overall sound attenuation of 12 dB(A); the other assuming windows closed providing a sound attenuation of 25 dB(A). This latter assumption could be an underestimate if the receptors have standard thermal double-glazed windows, meaning that robust and worst-case assumptions have been considered for this aspect.

For the “windows closed” the assessment indicates that the potential increase in noise induced awakenings from maximum noise levels is less than one in all the assessment years and no significant adverse effects is expected.

For “windows open”, the same result is expected for receptor locations R23, R32 and R39 for all scenarios and for locations R1, R18 and R54 in 2021 and 2033. However, **a potential significant adverse effect has been identified for these later three receptors in 2043 since it is estimated that the number of noise induced awakenings from maximum noise levels could increase by just over one per night (para 8.5.45 and 8.5.48)**. It is commented that “... while two types of freight locomotive have been assumed for the predictions of railway noise for both SRFI and non-SRFI movements it is likely those other types of freight locomotive that produce lower levels of noise will be used for some of the movements” albeit “it is not possible to accurately identify how many movements this may affect” (para 8.5.46).

2.3 Railway Vibration

Operation of the SRFI will mean that additional freight trains will use the rail network, entering and exiting the site via the Northampton Loop line that runs along the western boundary of the Main Site. Freight trains travelling on surface railways are considered a potential source of ground borne vibration (para 8.5.49).

Railway induced vibration levels have been predicted at two receptors including the contribution of both passenger and freight train activity on the Northampton Loop for the baseline, "Do-Minimum", "Do-Something DM and DS future year scenarios described in section 8.3 (i.e. para 8.3.15)

Railway induced vibration levels have been predicted at two receptor locations, R18 & R24 at around 36m and 86m from the centre of the northbound track respectively, and which includes the contribution of both passenger and freight train activity on the Northampton Loop (para 8.5.51).

The predictions **assume** typical rail operations with no engineering works taking place. The vibration levels used in the predictions are the highest measured values for each representative train type taken during the baseline survey (para 8.5.52).

The assessment of the potential change in railway induced vibration as a result of the operation of the proposed SRFI indicates that no significant adverse vibration effects or adverse impacts are expected at receptors close to the Northampton Loop for all future year scenarios during both the day and night-time periods (para 8.5.55, & 8.5.56).

2.4 Mitigation of Significant Adverse Effects Railway Noise/Vibration

The consultant comments that for the most part, no significant adverse effects or adverse impacts are expected as a result of the potential change in railway noise or railway induced vibration associated with the Proposed Development for any of the future year scenarios at any of the relevant receptors (para 8.6.9). **The exceptions are three locations when in 2043, the national rail long term planning horizon, there could just be a significant adverse effect due to a possible increase of one noise induced awakening a night in that scenario.**

He goes on to comment that "In considering mitigation options, it needs to be recognised that the results of the assessment have only just indicated a significant adverse effect for the situation some 25 years ahead (para 8.6.10). As mentioned in Appendix 8.19, there is a degree of uncertainty associated with this assessment. This includes the noise levels emitted from the rolling stock. As discussed in section 8.5, it is likely that some of the freight locomotives used for the prediction of railway noise from both SRFI and non-SRFI movements would generate lower levels of noise than those currently assumed" ..

It is also further stated in the assessment report that "Work is being carried out at a European level to reduce the noise from freight trains and it is likely that by 2043, quieter rolling stock will be in use compared with that assumed for this assessment (para 8.6.11). Therefore, the potential significant adverse effect would be mitigated by the use of quieter rolling stock.

2.3 Comment Railway Noise/Vibration

In respect of the predicted significant adverse impacts, what happens if some of the assumptions do not materialise as expected?

I am concerned regarding the three exception locations when in 2043 it is predicted there could just be a significant adverse effect due to a possible increase of one noise induced awakening a night in that scenario (i.e. R1 Woodpecker Way, R18 Collingtree Road North, and & R54 Ashton Road W). I am not clear what exceedance value they have used but The World Health Organisation Guidelines recommends a limit for individual noise events not exceeding an L_{Amax} 45 dB and guidance of which has been further supplemented by the WHO Night Noise Guidelines for Europe where it comments that effects have been observed at 45 dB or less". Furthermore, in the noise hierarchy detailed in the Planning Practice Guidance its states that significant adverse effects should be "avoided" if not "prevented" depending whether the level of intrusion is noticeable and disruptive or very noticeable and disruptive. The acoustic metric test used for individual noise events is different than the one covered under provisions of the Sound Insulation Regulation for Railways but equally important since the WHO comment in its Night Noise Guidelines for Europe that "if the noise is not continuous, sleep disturbance correlates best with the L_{Amax} ...". The consultant's conclusions are based on a number of assumptions which involves a degree of uncertainty. Given the degree of uncertainty involved in this instance is it possible to extend the context of the exception to include an offer of protection to the occupiers of those three properties and which may only require the provision of suitable glazing and alternative means of ventilation?

3.0 Road Traffic Noise – Around Main Site (8.5.60 – 8.5.77)

This section deals with the assessment of the potential change in road traffic noise as a result of the Proposed Development on the roads around the Main Site (para 8.5.60). The assessment does not include the roads within the Main Site itself, providing access to the SRFI warehousing and other elements, as they are considered to be an operational sound source and are assessed in the corresponding section.

3.1 Significant Impacts

The assessment indicate that most receptors around the Main Site are not expected to experience any material adverse impacts as a result of the change in road traffic noise associated with the Proposed Development for any of the future year scenarios in either the day or night-time periods. The impact magnitudes are expected to be largely negligible (para 8.5.65,-8.5.66 & 8.5.68).

Minor beneficial impacts have been predicted for up to ten of the receptors close to the north and west boundaries of the Main Site depending on the future year and assessment period, due to the landscaping bunds around the site screening them from road traffic noise from the M1. (para 8.5.69)

A significant adverse effect has been predicted at one receptor: R30 West Lodge Cottages - East Façade, located on the A508 just to the south of the Main Site, for the 2031 DS day and night-time scenarios (para 8.5.65). This receptor has been identified as being likely to be

eligible for an offer of mitigation under provision of the Noise Insulation Regulations (Roods) (para 8.5.72).

At R27 Blisworth High Street, results indicate a significant adverse effect in for the 2021 DS year daytime scenario only (para 8.5.66). It goes not state that “this effect would only be temporary as once the Roade Bypass is operational, R27 would receive a minor beneficial impact for both the day and night-time as indicated by the results for the 2031 DS scenarios.

At receptor R29, which is located on the other side of R30, it is predicted to experience a minor adverse impact during both future year night-time scenarios (para 8.5.70).

Minor adverse impacts are also predicted at the receptors R31 to R33 for the 2021 DS night-time scenario, which are different facades of the same building (Bridge Cottage) located on Courteenhall Road at the south of the Main Site (para 8.5.71). However, in the 2031 DS scenario these have changed to be mainly minor beneficial due to the Roade Bypass affecting the flow of traffic in this area. The consultant goes onto comment that “it is expected that the beneficial impacts as a result of the bypass would occur considerably before 2031”.

The assessment indicates that no significant adverse effects or adverse impacts are predicted for the three Noise Action Planning Important Areas (Receptor locations R39, R39a and R54) as a result of the Proposed Development in any future year scenario (para 8.5.73 – 8.5.75). The expected impact magnitudes for all future years are at worst negligible during both the day and night-time periods. It also commented “that 2 m high fencing is already in place between Collingtree Court and the M1”.

3.2 Mitigation of Significant Adverse Effects

Mitigation for the significant adverse noise effect predicted for 2031 DS at one receptor, R30 West Lodge Cottages - East Façade (located on the A508 just to the south of the Main Site). Mitigation will be applied through implementing the Noise Insulation Regulations for the residential properties represented by that receptor for R30 (R30 West Lodge Cottage – East Façade) (para 8.6.12 & 8.6.13).

3.3 Comment - Road Traffic Around main site

No consideration appears to have been given to any mitigation for receptor R29 in respect of predicted changes to road traffic noise levels around the main site?

Could further efforts not be made to reduce the significance of temporary significant adverse effects at R27 Blisworth Road and R31 to R33, possibly from an offer of some form of temporary screening for example?

What happens if the assumptions do not materialise?

3.4 Roade Traffic – Roade Bypass (para 8.5.78 – 8.5.98)

This section deals with the assessment of the potential change in road traffic noise as a result of the Proposed Development on the roads around the Roade Bypass site, as well as on the bypass itself (para 8.5.78).

It is commented that "...the Roade Bypass is not planned to be completed in the 2021 DS scenario, which represents the expected opening year of the SRFI. The traffic noise predictions for this scenario are based on the existing road layout. However, the bypass, as well as all other highway works, are expected to be completed in 2031 DS and have been modelled as such (para 8.5.79) **(Can conditioning be used to ensure all the necessary highways works take place by that date?)**.

3.5 Significant Impacts

The assessment indicates that no significant adverse effects have been predicted at the relevant receptors around the Roade Bypass site as a result of the change in road traffic noise for any of the future year scenarios in either the day or night-time periods (para 8.5.83 & 8.5.96) .

It is predicted that the magnitude of impacts with the Roade Bypass constructed will be both beneficial and adverse at receptors around the site with many of the 2021 DS levels being below the LOAEL (Lowest Observed Adverse Effect Level). The impact at all other receptors are expected to be negligible whilst a minor adverse impact is predicted at one receptor, R52 Roade High Street (para 8.5.85 – 8.5.97).

Beneficial impacts are expected at the receptors located on the A508 as it passes through the centre of Roade, as road traffic is relocated onto the bypass (para 8.5.87).

Adverse impacts are expected at the receptors close to the Roade Bypass site on the western side of the village where existing levels of road traffic noise are relatively low. In particular, major adverse impacts are predicted for receptors R38a, R39 and R39a for the night-time DS 2031 scenario (para 8.6.26 and 8.6.27)

While no significant adverse effects have been predicted, it is recognised from the assessment in section 8.5 that following the opening of the Roade Bypass, as reflected in the 2031 DS scenarios, a variety of beneficial and adverse impacts are predicted at the relevant receptors. This includes several major adverse impacts, with changes of more than 10 dB(A), but which result in a level below the SOAEL when the DM and DS scenarios are compared (para 8.6.19).

The property at which the highest increases in road traffic noise between the 2031 DM and DS scenarios are expected is Hyde Farm, represented by receptors R38 and R38a. When the results of the 2031 DS scenarios with and without the additional fencing are compared, the predicted road traffic noise levels at these receptors are reduced by 4 to 5 dB(A) (para 8.6.26).

Two of the receptors predicted to experience major adverse impacts in the 2031 DS night-time scenario, regardless of additional fencing, are R39 and R39a. This is primarily because they are close to the bypass as it crosses over the railway tracks, and for structural reasons, the bridge parapets are limited to a height of 1.9 m. Therefore, limited screening of road traffic noise passing over the bridge is possible (para 8.6.27).

It is further commented that "This outcome, however, is based on considering road traffic noise only (para 8.6.28). Whilst road traffic and railway noise are of different character, the two receptors already experience noise from the nearby railway. To

give an indication of what a combined impact may be, the predicted road traffic and railway noise levels at R39 and R39a have been combined for the 2033/2031 DM and DS night-time scenarios and the results considered in accordance with Tables 8.5 and 8.10. This indicates that the change in combined road traffic and railway noise would reduce to a negligible impact at R39 and a minor adverse impact at R39a.

The assessor also comments that further analysis has been undertaken to reflect the total number of dwellings that may experience beneficial or adverse impacts and which concluded that as a result of the Roade Bypass and the proposed mitigation, the number of residential properties exposed to higher levels of road traffic noise would be reduced (para 8.6.34 & 8.6.32). This includes a reduction of about 70% in the number of properties with noise exposures above the SOAEL. The number of residential properties that would experience lower levels of noise would also increase once the bypass is in operation.

The assessment indicates that negligible impacts are predicted for the Noise Action Planning Important Areas receptor locations R44 in the 2021 DS scenario when the Roade Bypass is operational. However, in the 2031 DS scenario when the Roade Bypass is operational, the receptor is expected to experience a minor beneficial impact during the day and a major beneficial impact during the night because of the reduction in traffic volume on the A508 (para 8.5.92).

It is anticipated that in 2021, prior to the construction of the bypass, the change in road traffic noise associated with the Proposed Development would have, at most, a negligible impact on the Roade Quarry Local Wildlife Site (LWS) located at the south of Roade, adjacent to the A508 on the east side (para 8.5.95, 8.5.95 & 8.5.98). No significant adverse noise effect on any wildlife is expected. In 2031, beneficial noise impacts are anticipated at the LWS as a result of the Roade Bypass.

3.6 Mitigation of significant impacts Road Traffic-Roade Bypass

No receptors have been identified as being likely to be eligible for an offer of mitigation under provisions of the Noise Insulation Regulations (Roads) 1975^(as amended) (para 8.5.90).

However it is commented in in the report that “The design of the bypass includes landscape bunding next to the new road, particularly on the side closest to Roade and the potential for additional mitigation has been identified in the form of acoustic fencing in order to mitigate and minimise further the predicted adverse impacts for those dwellings most affected (para 8.5.88 and 8.5.89).

This is to include the targeted use of fencing on top of the landscape bunding, focused around the central roundabout and connecting road to the southern roundabout, to increase the overall height of the barrier and provide additional attenuation of the road traffic noise from the bypass at the relevant receptors and other nearby properties (para 8.6.21 & 8.6.22). It is to comprise of a mixture of 2m and 3m high fencing with some sections having sound absorption coverings (para 8.6.23).

It is also commented in the report that whilst the number of predicted beneficial and negligible impacts remains the same for both the day and night-time periods compared to the 2031 DS scenario without the fencing, the number of moderate and major adverse impacts during the day decreases by two and one respectively, with no major adverse impacts

remaining. During the night, the number of major adverse impacts decreases by three, with the number of moderate adverse impacts increasing by two as a result” (para 8.6.25).

3.7 Comment: Road Traffic Noise-Road Bypass

Whilst it is appreciated a balancing is needed between those properties that will experience beneficial or adverse impacts I am concerned that quite a number of properties will experience a moderate to major change in the magnitude of the noise change from the proposed development even with mitigation and which will exceed the night-time noise criteria recommended by the World Health Organisation (WHO) Night Noise Guidelines for Europe. That guidance advises that adverse health effects are observed at 40 dB $L_{\text{night, outside}}$, such as self-reported sleep disturbance, insomnia, and increased use of somnifacient drugs and sedatives and so therefore considers 40 dB $L_{\text{night, outside}}$ as the Night noise guideline (NNG) for the protection of public health. It should be stressed that this has not been adopted by the European parliament or in the UK and also that a 50 dB $L_{\text{night, outside}}$ is recommended as an interim target level whilst further research is undertaken. Whilst that guidance has yet to be adopted or otherwise in the UK is it not possible for an offer of protection to be extended to those affected properties in the form of the provision of suitable glazing and alternative means of ventilation?

3.9 Road Traffic – Other Highways Works

This section deals with the assessment of the potential change in road traffic noise as a result of the Proposed Development in the areas around the other highway works where a noise-sensitive property is within 300 m of the site (para 8.5.99).

The other highway works consist of alterations and realignments of several sections of existing road, described in Chapter 2 of the ES (Description of Development). The following works have been integrated into the assessment of road traffic noise around the Main Site and the new roundabout on the A508 to serve as access to the SRFI:

- dualling of the A508 between the new roundabout and M1 Junction 15;
- enlargement and reconfiguration of M1 Junction 15; and
- widening of the A45 to the north of M1 Junction 15.

Six other highway works have been identified for assessment, corresponding to the seven receptors R57 to R62 (incl. R57a), which were selected to be those closest to the changes in road realignment. These works are part of the ‘A508 route upgrade’ described in Chapter 2 of the ES, and in detail in Chapter 12 (Transportation). (para 8.5.100 & 8.5.101)

3.9 Significant Impacts

It is predicted that most receptors around the other highway works are not expected to experience any significant adverse effects as a result of the change in road traffic noise associated with the Proposed Development for the 2031 scenario in either the day or night-time periods (para 8.5.105).

A significant adverse effect has been predicted at one receptor: R57

The Lodge, located on the A508 just to the south of the Main Site, for the 2031 DS daytime scenario only (para 8.5.106). This is due to the predicted road traffic noise level exceeding the SOAEL for the DS scenario, together with a minor increase of 1.3 dB(A) from the DM to the DS scenario.

It is also predicted that there is a mixture of impact magnitudes at the receptors close to the other highway works for the 2031 DS scenarios (para 8.5.108). This includes minor beneficial impacts at R60 during both the day and night-time periods, and a moderate adverse impact is predicted at R58 during the night-time period only (para 8.5.109 & 8.6.43). The other impacts consist of minor adverse and negligible magnitudes. At locations R57a and R59, minor adverse impacts are predicted during the 2031 DS night-scenario only (para 8.6.45).

3.10 Mitigation of significant impacts Road Traffic-Other Highways Works

One receptor has been identified as being likely to be eligible for an offer of mitigation under provisions of the Sound Insulation Regulations (Roads). This is R57 The Lodge, the same receptor where a significant adverse effect is expected as identified in 3.9 above (para 8.5.110).

It is commented in the report that the existing noise issues associated with this road traffic noise Important Area could be mitigated, if practicable, by use of a low noise road surface, such as a thin surface course (para 8.5.113). The viability of this potential mitigation measure would be discussed with the local highway authority during the detailed design approval process, as in some situations the increased maintenance requirements restrict the potential use of this type of mitigation. It is not considered that there are any other practicable opportunities to address the existing noise issues associated with this road traffic noise IA with regard to paragraph 5.200 of the NPSNN.

Regarding the receptor R58, which is expected to experience a moderate adverse impact but with a resulting level which is below SOAEL, it is considered that there are no practicable options to mitigate this impact for a number of reasons the practicalities of installing measures in this location. It is further commented that this is also the case regarding the predicted minor adverse impacts at R57a and R59 (para 8.6.44 to 8.6.47).

3.11 Comment: Road Traffic Noise-Other Highway Works

No comment

3.12 Road Traffic Noise – Triggered Data Links

This section deals with the assessment of the potential change in road traffic noise as a result of the Proposed Development on the triggered data links, i.e. roads in the wider transport model that have met certain criteria in terms of the increase in traffic flows (see section 8.3 for further details). In total, six such roads have been identified (para 8.5.117).

3.13 Significant Impacts

No significant adverse effects have been predicted as a result of the change in road traffic noise for the relevant future year scenarios (para 8.5.120).

No change and negligible impacts are predicted at two locations (Berry Ln, Northampton), and minor adverse impacts at two others (Pomfret Rd/Water Lane, Towcester and Hill Farm Rise, Northampton) (para 8.5.122 & 8.5.124). The predicted DS road traffic noise levels are below the LOAEL at the two remaining locations, and therefore no adverse impact has been identified (Bickerstaffes Rd, Towcester, Burcote Rd, Towcester).

4.13 Mitigation: Road Traffic Noise – Triggered Data Links

No significant adverse effects are expected as a result of the potential change in road traffic noise as a result of the Proposed Development on the triggered data links for the relevant future year scenarios in the immediate areas around the corresponding roads (para 8.6.48).

Whilst minor adverse impacts have been predicted at two of the triggered data links for the 2031 DS daytime scenario. However, due to their relative isolation from the Proposed Development and that no works are planned at their location, it is not considered that there is a practicable opportunity to mitigate these impacts (para 8.6.49).

4.14 Comment: Road Traffic Noise-Triggered Data Links

No comment

5.0 Operational Sound from SRFI Activities at the Main Site

This section deals with the assessment of sound from operational activities taking place at the SRFI. An overview of the different sources and activities included is given in section 8.3 (para 8.5.125). The predictions assume that the SRFI is fully operational, meaning that robust and worst-case assumptions have been considered for this aspect.

Potential sources of operational sound at the SRFI have been identified to include the following (para 8.3.57):

- heavy goods vehicles (HGVs) and light vehicles (e.g. cars) travelling on the internal access roads;
- freight train movements on the internal tracks;
- the use of rail mounted gantry cranes (RMGs), reach stackers and telehandlers to handle containers at the intermodal freight terminal;
- excavators and wheeled loaders distributing aggregate at the aggregates facility; and
- forklift trucks moving cargo at the 'rapid rail freight' facility.

The predictions have been based on the SRFI operating at full capacity with all warehousing in use and the following information has been incorporated into the prediction model (para 8.3.60):

- The layout of the site as shown in the illustrative masterplan, including the size and heights of the proposed warehousing;

The proposed topography for the site, including the inherent screening effects of the bunding and landscaping;

The expected level of HGV activity at the proposed warehousing, intermodal freight terminal, 'rapid rail freight' facility and aggregates facility, including travel on the internal access roads;

The number and type of freight train movements, including arrival, departure and shunting manoeuvres; and

The expected activities at the intermodal freight terminal, 'rapid rail freight' facility and aggregates facility, including the likely durations that equipment will be operational during the assessment periods.

The operational sound from the SRFI is expected to be complex in nature, composed of different sources in different locations around the site (para 8.5.127). The noise impact from activities at the site have been assessed in accordance with procedures detailing in BS 4142:2014 Method for Assessing & Rating Industrial and Commercial Sound (paras 8.3.64 to 8.3.72, & 8.5.126). A +3 dB(A) penalty has been applied to all sources of an industrial nature on the SRFI to account for certain acoustic features that may be readily distinctive at the receptors (para 8.5.126 – 8.5.127).

It has been recognised that wind direction has a strong influence on the measured noise levels in the area around the Main Site (para 8.5.128). Consequently, typical background sound levels have been derived for each survey location using the modal value of the survey results for two wind conditions: broadly south-westerly winds and broadly north-easterly winds. The initial estimate of impact is considered under both wind conditions, the prevailing wind direction in the area, as in the rest of the UK, is broadly south-westerly.

The predicted rating level is also considered in the context of the existing noise environment and how it relates to the existing sound environment in terms of absolute noise levels provided in BS 8233:2014:30 (para 8.3.67, & 8.3.68).

The assessment has taken into account any mitigation that it is inherently integrated into the design of the Proposed Development, such as the landscaping bunds around the Main Site and Roade Bypass (para 8.5.169).

5.1 Significant Impacts

Daytime – South Westerly Winds:

The assessment predicts that under broadly south-westerly winds during the daytime, most relevant receptors are expected to experience low impacts (i.e. rating levels below background levels) from operational sound from the SRFI (para 8.5.133).

At the receptors from R2 to R13, broadly to the north-east of the Main Site and relatively close to the M1, the predicted rating levels are at least 10 dB(A) below both the modal and any sensitivity test background sound levels (8.5.134). As a result, no significant adverse effects or adverse impacts are expected due to operational sound at these receptors.

The assessment indicates a “potential adverse” impact is predicted for five receptors in the vicinity of R21 to R28 since the rating level exceed the corresponding modal background sound levels by up to 6 dB(A), and the sensitivity test background sound levels, where present, by up to 7 dB(A) (para 8.5.137). However, it is further commented that these rating levels are at least 5 dB(A) below the lower threshold for external amenity space recommended for daytime external guideline desirable sound levels for dwellings by BS 8233:2014, and; assuming a typical reduction of 12 dB(A) for external sound passing through an open window into a habitable room, the rating levels are at least 2 dB(A) lower than the lower threshold for resting inside living rooms during the daytime recommended by BS 8233:2014 (para 8.5.139)”. Also that none of the predicted rating levels at the receptors in the vicinity of R21 to R28 are expected to exceed the LOAEL either outside or within dwellings during the daytime (para 8.5.140, 8.5.142 & 8.5.146). (I disagree with this approach – see comments below).

Daytime – North Easterly Winds:

The assessment predicts that under broadly north-easterly winds during the daytime, almost all the relevant receptors are expected to experience low impacts from operational sound from the SRFI according to the principles of BS 4142:2014 (para 8.5.143).

The assessment indicates a “potential adverse” impact is predicted at receptors R23 and R25, to the west of the site, since the rating levels at the receptors are 3-4 dB(A) above the modal background sound levels (para 8.5.145). However, it is commented no significant adverse effects are expected, and, once the predicted absolute levels of operational sound have been taken into account, no adverse impacts are likely (para 8.5.146 & 8.5.147).

Night-time – South Westerly Winds:

The predicted rating levels are almost all below both the modal and any sensitivity test background sound levels for receptors from R2 to R13. The rating level at R13 Maple Farm – South Façade is 2 dB(A) less than the modal value and exceeds the sensitivity test value by just 1 dB(A). No significant adverse effects or adverse impacts are expected due to operational sound at receptors R2 to R13 based on the principles of BS4142:2014 (para 8.5.149).

The assessment predicts potential adverse impact, to significant adverse impact, for nine receptors in the vicinity of R16 to R29 since the rating level exceed the corresponding modal background sound levels by up to 8 dB(A), as at R28 Courteenhall Road at the south of the site, and the sensitivity test background sound levels, where present, by up to 9 dB(A), as at R23 Barn Lane and R25 Barn Lane (para 8.5.150, 8.5.151. 8.5.152).

However, it is commented no significant adverse effects are expected, and, once the predicted absolute levels of operational sound have been taken into account, no adverse impacts are likely (para 8.5.153, 8.5.154, 8.5.155, & 8.5.156)

Night-time – North-Easterly Winds:

The assessment predicts that under broadly north-easterly winds during the night-time, almost all the relevant receptors are expected to experience low impacts from operational sound from the SRFI according to the principles of BS 4142:2014 (para 8.5.157).

The rating levels at two receptors, R23 Barn Lane and R25 Barn Lane, are predicted to exceed the modal background sound level, but only by 1 dB(A). However, it is commented that neither receptor has a sensitivity test value and so on that basis, it is considered highly unlikely that an adverse impact would be expected at either receptor(para 8.5.159).

5.2 Assessment of Operational Sound Impacts- Maximum Noise Levels at Night.

This assessment considers predicted maximum noise levels from operational activities taking place at the SRFI and compares these to the $L_{Amax(f)}$ 60 dB criterion outside of bedrooms recommended in the World Health Organisation Community Noise Guidelines to preserve sleep. It recommends that level should not be exceeded more than 10-15 times per night for good sleep and assumes a 15 dB reduction for propagation through a partially opened window (para 8.5.162 & 8.5.163).

It is predicted that no maximum noise levels are expected to exceed the 60 dB LAFmax at the outside façade of any relevant receptor (para 8.5.164).

5.3 In summary, predicted impacts for daytime, night-time and maximum noise levels

Daytime

The assessment concludes that some adverse impacts are indicated initially for the daytime peak hour of SRFI operations under broadly south-westerly winds at some receptors to the west and south of the Main Site (para 8.5.142). Also, that the predicted rating levels for the daytime peak hour of SRFI operations under broadly north-easterly winds exceed the modal and/or sensitivity test background sound values at two receptors at the west of the Main Site (para 8.5.147). However, it considers that no significant adverse impacts or effects are expected when context is taken into account (para 8.5.147).

Night-Time

The assessment predicts that rating levels exceed the modal and/or sensitivity test background sound values at some receptors at the west and south of the Main Site during the peak 15 minute period (para 8.5.156). However it concludes that when context is taken into account, no significant adverse impacts or effects are expected in this situation although it goes on to comment that it is possible that some adverse impacts or effects may occur, but this would be dependent on how often throughout a night the peak activity occurs.

For receptors at R23 and R25 Barn Lane a marginal exceedance is predicted the assessment concludes that no significant adverse effects are expected in this situation. Furthermore, no adverse impacts are likely (para 8.5.159 & 8.5.160).

Maximum noise levels

The assessment also concludes that no significant adverse effects or adverse impacts are expected as a result of maximum noise levels from operational activities taking place at the SRFI during the night-time period (para 8.5.165).

5.3 Mitigation: Operational Sound from SRFI Activities at the Main Site:-

Whilst no significant adverse effects have been predicted as a result of potential impacts of sound from operational activities taking place at the SRFI consideration has been given to the potential adverse impacts at the relevant receptors to the west and south of the Main Site during the night-time period under broadly south-westerly winds (para 8.6.53).

The primary source(s) identified as is the rail terminal at the west of the Main Site, and more specifically, the reach stackers and telehandlers used to handle and move the intermodal containers (para 8.6.54).

It is commented that the design of the Main Site includes landscape bunds around the perimeter of the SRFI, with heights optimised to provide maximum environmental mitigation while remaining practicable (i.e. bunding along the west of the site, adjacent to the rail terminal, would be approximately 16m above the level of the rail terminal ground surface, and at an even greater height above the ground level at the receptors - para 8.6.55). It is estimated that the bunding and landscaping around the Main Site would reduce operational sound levels by between 5 and 13 dB(A) at the receptors R21 and R23-R25 to the west of the site, and by 3 dB(A) at R28 to the south of the site (para 8.6.56). Note-these have been taking in to consideration in the modelling and assessment of the noise impact from operational activities at the SRFI.

However, it is explained that the benefit of any practicable increase in bund height in terms of further reducing operational sound levels from the rail terminal at the relevant receptors has been analysed and been found to be minimal (para 8.6.57). It is also commented that the computer modelling potentially underestimates the sound attenuating properties of the bunding at receptors close to the bottom of the bunding by up to 5 dB(A) (para 8.6.58).

It is further commented that the use of additional barriers around the perimeter of the rail terminal has been investigated but due to the relatively large size of the rail terminal, the inclusion of such barriers would have no benefit at practicable heights taking into consideration of the height and screening effect of the bunding already in place (para 8.6.59). **how would this be secured?**

Reference is made to potentially attenuation effects from the stacking and positioning of intermodal containers that will be handled and stored at the site and which were not included in the noise assessment computer modelling (para 8.6.60). It is claimed that these could provide a screening effect as the reach stackers and telehandlers would often be in close proximity to them to achieve a further 2 dB(A) at the receptors to the west and south of the Main Site. **How would this be secured?**

5.4 Comment: Operational Sound from SRFI Activities at the Main Site:-

Whilst a +3dB penalty has been applied to the industrial noise sources to “account for features that may be readily distinctive” no description has been provided regarding what features this correction may include. BS4142 applies a range of corrections for various

features and which are cumulative. This includes a correction for any tones ranging from 0 to +6 dB, for any impulsivity ranging from 0 to +9 dB, and +3 dB for any “other acoustic character that will be distinguishable”. The amount of the correction that needs to be applied to the “specific sound source(s) being assessed depends on the perceptibility of the sound(s), but which could be as much as +18 dB if it includes any tones, impulsivity, or has any other distinguishable acoustic features that may be recognisable in the context of the receiving environment (see Section 9 of BS4142:2014 Method for Assessing and Rating Industrial and Commercial Sound).

It is implied in the report that there is some other acoustic feature is or may be present in the specific noise sources and which has not been accounted for in the +3 dB that has been applied as a cautionary approach (para 8.5.127 and 8.5.130). Consideration is given to this apparent feature but in the context the L_{Amax} criterion level recommended by the World Health Organisation to preserve sleep in respect of intermittent noise events (i.e. 60 dB L_{Amax} outside a bedroom window to achieve an internal level not exceeding 45 dB L_{Amax} assuming 15 dB attenuation provided through a partially opened window).

Whilst no maximum noise levels were predicted to exceed that WHO intermittent noise criterion for operational activities within the SRFI main site no corrections appear to have been applied for this particular feature in the predicted rating level(s) for the development and which may potentially underestimate the significance of the predicted impacts at some receptors.

For example, assuming the +3 dB correction already applied to the specific sound level is the correction recommended in the guidance for acoustic characters other than tonal or impulsivity, then a correction for impulsivity should also be applied, and which would fall somewhere between 0 to +9 dB depending on how distinguishable it will be when considered in the context of the receiving environment. No acoustic information has been provided in respect of what the current acoustic environment is like in respect of L_{Amax} levels although it is commented that the predominant noise climate is from road traffic on the M1 and also from rail freight using the West Coast Mainline and Northampton Loop (para 8.4.2). These are generally considered in WHO and BS 8233 guidance as “anonymous”, “steady continuous type noise sources that follow typical diurnal patterns See Section 7.7.2 of BS 8233:2014). However, comparison of the predicted L_{Amax} levels provided in the assessment report against the measured background sound levels indicates that these exceed the background sound levels by some margin at some locations and so would likely be at least “just perceptible” if not “perceptible” (compare results in Table 5 against background sound levels determined at the sensitive receptor locations in Table 3 & 4 in Appendix 8.8 of the Noise Assessment Report and receptor location). BS 4142:2014 recommends that for “impulsivity” feature that is just perceptible an additional +3 dB penalty should be applied, or +6 dB it is “perceptible” (Section 9 of BS4142:2014). This would increase the predicted rating levels by those amounts and consequently some of the predicted impacts would be more significant adverse and particularly for night time.

Whilst BS4142:2014 requires “context” to be taken into account, and also refers to considering criteria recommended in other guidance such as BS 8233:2014 it does not recommend that the predicted rating level and its impact assessment should be ignored but rather that both should be considered. BS 8233:2014 also recommends that BS4142 should be used for industrial noise sources affecting residential or mixed residential areas since it’s own internal ambient noise criteria are for “noise levels generally applied to steady sources such as those due to road traffic, mechanical services or continually running plant...” (see paragraph 6.5.2 and paragraph beneath Table 2 of BS 8233:2014). It also states in BS4142:2014 that “The methods described in this British Standard uses “outdoor sound levels to assess the likely effects of sound on people who might be inside or outside a

dwelling or premises used for residential purposes upon which sound is incident” (See Section 1.1 Scope of BS 4142:2014). The predicted rating level is therefore equally valid in respect of predicting impacts on people who may be inside a dwelling. Although it further states that “The standard is not intended to be applied to the derivation of indoor sound levels arising from sound levels outside, or the assessment of indoor sound levels” it does not say that its rating and assessment should be ignored but implies that it should be considered in conjunction with other guidance (see Section 1.3 , and Examples 7 and 8 in Appendix A of BS 4142:2014).

For the above reasons, I am concerned that the approach adopted in respect of assessing the L_{Amax} values for potential impulsivity characteristics of the proposed sound sources underestimates the BS4142 assessment of operational noise(s) from SRFI Main site. I am also concerned that adverse and significant adverse impacts will not be avoided for some receptor locations even with the proposed mitigation measures and there is very little opportunity for any additional measures to be provided in in this respect.

6.0 Cumulative Effects

Road Traffic Noise:-

The traffic data used in the prediction of road traffic noise for all baseline and future year scenarios includes the changes in traffic associated with all committed development and allocated sites within the Northamptonshire area (para 8.8.1). It also includes the committed infrastructure schemes and those highly likely to come forward before the forecast assessment years and the Highways England Smart Motorway Project (para 8.8.2). The cumulative road traffic noise impacts of the Proposed Development together with other defined land uses and infrastructure schemes have been assessed as part of the primary road traffic noise assessment (para 8.8.3). The assessment concludes that it is not expected to cause any adverse noise impacts or effects at existing receptors, other than from any associated increase in road traffic noise.

Proposed Rail Central SRFI:-

Rail Central (RC) is a proposed SRFI NSIP scheme located on a site directly to the west of the Northampton Gateway (NGW) site (para 8.8.5). It comments that due to the type, size and proximity of the RC scheme to the NGW, any potentially significant cumulative effects have been considered based on the currently available information (para 8.8.7).

It is commented in the report that a 2031 DS scenario that includes road traffic from the NGW and the RC proposals current at the time the traffic modelling Has carried out. This includes highway works elements from both schemes, though most significantly in terms of potential changes in road traffic noise levels, the Roade Bypass is included (PARA 8.8.9). However, the information from RC was not finalised by the time of the cumulative assessment. Therefore, the conclusions set out below should be regarded as tentative.

It predicts that in general, road traffic noise levels for the cumulative 2031 scenarios at the relevant receptors are within ± 1 dB(A) of the levels for the DS scenario without RC (para 8.8.14). Also that the cumulative 2031 DS scenarios are predicted to produce exactly the same results as the DS scenario without RC, i.e. they are indicated at R30 and R57 (para 8.8.15).

Any changes are considered to be a result of small increases in the DS road traffic noise level and largely result in negligible impacts (para 8.8.16). It is predicted that at the Roade Bypass receptor R41 Blisworth Rd N-W during the daytime period, a minor adverse impact has increased to a moderate adverse impact due to an increase of 0.6 dB(A) between the two scenarios (para 8.8.17).

Operational sound from SRFI Activities:

The RC operational sound assessment has been based on the principles of BS 4142:2014 (para 8.8.19). However, there appear to be differences in the approach adopted to identifying significant adverse effects in the RC PEIR compared with that described above for the NGW. In particular, no consideration of the absolute levels of operational sound appears to have been undertaken for the RC assessment. Consequently, the conclusions from the two assessments are not directly comparable. A number of differences between the RC and NGW assessments are commented on in the report including that rating levels from the RC development are expected to be greater than those from NGW at the two receptors by between 3 and 5 dB(A) during the day and between 4 and 6 dB(A) during the night (para 8.8.25).

Their assessment shows that the initial estimates of cumulative operational sound impact under broadly south-westerly winds are generally dominated by the RC SRFI (para 8.8.27). During the night-time in particular, potentially significant adverse impacts are initially indicated at both receptors as a result of RC SRFI operations. The cumulative rating levels would be equal to and 1 dB(A) above the lower threshold for resting inside living rooms, whilst during the night-time the cumulative rating levels would exceed the upper threshold for sleeping inside bedrooms by 1 and 2 dB(A) both situations of which indicate a potential adverse effect (para 8.8.28 & 8.8.29).

It concludes that the cumulative assessment of sound from operational activities taking place at both the Northampton Gateway and Rail Central under broadly south-westerly winds has indicated that adverse impacts and effects could occur during both the daytime and night-time period at the two shared receptor locations. In particular, the impact would be greater with the addition of RC compared with NGW operating on its own (para 8.8.30).

Comment

It is clear from this indicative assessment of cumulative impacts of both the RC and NGW development's has implications in respect of potential adverse impacts and which will need to be considered in detail with respect to the progression of these proposals since each has implications for the other.