VANGUARDIA

A BURO HAPPOLD COMPANY

Technical Note

Project	Goldthorpe - Air Quality Comments
Subject	Further Consultation Response
Project no	00052805
Date	14 October 2024

1 Introduction

This Technical Note (TN) has been prepared by Vanguardia on behalf of Equite Newlands (Goldthorpe) Ltd (the applicant) to address further comments (Ricardo ref: ED18432127) (set out in **Appendix A**) received in respect to Air Quality works undertaken for planning Ref: 2023/1105.

1.1 Planning History

An Air Quality ES Chapter was submitted in December 2023 by Vanguardia. Ricardo, on behalf of Barnsley Metropolitan Borough Council (BMBC) undertook a review of this Chapter and provided comments in May 2024 Ricardo ref: ED18432116. Vanguardia, on behalf of the applicant, submitted a Technical Note (herein referred as TN1) reply to this first round of comment in June 2024, (Vanguardia Doc ref: VC-00052805-EN-RP-0001_TN_FINAL).

Subsequent to TN1, Ricardo provided further comments (Ricardo ref: ED18432127 dated August 2024) on behalf of BMBC and prior to the submission of a second TN dated August 2024 (Vanguardia Doc ref: VC-00052805-EN-RP-0002_TN_FINAL) (herein referred to as TN2) a meeting was held between BMBC and Ricardo on 13th August 2024 to discuss both the applicant's and consultation comments. To note, further commentary of TN1 and TN2 was set out in the ES Addendum produced by Stantec (dated August 2024).

This TN (herein referred to as TN3) sets out responses (where deemed to be required) to the comments received from Ricardo (Ricardo ref: ED18432127) on behalf of BMBC on 7th October 2024.

This TN3 should be read in conjunction with the associated comments (which are set out in **Appendix A**).

2 Vanguardia Commentary

2.1 Development of Queries

The points which remained outstanding in light of TN1 but were deemed by Ricardo to have been addressed in TN2 were in respect to AQ2, AQ5, AQ9, AQ10, AQ11, AQ12, AQ13 and AQ14, as summarised below.

2.1.1 AQ2

Ricardo now agree this point and state *"it is probable that meteorological data used is appropriate and that the meteorological site is representative of meteorological conditions at the dispersion site"*.

2.1.2 AQ5

Ricardo now agree this point and state *"No more clarification is required regarding this issue, as the onus is on BMBC to use their discretion on how they would seek to reduce $PM_{2.5}$ emissions from planning applications while they await further guidance"*.

2.1.3 AQ9

Ricardo have confirmed that the mitigation agreed, subject to a S106 agreement, would be acceptable, stating *"No further work is required in relation to this issue. However, a planning condition including the use of AAC Nitrosorb and roadvent should be secured to ensure that there are no significant air quality impacts at John O Gaunts"*.

In the most recent Ricardo (Ricardo ref: ED18432127) comments it is recommended:

- *A planning condition including the use of AAC Nitrosorb and roadvent should be secured to ensure that there are no significant air quality impacts at John O Gaunts.*
- *A planning condition including the installation of roadvent near the receptors covering John O Gaunts at the minimum have been predicted should be secured to ensure that there are no significant air quality impacts.*

As set out throughout the planning consultation process the applicant's mechanism to supply mitigation would be through a Section 106 agreement. This option would allow for specific mitigation and funding of mechanical ventilation to mitigate the impacts at the *John O Gaunts* property. Any remaining financial contributions would go towards wider air quality improvement plans within the Hickleton Air Quality Management Area. As stated in Section 2.2.2 of TN2, the applicant has more than adequate funding to cover the costs of the proposed final contribution towards air quality improvements within Hickleton. The final offer will be obligated by the aforementioned Section 106 agreement and CDC can use these funds as they deem fit. It should be noted that the previous roadvent references in TN1 and TN2 were just examples of how the S106 contributions could be utilised, in line with potential measures set out in the emerging Air Quality Action Plan.

2.1.4 AQ10

Ricardo's latest comment in respect to AQ10 is set out in full below:

> *"The applicant has confirmed that non-negligible impact is expected at other receptors (R11, R22, R26 and R31) in the cumulative assessment of the original TN. Ricardo could not find slight impacts at these receptors in appendix 14.9 instead only negligible impacts were identified at these receptors. All Information provided by the applicant in response to AQ9, already states that the use of roadvent would benefit the wider Hickleton village. Therefore, if that is correct, the other receptors in the wider Hickleton village (R06, R11, R12, R22, R23, R28, R31) - where only slight adverse impacts should be expected to experience a negligible air quality impact with the implementation of the roadvent technology. Reassurance should be provided that slight impacts will range between 0.4 and 4 µg/m^3 and unlikely to result in new exceedances, with roadvent technology offering potential to offset these impacts in full."*

It is noted that Appendix 14.9 has been reviewed with respect to identifying the 'Slight' impacts. It should be clarified that the original comment was with regards to the "Review of updated modelling", which benefitted from the release of 2023 monitoring data within Hickleton. These slight impacts have arisen with the benefit of the 2023 modelling data, as set out in Table C.10 of TN1.

As set out in Table C.10 of the TN1, the 'Slight' impacts all fall within the range of 0.4 - 4 µg/m^3 and do not result in any new exceedances. It is considered therefore that no further clarification is required in respect of these points.

2.1.5 AQ11

Ricardo now agree this point and state *"it is clear from the applicant's response to AQ10 that the ventilation strategy would achieve a negligible impact at the receptors as such no further modelling studies is required"*.

2.1.6 AQ12

Ricardo now agree this point and state *"No further clarification is required concerning this issue. However, it is worth emphasizing that is considered best practice to apply the precautionary principle and assume the most conservative or worst-case results when undertaking air quality assessments"*.

2.1.7 AQ13

Ricardo now agree this point and state *"The applicant has stated that the changes in the emissions factors, meteorological data and verification factor has resulted in this change, which is plausible. Therefore, no further clarification is required in relation to this issue."*

2.1.8 AQ14

Ricardo now agree this point and state *"The applicant has reiterated the same reasons provided in response to AQ13. Therefore, no further clarification is required in relation to this issue."*

3 Conclusions

This TN3 has been produced to address the latest comments raised by Ricardo (Ricardo ref: ED18432127) on behalf of BMBC, received in October 2024. The below summarises the queries raised and the responses made in this TN3:

- AQ2, AQ5, AQ11, AQ12, AQ13 and AQ14 have all been agreed in the latest response and do not require further consideration;
- AQ4, AQ7 and AQ8 are considered covered within the response to AQ9, AQ10 and AQ11;
- AQ9 is left up to the discretion of the applicant and local authority upon the mechanism to secure the mitigation measures, but the applicant requests this is made via a S106 agreement; and
- AQ10 has been clarified within this TN3.

In line with the above, it is considered that within this TN3 all queries raised by the BMBC subconsultant are now agreed and satisfied, with the exception of AQ9 which is left up to the discretion of the applicant and local authority. It is anticipated with suitable mitigation in place the appropriate air quality standards will be met

Appendix A – Ricardo Comments

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Our reference: ED18432127

14 October 2024

Dear John,

Planning Application for Land to the south of Dearne Valley Parkway (2023/1105) – Review of Applicants' Second Response

Ricardo undertook a review of the of the Air Quality Chapters and associated appendices included within the Environmental Statements (ES) for Land to the south of Dearne Valley Parkway (Application Reference: 2023/1105) on behalf of Barnsley Metropolitan Borough Council (BMBC) on 2nd May 2024. In addition, the review also looked at the City of Doncaster Council (CDC's) response to the planning application to determine whether they have valid reasons which have led to the rejection to support the planning application.

Ricardo's review of the Air Quality ES identified eight issues and clarifications (referred to as AQ1 to AQ8) to be considered by the applicant. The applicant provided a response to this ES review in the Technical Note (TN) "*Air Quality VC-00052805-EN-RP-0001_TN_FINAL.pdf*" (hereafter referred to as the applicant's first response).

Ricardo reviewed the applicants first response in a letter dated 1st August 2024 and six (AQ9 to AQ14) additional high priority issues were identified at the end of this review.

Further to this review, the applicant and Ricardo had a meeting on 13th August 2024 to discuss how to resolve these high priority issues. The applicant has now provided an updated Technical Note "*Appendix 14.16 Air Quality Tech Note 2"* (hereafter referred to as the applicant's second response) which includes the outcome of the discussions and responses to the high priority issues.

This letter provides a review of the applicant's second response to confirm whether all outstanding issues have been suitably addressed.

Review of Applicants' Second Response

AQ2

Ricardo raised a query for the applicant to "*provide justification for using the meteorological site Emley Moor meteorological station and that no justification was provided on why the site is considered representative of the meteorological conditions at the dispersion site, such as the distance away from the site, the height above sea level and any other parameters that can help justify that the meteorological site is representative of the dispersion site*." The applicant confirmed that the meteorological site is 26.9 km from the dispersion site and 268 m above sea level with a data capture between 92.8% and 93.6%. No other details on the terrain, surface roughness or general wind speed for the meteorological site compared to the dispersion site has been provided to justify the representativeness. However, this is

a low to medium priority issue and a model verification exercise has been undertaken to ensure that the modelling results replicate monitored results as much as possible. Furthermore, the data capture is also over the recommendation in the LAQM.TG(22) value of 85% and the site is a reasonable distance away from the dispersion site, as such it is probable that meteorological data used is appropriate and that the meteorological site is representative of meteorological conditions at the dispersion site.

AQ5

Ricardo raised a query for the applicant to take into consideration the stringent $PM_{2.5}$ target of 10 µg/m^3. The applicant stated that " *the $PM_{2.5}$ targets are central government targets primarily focusing on tackling emissions, rather than requiring local authorities to assess concentrations against these new PM2.5 targets. In March 2023, the Department or Levelling Up Housing and Communities write to all Chief Planning Officers in England advising that guidance was progressing on how these targets should be integrated into the planning system but that until such guidance is published local authorities should continue to assess local air quality impacts in accordance with existing guidance. It is thus not appropriate to consider these new targets until such guidance has been published which at this time it is understood this guidance has not been released*."

In response Ricardo stated that, "*the proposed guidance referred to by the applicant is expected to be specific to local authorities assessing whether they would meet the $PM_{2.5}$ targets based on the assessment of indiviudal projects in the LA. Furthermore, it is important that the impact of a new scheme is considered in the context of whether it will be detrimental to the LA meeting these new $PM_{2.5}$ targets. Air quality professionals have the expertise to make this judgement based on the modelled concentrations. However, given that this is a future target, the LA has the discretion to decide if this should be considered for this and any upcoming planning applications*."

Further to our discussions regarding this issue on the 13th of August 2024, the applicant has further emphasised that although local authorities are expected to use their powers to control $PM_{2.5}$ emissions, the duty is placed on the Secretary of State to comply with the target. No more clarification is required regarding this issue, as the onus is on BMBC to use their discretion on how they would seek to reduce $PM_{2.5}$ emissions from planning applications while they await further guidance.

AQ4, AQ7 and AQ8

Ricardo raised the following queries:

- *"The applicant should undertake further modelling studies of the proposed mitigation measures to **confirm that the impacts would become "negligible**". It is recommended that the ecological assessment of air quality impact's is reviewed by Barnsley's Ecologist to confirm an adequate assessment has been undertaken (AQ4).*
- *The applicant should undertake further modelling studies of the proposed mitigation measures to confirm that **cumulative impacts** would be negligible (AQ7).*
- *The applicant should conduct a more robust study of the effects of mitigation measures and then provide an overall **significance of the impact** of the development based on the outcome of this study (AQ8)."*

The applicant has responded in their latest response that these issues have been addressed in an EIA Addendum produced by Stantec. This document has not been reviewed. However, Ricardo already stated in their last response on 1st August 2024 that to resolve the high priority issues **AQ4, AQ7** and **AQ8**, the following additional recommendations **AQ9, AQ10** and **AQ11** were made. The applicant has provided a response to these additional recommendations, and a review of their response is detailed below**.**

AQ9

Ricardo raised a query for the applicant to "*provide the specification of the mechanical ventilation, its maintenance routine and the improvement in air quality expected from the mechanical ventilation device. Where this air quality improvement reveals that air quality impact would be reduced to a negligible impact, then no further work is required*".

The applicant has confirmed that mitigation would be agreed which would be subject to an S106 agreement. The mitigation would include the use of the AAC Nitrosorb filtration technology which would achieve a 75.4% reduction in the modelled concentrations at John O Gaunts, reducing this to a value of 15 µg/m^3 to 16.4 µg/m^3 during the construction and operational phase, respectively. This measure is specific to only John O Gaunts. However, in addition to this, the applicant has proposed the implementation of roadvent technology which would benefit the wider Hickleton village and this would reduce road NOx concentration by 72 to 91%. If these measures achieve the NO_2 or NOx reduction which have been suggested in practice, air quality impacts is expected to become negligible at John O Gaunts (i.e. at R29 and R30 where a substantial adverse impact was predicted).

Furthermore, the applicant has confirmed that monies will be made available for the installation of the AAC Nitrosorb and its maintenance for 10 years, at which time the location is expected to comply with the air quality objectives. Therefore, no further work is required in relation to this issue. However, a planning condition including the use of AAC Nitrosorb and roadvent should be secured to ensure that there are no significant air quality impacts at John O Gaunts.

AQ10

Ricardo raised a query for the applicant to "*confirm that there are no other receptors apart from John O Gaunts (R29 and R30) where non-negligible (i.e., slight, moderate or substantial adverse impacts) would occur. If there are, the proposed mitigation measures should also be applied to these receptors*."

The applicant has confirmed that non-negligible impact is expected at other receptors (R11, R22, R26 and R31) in the cumulative assessment of the original TN. Ricardo could not find slight impacts at these receptors in appendix 14.9 instead only negligible impacts were identified at these receptors. All Information provided by the applicant in response to AQ9, already states that the use of roadvent would benefit the wider Hickleton village. Therefore, if that is correct, the other receptors in the wider Hickleton village (R06, R11, R12, R22, R23, R28, R31) - where only slight adverse impacts should be expected to experience a negligible air quality impact with the implementation of the roadvent technology. Reassurance should be provided that slight impacts will range between 0.4 and 4 $\mu g/m^3$ and unlikely to result in new exceedances, with roadvent technology offering potential to offset these impacts in full.

AQ11

Ricardo raised a query for the applicant as follows "*Where the ventilation strategy is unable to achieve the appropriate reduction to achieve a negligible air quality impact, then further modelling studies should be undertaken based on traffic estimates of the proposed bypass and junction improvements to predict the air quality improvement from this additional mitigation*".

The applicant stated that an EIA Addendum was prepared by Stantec which addresses this issue, but this report has not been provided. Nevertheless, it is clear from the applicant's response to AQ10 that the ventilation strategy would achive a negligible impact at the receptors as such no further modelling studies is required.

AQ12

Ricardo raised a query for the applicant to "*provide a commentary on why the updated 2023 model is performing significantly worse than the original model at kerbside sites*".

The applicant stated that the change in the modelled results was due to the relocation of one of the diffusion tubes used for the model verification from within a canyon to outside a canyon, which is plausible. This has resulted in a change in the modelled concentrations and the number of receptors where a non-negligible impact is predicted.

No further clarification is required concerning this issue. However, it is worth emphasizing that is considered best practice to apply the precautionary principle and assume the most conservative or worst-case results when undertaking air quality assessments.

AQ13

Ricardo raised a query for the applicant to provide "*an explanation why predicted baseline concentrations in 2026 are significantly lower using the updated model compared to the previous modelling*."

The applicant has stated that the changes in the emissions factors, meteorological data and verification factor has resulted in this change, which is plausible. Therefore, no further clarification is required in relation to this issue.

AQ14

Ricardo raised a query for the applicant to provide "*confirm why the predicted change at the majority of sensitive receptors in the domain is significantly lower in the 2023 model than in the 2022 model. These changes affect the impact descriptor as per the significance assessment methodology outlined in the report.*"

The applicant has reiterated the same reasons provided in response to AQ13. Therefore, no further clarification is required in relation to this issue.

Conclusions

It is considered that the applicant's Technical Note (Appendix 14.16 Air Quality Tech Note 2) provides responses to all the outstanding issues. However, to ensure that the air quality impact is negligible at receptors in Hickleton, the following planning conditions should be set subject to S106 agreement.

- A planning condition including the use of AAC Nitrosord and roadvent should be secured to ensure that there are no significant air quality impacts at John O Gaunts.
- A planning condition including the installation of roadvent near the receptors covering John O Gaunts at the minimum have been predicted should be secured to ensure that there are no significant air quality impacts.

Yours sincerely,

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