Consultation Response from: KC Environmental Health (Pollution & Noise Control)		
2021/93689 Land to the south of, Ravensthorpe Road / Lees Hall Road, Dewsbury		
Hybrid application for full planning permission for engineering works, drainage and utilities connection for the provision of site access from Forge Lane and Ravensthorpe Road and associated works; and for outline permission for erection of residential development and mixed use development (including community facilities) with associated works including the provision of internal estate roads and parking, landscape works (including provision of public open space, tree clearance/replacement/woodland management and ecological management) and sustainable urban drainage works drainage principles		
Date Responded: **2nd February 2022**	**Responding Officer:** **Rebecca Muff – Air Quality** **Natalie Heaney – Contaminated Land** **Mohammed Nasim - Noise**	**Responding Ref:** **WK/202134212**

The application is for a mixed-use development with up to 350 dwellings including community facilities and associated works. The site forms the first phase of the Dewsbury Riverside allocation (Local Plan ref: HS61) which has been identified by the Council to deliver 4,000 homes alongside supporting physical and community infrastructure. The site is located approximately 2 miles from Dewsbury Town Centre and forms the north-western part of the Dewsbury Riverside Housing allocation. The site extends to circa 30ha and comprises agricultural land, woodland, Ravensthorpe Road Allotments, and Masjid Abubakr Mosque and Lees Hall Playgroup.

The Site is bound to the north-east by residential development along Ravensthorpe Road and to the north-west by the Huddersfield Railway Line. The surrounding residential development is mainly comprised of two storey semi-detached or terraced dwellings. Dewsbury District Golf Club and residential properties on Sands Lane are located to the west, and agricultural land extends from the southern boundary of the Site.

Air Quality

An Air Quality Assessment by Buro Happold (ref: 048206-BHE-XX-XX-RP-AQ-0001) (dated: 27th September 2021) has been submitted in support of the application. The majority of the site currently comprises of vacant agricultural land and a woodland area. The site is located approximately 600m from one of Kirklees Councils Air Quality Management Areas (AQMA 2).

The assessment details the impact the development will have on existing air quality, and how this will impact existing and future sensitive receptors by considering dust emissions during the construction phase and air pollution from the additional traffic travelling to and from the site during both the construction and operational phases. The pollutants modelled were nitrogen dioxides (NO_2) and particulate matter (PM_{10}). Particulate matter is a complex mixture of extremely small particles and liquid droplets and is classified according to size. PM_{10} being particulate matter less than 10µm (micrometres) in diameter, and $PM_{2.5}$ being particulate matter less than 2.5µm in diameter. The assessment uses techniques detailed in Local Air Quality Management Technical Guidance (LAQM) (TG) 16, and the Institute of Air Quality Management (IAQM) Technical Guidance.

Construction Phase

For the construction phase a qualitative assessment of fugitive dust emissions, caused by demolition, earthworks, construction and track out, as well as emissions from construction site traffic was undertaken. This was done in accordance with the Institute of Air Quality Management (IAQM) Guidance on the Assessment of Dust from Demolition and Construction v1.1.(2014) to identify the dust emission magnitude of the construction phase and the risk of impact at sensitive receptor locations within 350m of the site boundary.

It is predicted that during the peak construction year of development (2023), construction traffic would increase to 348 Annual Average Daily Traffic (AADT) on the proposed access road opposite Forge Lane. Therefore, construction traffic emissions were modelled for all pollutants (NO_2, PM_{10} and $PM_{2.5}$) at receptors on Ravensthorpe Road, a key construction site route. The results indicated that given the low pollutant concentrations in this area the magnitude of increase was below the level of significance set out in the IAQM guidance and is predicted to be negligible at all receptors.

The report concluded that there is a high risk of fugitive dust emissions and a low risk of human health impact due to construction site activities. However, it goes on to say that the risk can be reduced by the implementation of good practice dust control mitigation. It recommends that these are to be implemented within a Construction Environmental Management Plan (CEMP). The mitigation measures to be considered for the inclusion in the (CEMP) are outlined in Section 6.1 of the assessment titled *Construction*.

Operational Phase

Dispersion modelling was undertaken using ADMS-Roads (v5) to determine the changes in pollutant concentrations at 97 sensitive receptor locations. The receptor locations were chosen as being in the vicinity of road links likely to be most affected by changes in traffic flows because of the development.

The assessment considers existing traffic flows on the road network, future year traffic increases from cumulative schemes and the predicted change in future traffic flows and patterns as a result of the proposed development. Traffic data supplied by the transport consultants for the scheme was used in the model to predict changes in Nitrogen Dioxide (NO_2), and particulate matter (PM_{10} and $PM_{2.5}$) concentrations from traffic emissions. Monitored data supplied by Kirklees Council and background concentrations supplied by Defra were also used in the assessment. The model predicted pollutant concentrations at sensitive receptor locations based on the following scenarios as follows:

- 2019 Existing Baseline (to establish existing baseline conditions and for model verification)
- 2023 Peak Construction Year Do Nothing (traffic flows for the peak construction year including committed development)
- 2023 Peak Construction Year Do Something (traffic flows for the peak construction year including committed development with flows associated with the construction vehicles manually assigned to the Do Nothing Scenario by the appointed transport consultant
- 2030 Opening Year Do Nothing; traffic flows for the opening year (including committed development)

- 2030 Opening Year Do Something; traffic flows for the opening year (including committed development with flows associated with the full operation of the proposed development).

The year 2019 was used as the baseline year, and the model was verified using, traffic data, meteorological data and monitoring results from this year. The 2019 baseline year was used to represent the opening year as a worst-case scenario as it is predicted that air quality will improve in future years due to changes in vehicle technology.

For the operational phase the report concludes that the proposed development will lead to an increase in traffic on the local road network. The model results indicate that concentrations of all pollutants modelled (NO_2, PM_{10} and $PM_{2.5}$) at all receptors are expected to marginally increase as a result of the increased traffic due to the development. Except for receptor 11(adjacent to Forge Lane Junction) which is predicted to have the highest increase in annual mean NO_2 concentrations for the opening year of 2023. The NO_2 concentrations at this location are predicted to increase by 4.91 µg/m^3, from 15.44 µg/m^3 (2019) to 20.35 µg/m^3 (2023). Which in accordance with the IAQM guidance is indicative of a moderate adverse impact because the percentage change is above 10% of the baseline year. Despite this it is still well below the National Air Quality Objective (NAQO) for NO_2 which is 40µg/m^3.

In conclusion all the modelled pollutant concentrations at all sensitive receptors are predicted to be well below National Air Quality Objectives and given that existing monitored pollutant concentrations near to this location are low, the magnitude of change overall is not significant and predicted to be negligible. This is based on *Land-use Planning & Development Control: Planning for Air Quality Guidance by Environmental Protection UK (EPUK) and the Institute of Air Quality Management January 2017*. This guidance is used to compare the percentage long term average concentration at the receptor locations in the assessment year against the air quality objectives, and grades the overall impact as being negligible, slight, moderate or substantial as seen in the table 6.3 below.

Table 6.3: Impact descriptors for individual receptors.

Long term average Concentration at receptor in assessment year	% Change in concentration relative to Air Quality Assessment Level (AQAL)			
	1	2-5	6-10	>10
75% or less of AQAL	Negligible	Negligible	Slight	Moderate
76-94% of AQAL	Negligible	Slight	Moderate	Moderate
95-102% of AQAL	Slight	Moderate	Moderate	Substantial
103-109% of AQAL	Moderate	Moderate	Substantial	Substantial
110% or more of AQAL	Moderate	Substantial	Substantial	Substantial

Explanation

1. AQAL = Air Quality Assessment Level, which may be an air quality objective, EU limit or target value, or an Environment Agency 'Environmental Assessment Level (EAL)'.

Damage Cost Calculation

In accordance with the West Yorkshire Low Emission Strategy (WYLES) - Technical Planning Guidance a damage cost calculation has been undertaken to determine the amount (value) of mitigation required to offset the detrimental impact that the development will have on air quality. The calculation was undertaken in accordance with DEFRA guidance current at the

time of writing and provides a five-year exposure value to the sum of £126,753. This is the recommended figure which should be spent on measures to mitigate the impact of the development. The report goes on to say that mitigation measures should be confirmed, and agreed with the Local Authority, during the detailed design stage. Recommended mitigation measures are listed in Section 6.3 of the report titled Emissions Mitigation Assessment – Damage Costs and include amongst others the following:

- Provision of Electric Vehicle (EV) charging points
- Zero emission heating plant
- Car club provision
- Alternative forms of transport

Comment
We agree with the approach and general methodology of the report. The damage costs equate to the sum of £126,753 and a list of recommended mitigation measures have been provided. However, for anything to be considered as acceptable as part of the approved low emission mitigation measures it must be something in addition to what is normally provided at a development and is not otherwise required. For example, the costs of providing footpaths and standard electric vehicle charging points would not be accepted as part of the costed mitigation measures.

A condition will therefore be necessary requiring the detailed proposals for low emission mitigation measures to the value of the cost damages as cited in the report.

Contaminated Land
The application seeks permission for 350 properties. As such, the site is classified as a major development. The site has also been identified on our mapping system as potentially contaminated land (site reference 48/11 and 53/11). Several other potentially contaminated sites are adjacent to the site of interest. For these reasons, contaminated land conditions must be considered for the site.

The following documents, authored by Lithos, have been submitted in support of the planning application:

1. Preliminary Geoenvironmental Investigation, dated September 2021 (ref: 3901/1A)
2. Geoenvironmental Investigation Appraisal, dated July 2021 (ref: 3901/2A)
3. Remediation Strategy, dated August 2021 (ref: 3901/3)

The report includes geotechnical information, which is outside the remit of Environmental Health, this consultation response therefore only relates to the land contamination aspects of the report.

Preliminary Geoenvironmental Investigation (ref: 3901/1A)
Preliminary Geoenvironmental Investigation report (ref: 3901/1A) details that on November 24, 2020, a site walkover took place. The entire site area is 30.3 hectares, although this includes 9.1 hectares of land (Ravenshall School, Lady Wood, and Lady Wood Extension) that will not be developed. The vast majority of the remaining 21.2ha is greenfield (arable farmland), with a small area of allotments (1.1ha) and a nursery car park (0.15ha) towards the northeast. Because the new Spine Road is expected to pass through the allotments and the

nursery car park, no new construction is expected in the northeast.

The report continues to provide information about site history and previous surrounding land uses, since the 1800s. These include but are not limited to slag heaps and refuse tips, and areas of former opencast coal extraction. Other features associated with historical coal mining, such as mine entries, are also identified as potentially present onsite. The report continues to detail a fieldwork investigation to determine the ground conditions at the site.

Geoenvironmental Investigation Appraisal (ref: 3901/2A)
Fieldwork was carried out on the 4th and the 21st of January 2021. Lithos has combined the findings from a previous study they undertook on part of the site in 2017 with the findings from the most recent fieldwork. Shallow and potentially combustible coal was identified, and seven shallow coal seams were encountered. A portion of the soil samples analysed were confirmed to contain concentrations of contaminants above the assessment criteria for residential development. As such the report concluded that contamination has been identified in the northeast (vicinity of the allotments and nursery car park).

In addition to the soil analysis, an initial assessment of the ground gas regime has been provided from 6 monitoring visits completed over 3 months. No methane was detected throughout the monitoring visits. However, the peak concentration of carbon dioxide was 5.0% v/v and the peak flow rate was 4.0 l/h. In addition, the oxygen was depleted in several monitoring wells which correspond with identified workings in the centre of the site. The report advises that gas protection will be necessary at the development however ground gas monitoring is still ongoing to establish the sites ground gas regime.

The report concludes that remediation is necessary however, first it is recommended that further works are completed to '*reduce uncertainties'*. In Section 18.10 several additional works are detailed these include but are not limited to, further trial pits to locate the former sandstone quarry in the centre of the site and bio-accessibility testing for arsenic in topsoil from the main development area and additional rotary probe holes.

Remediation Strategy (ref: 3901/3)
A remediation strategy has also been submitted. The remediation strategy details that in addition to a supplementary ground investigation, clearance, crushing and excavation activities will then be required. Clean cover and gas protection measures are also necessary.

The report advises that prior to replacement, soils will be excavated and screened. Contaminants will be assumed to be present in any stockpile of made ground. The allotment topsoil identified as unsuitable for re-use and will be stored separately from the rest of the topsoil. The material will be stored until further testing determines its suitability for re-use, or until it can be placed in garden areas and/or public open spaces directly beneath a 600mm layer of clean soil but no more than 1m of soil overlain. Excavated made ground soils from the allotment and car park areas shall be stockpiled separately until isolation beneath hardstanding or at least 600mm of clean cover, which will include 450mm of 'clean' subsoil and at least 150mm of topsoil.

In terms of crushing activities, existing hardstanding or underground obstructions will be crushed and retained in stockpiles. A minimum of three samples will be taken from any stockpile of specific crushed product (or 1 sample per 500m^3, whichever is greater) and sent

for laboratory analysis. After that, the excavations will be backfilled with site-won (if suitable) or imported materials. The report also advises that imported topsoil will be subject to testing to confirm its suitability for use. Meanwhile, any excavation arisings that are unsuitable for retention and re-use on site will be placed in temporary stockpiles on hardstand or polythene sheeting to minimise the potential for dust/odour nuisance and prevent surface water run-off, before export to landfill.

The report anticipates that possibly all the shallow coal will be removed during the preparatory earth works. However, where coal is recorded within the uppermost 1m or so then an inspection pit will be excavated in the rear garden and the report suggest further advise is sought from Lithos.

In terms of hazardous gas protection, the report acknowledges that gas monitoring is ongoing and a full gas risk assessment '*cannot be undertaken with the limited data available'*. The report anticipates that part of the site with fall within Amber 1 or Amber 2 classification. The gas protection measures to be installed will then require verification.

Information is also provided about the treatment of mine entries and shallow coal workings. However, it is unclear in the report if and how this will impact the ground gas regime.

Contaminated Land Summary
Overall, the Phase 1 report (ref: 3901/1A) identified the potential for contamination at the site due to the sites former use/s including but not limited to, tipping activities and further work was recommended. The Phase 2 report (ref: 3901/2A) confirmed that remediation will be necessary however the report considers the site characterisation to be incomplete and recommends additional work. A remediation strategy has been submitted (ref: 3901/3) that advises that remediation is necessary however, in line with the advice provided in the Phase 2 report, additional works are necessary before remediation can begin.

Comments
From the findings to date, contaminated land does not appear to significantly limit the ability to develop the site. We agree and accept the Phase 1 report (ref: 3901/1A) and the findings to date presented in the Phase 2 report (ref: 3901/2A).

Whilst the information presented in the Remediation Strategy (ref: 3901/3) is acceptable, it is unclear how we can accept a remediation strategy in light of an incomplete site assessment as a large amount of works are still necessary.

As the gas assessment remains incomplete and the reports have identified that a greater number of samples is required to reduce uncertainness, we first require an addendum report. This must detail the findings from the supplementary investigation and confirm the remediation strategy. For these reasons, contaminated land conditions are necessary and must apply from the intrusive investigation and the subsequent stages of development (remediation and validation).

Noise
The applicant has submitted a Noise and Vibration Impact Assessment authored by Vanguardia dated 29 September 2021 Ref VC-103588-EN-RP-0001. The assessment considers the potential noise effects of the proposed development from the construction and

completed development phases on nearby noise sensitive receptors. The vibration effects associated with the construction phase have also been assessed.

Para 4.2 makes reference to the nearest noise sensitive receptors which have been used in the assessment of the likely effects of noise and they are listed in Table 2 (below) and shown in Figure 2.

Receptor	Noise Receptor Type	Description
R1	C & T	Dwellings on Ravensthorpe Road
R2	C & T	Ravenshall School
R3	C & T	Dwellings on Ouzewell Lane
R4	C & T	Isolated Farm House south of site
R5	C	'Five Arches' on Sands Lane
R6	C	410 Lees Hall Road
R7	T	535 Lees Hall Road
C = Construction T=Traffic		

Receptor R6 has been selected primarily to assess the effect of the proposed demolition works at the neighbouring Abu Bakr Mosque and Lees Hall Playgroup building. Receptor R7 is located on the corner of Forge Lane and Lees Hall Road, and has been selected, as the only residential receptor on Forge Lane, to assess the effect of road traffic noise on that road link.

Construction Noise Assessment

Para 4.5 states a construction contractor has not yet been assigned to the Project, and therefore no detailed information regarding the construction works associated with the proposed development is available. However, Noise associated with the construction phase has been assessed using the guidance given in BS 5228-1, which provides methods for predicting and assessing noise from construction sites.

The main construction activities associated with the Proposed Development are-

- Demolition
- Site preparation
- Piling
- Foundations and concreting
- General building activities

There is only a small amount of demolition work required for the removal of the Abu Bakr Mosque and Lees Hall Playgroup building, located in the north-east corner of the site. There is expected to be a significant amount of earth works involved in the preparation of the site, largely concentrated in the areas set aside for residential development and new roads. While it is expected that the majority of the dwellings will be constructed on traditional strip footings, it is noted that some plots may require alternative piled foundations following earthworks regrade, where this results in fill depths greater than c2.5m. It has been assumed that, where it found that this is required, it would be achieved through rotary/continuous flight auger (CFA) piling methods which also has the advantage of minimising levels of vibration.

For demolition, the closest point will be the nearest facade to the Mosque and Playgroup

building. Equipment for all other phases has been located at the closest point within the site area assigned to road and/or residential use, with the exception of site preparation which has been assumed will take place at any point within the red line boundary, and therefore equipment items have been placed at the closest point on the boundary to the respective receptor.

As the location of construction equipment haul roads within the site have not yet been defined, it has therefore been assumed that the main haul route will follow the route of the Forge Lane access road to access the site, before turning into the central area of the site set aside for residential development and new roads.

In order to provide a robust, worst-case assessment, it has been assumed that all equipment items associated with each phase could, at some point, be operating simultaneously at the closest point to a given receptor.

Para's 4.18 to 4.21 address the vibration through the construction phase. The Prediction of ground-borne vibration associated with the construction phase of the Proposed Development has been undertaken using the methodologies given in BS 5228-2. The need for piling activities has not been confirmed, and if required it is expected that rotary/CFA piling method would be used, which is not anticipated to result in significant levels of vibration. The primary source of vibration is therefore expected to be use of vibratory rollers for ground compaction.

Para 4.22 states that the noise effects associated with the completed development are expected to be limited to the noise produced by changes in traffic Noise effects associated with the completed development are expected to be limited to the noise produced by changes in traffic.

The community aspect of the development forms part of the outline application and no detailed designs have been proposed. For the purposes of this assessment it has been assumed the community facilities comprise the same scale and type of development as the Mosque and playgroup buildings being removed. In that instance, it is considered that the net effect on noise would be negligible. Where alternative proposals are put forward for that area, further assessment would be required.

Noise from any potential changes in road traffic has been predicted using the methodology described within the Calculation of Road Traffic Noise (CRTN) memorandum which is the standard method of traffic noise prediction used in the UK.

Section 5 looks at the significance of the effects of noise and table 3 gives the threshold values for construction noise for the Lowest Observed Adverse Effect Level (LOAEL) and Significant Observed Adverse Effect Level (SOAEL) during the relevant time periods (Day, Evening & Night). The threshold values are expected to occur if the programme of works indicates that the relevant threshold values are likely to be exceeded over a period of at least one month. Adverse effects are only considered to be significant where the predicted noise level exceeds the SOAEL, for a period of at least one month.

The significance of construction traffic noise effects has been determined using the thresholds set out in Table 4 which are based on the guidance in Table 3.17 of the Design Manual for Roads and Bridges (DMRB LA111). The note in Table 4 states that construction traffic noise

shall constitute a significant effect where it is determined that a major or moderate magnitude of impact will occur for a duration exceeding -

a) 10 or more days or nights in any 15 consecutive days or nights
b) A total number of days exceeding 40 in any 6 consecutive months.

Although only used for noise, the same principles of LOAEL and SOAEL have been applied when assessing the vibration impact and effect and Table 5 sets out the construction vibration exposure thresholds based on the guidance within Annex B of BS 5228-2:2009+A1:2014. The guidance states that the SOAEL level of exposure can be tolerated by those affected if prior warning and explanation has been given. It goes on to state that a level of 10 mm/s is unlikely to be tolerable in most buildings for any more than a very brief exposure.

It is expected that noise effects associated with the completed development will be limited to noise associated with increased road traffic flows, assuming the community use allocation in the north-east corner of the site is set aside for a development of the same type and scale as the existing Mosque and playgroup buildings. The noise exposure thresholds are set out in Table 6 and have been derived from the effect that road traffic noise can have on those affected. The report continues to look at whether the LOAEL threshold is exceeded and the magnitude of impact from negligible (Up to 0.9dB) through to major (5dB and over) should it be so. If the result for any receptor falls in the categories shown by the shaded boxes in table 7 (1dB to 5dB and over), then that indicates that the property is regarded as experiencing a significant adverse effect with respect to Government policy due to an increase in road traffic noise. Table 8 applies the same principles but for the night-time period.

Section 6 looks at the baseline conditions and states that the existing noise environment at the receptor locations has been characterised by way of a baseline noise survey which was undertaken between the 31st of August and the 2nd of September (no year given), and comprised a combination of long-term unattended measurements and short term attended samples. The primary purpose of the survey was to determine the existing levels of road traffic noise affecting the local receptors.

Figure 3 shows the measurement locations used for the baseline survey. Position L2 was used to characterise the baseline noise environment at Ravenshall School and at the rear gardens of the properties along Ravenshall Road and position L6 was used to determine existing noise levels in the vicinity of the new dwellings proposed as part of the Dewsbury Riverside development, in order to assess the suitability of the site for residential development. The baseline figures are shown in table 9 using $L_{10,18hr}$ and $L_{Aeq,16hr}$ parameters.

Para's 6.7 and 6.8 look at future baseline levels and state that the evolution of noise within and around the proposed Dewsbury Riverside development site is very likely to continue to be governed by changes in the current dominant sources of noise i.e. road traffic. The evolution of the baseline road traffic noise has been determined through calculation based on the prediction methodology given in CRTN, and on road traffic forecasts for future baseline assessment years provided by the Project's traffic consultant.

Section 7 assesses the construction and at para 7.1 states unmitigated noise predictions have been undertaken and unmitigated noise effects have been identified for each task. It has been assumed that all equipment items associated with each respective activity are in operation at

the closest realistic point to each receptor. Table 10 presents the results of the construction noise assessment for each of the tasks individually and Table 11 presents the levels from each task cumulatively with the haul road noise with each table providing an indication as to whether the predicted noise levels exceed the respective LOAEL or SOEAL. The potential for a significant adverse effect has therefore been assessed against the daytime threshold values given in Table 3.

The majority of construction activities produce noise levels below LOAEL at all receptor locations. Site preparation works at the Ravensthorpe Road receptors that back on to the site boundary, and demolition works at the property neighbouring the Masjid Abu Bakr Mosque and Lees Hall Playgroup building being demolished are predicted to have the potential to produce noise levels that are in excess of the SOAEL. This is due to the proximity of the site boundary to the rear gardens of those properties. The highest noise levels associated with site preparation works at the Ravensthorpe Road receptors occur when the works are taking place immediately adjacent to the rear gardens of those properties. While some earth works may take place at that location, in reality, the bulk of the site preparation works will be concentrated around the areas set aside for residential development. When the works are at that location, noise levels are at least 12dB lower at the Ravensthorpe Road properties than the figures shown in Table 10, and below the SOAEL. It notes that the noise levels given in Table 10 are based on all the equipment associated with the respective activity operating simultaneously at the closest point to the receptors.

Para 7.11 states, there are a number of instances where there is potential for noise levels, in a worst-case, exceed the LOAEL (but not the SOAEL) (as indicated in Table 10). The guidance confirms that adverse effects between LOAEL and SOAEL should be mitigated and reduced to a minimum and it is anticipated that any adverse effects in these cases can be suitably mitigated through the application of general good practice.

Para 7.17 states an initial screening exercise was carried out using the traffic data supplied by the Project's traffic consultant and from the screening exercise, it was found that on all road links assessed, the % increase in HGV composition is expected to be much less than 1% and is therefore not expected to produce an increase in noise level in excess of 1 dB. It is therefore considered that any adverse effects associated with construction traffic noise will be negligible at all receptors.

Para 7.18 states the most significant source of vibration being introduced to the environment during construction will be from the vibratory rollers used for ground compaction. An assessment of vibration levels arising from ground compaction has been undertaken and based on worst-case assumptions, according to the prediction methodologies given in BS 5528-2, with a 95% probability, the vibratory compaction will not produce levels of vibration at or above a level likely to cause significant adverse effects beyond a distance of approximately 70m from the vibratory roller.

The majority of receptors are significantly further than 70m away from the areas of the proposed development site in which vibratory compaction is likely to occur. The exception to this are the receptors on Ravensthorpe Road. Ground compaction by vibratory roller may take place as close as 55m to the Ravensthorpe Road receptors during the works to construct the site access roads and so an assessment of the vibration levels likely to be produced by vibratory rollers at R1 has been undertaken using the method described in Annex E of BS

5228-2 with the results presented in Table 12.

The levels in the table are based on the worst-case assumptions and only apply to the point at which the vibratory roller is closest to the receptor. Therefore, the period of time for which there is any chance of the SOAEL being exceeded is extremely limited if those levels of vibration occur at all. It should be noted that, while the levels of vibration indicated in the table that exceed the SOAEL are likely to be perceptible, they are significantly below the level at which there is any potential for damage to buildings.

At para 8.5, the report states an initial screening exercise was carried out using the traffic data supplied by the project's traffic consultant to look at the traffic effects of the completed development. From the screening exercise, it was found that only 1 of the links included in the traffic assessment (Forge Lane) was subject to changes in traffic flow likely to produce an increase in noise levels in excess of 1dB. A detailed assessment of the noise levels associated with changes to traffic flows along this road link was therefore carried out to assess the likely impact at the property on the corner of Forge Lane and Lees Hall Road (R7).

Tables 13-16 present the results of the completed development traffic assessment for changes in traffic flow on existing roads and tables 17-18 present the result relating to the new roads being introduced as part of the proposed development. On these roads, the night time traffic flows are significantly below lower limit of the CRTN calculation method, and therefore specific noise levels have not been calculated. Similarly, the forecast daytime traffic flow on the new development road that will run behind the Ravensthorpe Road receptors is also significantly below lower limit of the CRTN calculation method. In these cases, due to the low traffic flows involved, it is considered that the resulting effect from noise will be negligible.

The predicted daytime impacts show that at all residential receptors, the increased road traffic noise on existing roads due to the Proposed Development will have a negligible impact for both opening year and future year scenarios. The night-time assessment indicates that, at all residential receptors, the proposed development will have a minor impact for opening year, and a negligible impact for the future year scenario.

Noise levels on new roads being introduced as part of the proposed development are not expected to exceed the SOAEL at any receptor but may marginally exceed the LOAEL at receptors R2 and R4 for both the opening year and future year scenarios. However, in the case of the opening year scenario, and the future year scenario at receptor R2, given the excess above the existing baseline is relatively small (<5dB), only a minor impact is expected. For the opening scenario at receptor R4 (the isolated Farm House to south of the development site) the excess above the existing baseline is marginally over the 5 dB threshold, indicating a moderate impact may occur. This is based on road traffic flow on the proposed road egressing the development site to the south-west. As previously noted, no specific traffic data was supplied for this road and the assessment has been based on the worst-case assumption that all the traffic leading off Forge Lane will continue onto the south-west egress road. In reality, some of that traffic will likely go into the development itself, and so the traffic flow and associated noise levels will likely be lower than stated in the table. Furthermore, it is noted that the moderate effect is only temporary in nature with the traffic data indicating that this will reduce to a minor adverse effect under the 'future do something' scenario. Therefore, taking account of the fact that, as a worst case, the assessment predicts only a 1dB excess above the LOAEL at a single isolated property, it is considered that the

existence of a temporary moderate adverse effect should not be a barrier to the development, and further mitigation is not required.

Section 9 looks at mitigation measures and at para 9.1, it states that under the assumed absolute worst-case assessment presented previously, the potential for a significant adverse effect due to construction noise has been identified from site preparation activities at the Ravensthorpe Road receptors, and therefore some form of mitigation to reduce potential impacts at receptor locations may be required.

As the construction method is not finalised at this outline stage, detailed mitigation measures that follow the principles discussed in this report will be provided. However, as an example of what may be achieved, erection of close board type hoarding around the site perimeter would reduce the noise levels up to 10dB below those levels indicated in Table 10 (assuming it would be possible to block line of sight between the sources of noise and the receptors) which would be enough to reduce the effect below the SOAEL.

Para 9.4 states In order to identify where specific mitigation is required, a Construction Environmental Management Plan (CEMP) will be issued which will define the measures necessary to control various potential adverse effects during the construction programme.

Regarding any monitoring regime that may be required to manage noise levels generated during the works, typically noise and vibration monitoring stations are installed in locations representative of the nearest noise sensitive receptors that are likely to experience significant adverse impacts (i.e. a review of the works activities would be under taken in advance to identify key noise generating activities relative to sensitive receptors). These monitoring stations have the ability to send alerts to site managers if noise levels are likely to exceed a pre-agreed noise limit based on current activity. If an alert is received the site manager would review the activities taking place on site and where appropriate stop all working and identify whether quieter working methods can be adopted or other mitigation employed to assist in the reduction of noise or vibration emissions. Construction noise and vibration would be managed using best practicable means (BPM). The CEMP will further refine the construction vibration assessment once the construction methodology has been defined.

As no receptor is expected to experience more than a minor adverse effect due to operation of the completed development, no mitigation is expected to be required. Where any proposals for the community facilities in the north-east corner of the site include a significant change in the design, scale, nature, or location of the existing use, then they should be accompanied by a specific noise impact assessment to assess and appropriately mitigate any associated adverse effects.

This assessment has considered the potential noise effects of the proposed development on nearby noise sensitive receptors and is as expected as there a number of unknowns/uncertainties at this stage. Recommendations have been made to mitigate any potential noise from the construction of the development affecting the amenity of existing neighbouring occupiers and this is expected. However, little consideration has been given at this stage to the noise levels which may affect the occupiers once the new development is completed. Further assessment will be required once the uncertainties are addressed and any possible issues identified mitigated against through the siting, design and/or construction methods.

The findings of the report are accepted, and conditions are recommended, both during the development phase and the longer term, in order to protect the amenity of both the existing properties and the occupiers of the new development.

Odours
It is considered that the proposed development itself will not create any significant odours. However, the development is located near to several farms which have the potential of generating odours due to agricultural practices, which may adversely affect the amenity of future residents.

Therefore, it will be necessary for a condition requiring an odour assessment to determine all potential sources of odour in the vicinity of the application site.

Loss of amenity caused by the construction of the development
Because of the large scale of the development and the close proximity of residential properties to part of the site boundary there is a significant potential for loss of amenity to the occupiers of nearby properties from noise, vibration, dust and artificial light from the construction phase of the development. Therefore, it will be necessary for a condition requiring a Construction Environmental Management Plan (CEMP) detailing the actions that will be taken to minimise adverse impacts on occupiers of nearby properties.

Electric Vehicles Charging Points (EVCPs)
It is expected that there will be provision for car parking on the proposed development. In an application of this nature, it is expected that facilities for charging electric vehicles and other ultra-low emission vehicles are provided in accordance with the National Planning Policy Framework and Air Quality & Emissions Technical Planning Guidance from the West Yorkshire Low Emissions Strategy Group. A condition requiring charging points is therefore necessary.

RECOMMENDED CONDITIONS

AQMM Air Quality Mitigation Measures – Condition
Before construction work commences, a scheme detailing fully costed air quality mitigation measures based on the cost damage calculation as detailed in the Air Quality Assessment by Buro Happold (ref: 048206-BHE-XX-XX-RP-AQ-0001) (dated: 27th September 2021) (section 6.3) of the report, shall be submitted to and approved in writing by the Local Planning Authority. In the absence of acceptable proposals for Low Emission Mitigation Measures of sufficient value, a section 106 agreement may be required for the amount up to the estimated damage cost made available to the local authority to spend on air quality improvement projects within the locality. Following completion of the agreed air quality mitigation measures a verification report detailing a breakdown of costs shall be submitted to and approved in writing by the Local Planning Authority. The report shall detail the expenditure of each of the mitigation measures agreed, and this should reflect the total sum of cost damages that have been calculated for the development.

Reason: For promoting sustainable development and transport and conserving the natural environment in accordance with parts 2, 9 & 15 of the NPPF and LP20, LP24, LP47 of the Local Plan.

CLC2 Submission of a Phase 2 Intrusive Site Investigation Report - Condition
Groundworks (other than those required for a site investigation report) shall not commence until a Phase II Intrusive Site Investigation Report by a suitably competent person has been submitted to and approved in writing by the Local Planning Authority.
Reason: To ensure the safe occupation of the site in accordance with Policy LP53 of the Kirklees Local Plan and paragraph nos. 178 and 179 of the National Planning Policy Framework

CLC3 Submission of Remediation Strategy - Condition
Where site remediation is recommended in the Phase II Intrusive Site Investigation Report approved pursuant to condition (CLC2) further groundworks shall not commence until a Remediation Strategy by a suitably competent person has been submitted to and approved in writing by the Local Planning Authority. The Remediation Strategy shall include a timetable for the implementation and completion of the approved remediation measures.
Reason: To ensure the safe occupation of the site in accordance with Policy LP53 of the Kirklees Local Plan and paragraph nos. 178 and 179 of the National Planning Policy Framework

CLC4 Implementation of the Remediation Strategy - Condition
Remediation of the site shall be carried out and completed in accordance with the Remediation Strategy approved pursuant to condition (CLC3). In the event that remediation is unable to proceed in accordance with the approved Remediation Strategy or contamination not previously considered in either the Preliminary Risk Assessment or the Phase II Intrusive Site Investigation Report is identified or encountered on site, all groundworks in the affected area (except for site investigation works) shall cease immediately and the Local Planning Authority shall be notified in writing within 2 working days. Works shall not recommence until proposed revisions to the Remediation Strategy have been submitted to and approved in writing by the Local Planning Authority. Remediation of the site shall thereafter be carried out in accordance with the approved revised Remediation Strategy.
Reason: To ensure the safe occupation of the site in accordance with Policy LP53 of the Kirklees Local Plan and paragraph nos. 178 and 179 of the National Planning Policy Framework

CLC5 Submission of Validation Report - Condition
Following completion of any measures identified in the approved Remediation Strategy or any approved revised Remediation Strategy a Validation Report by a suitably competent person shall be submitted to the Local Planning Authority. No part of the site shall be brought into use until such time as the remediation measures have been completed for (that part of) the site in accordance with the approved Remediation Strategy or the approved revised Remediation Strategy and a Validation Report in respect of those remediation measures has been approved in writing by the Local Planning Authority. Where validation has been submitted and approved in stages for different areas of the whole site, a Final Validation Summary Report shall be submitted to and approved in writing by the Local Planning Authority.
Reason: To ensure the safe occupation of the site in accordance with Policy LP53 of the Kirklees Local Plan and paragraph nos. 178 and 179 of the National Planning Policy Framework

CLC 7 Contaminated land - Footnote
All contamination reports shall be prepared by a suitably competent person, as defined in Annex 2 of the National Planning Policy Framework 2019. Reports must be prepared in accordance with the following guidance:

- *Land Contamination Risk Management (LCRM)*
- BS 10175:2011+ A2:2017 *Investigation of Potentially Contaminated Sites. Code of Practice*
- *Development on Land Affected by Contamination - Technical Guidance for Developers, Landowners & Consultants - (v11.2) June 2020* by the Yorkshire and Lincolnshire Pollution Advisory Group

NC9 Noise Assessment Report and Mitigation Scheme - Condition
Before construction work commences, a report specifying the measures to be taken to protect the development from noise from all significant noise sources that are likely to affect the proposed development (e.g. including road traffic/commercial/community use premises) shall be submitted to and approved in writing by the Local Planning Authority. The report shall:

a) Determine the existing noise climate
b) Predict the noise climate in living rooms and gardens (daytime), bedrooms (night-time) and other habitable rooms of the development
c) Detail the proposed attenuation/design necessary to protect the amenity of the occupants of the new residences (including ventilation if required).

The development shall not be occupied until all works specified in the approved report have been carried out in full and such works shall be thereafter retained.

NF4 Competent Person - Footnote
All noise assessments should be carried out by a competent person. Developers may wish to contact the Association of Noise Consultants http://www.association-of-noise-consultants.co.uk/ (020 8253 4518) or the Institute of Acoustics http://www.ioa.org.uk (0300 999 9675) for a list of members.

Odours Impact Assessment Report
Before construction work commences, an Odour Impact Assessment Report shall be submitted in writing to the Local Planning Authority. The report shall:

- determine the existing baseline odour conditions (including complaints history)
- identify all potential odour sources
- determine the location of any future sensitive receptors relative to any potential sources of odour
- predict the likely odour impact on future sensitive receptors using appropriate assessment tools and taking into consideration, the likely magnitude of odour emissions, meteorological conditions, the dispersion and dilution afforded by the pathway to the receptors, any potential cumulative odour effects
- based on the findings of the odour assessment, provide details of appropriate mitigation/control measures that are required to ensure the future occupiers of the development are not adversely affected by sources of odour in the vicinity

Reason: To safeguard the amenities of the occupiers of nearby properties in accordance with part 15 of the NPPF and xxxxx of the Local Plan

CEMPC Construction Environmental Management Plan - Condition
No development shall take place, until a Construction Management Plan has been submitted to, and approved in writing by, the Local Planning Authority. The Construction Management Plan shall provide details of:

a) timetable of all works
b) vehicle sizes and routes, times of vehicle movements, identify the location of any HGV waiting areas and include details of the management of said areas
c) the parking of vehicles of site operatives and visitors
d) details and location of signage
e) loading and unloading of plant and materials
f) storage of plant and materials used in constructing the development
g) measures to be taken to minimise the deposit of mud, grit and dirt on public highways by vehicles travelling to and from the site, including the provision of adequate wheel washing facilities within the site
h) measures to control and monitor the emission of dust and dirt during construction
i) a Site Waste Management Plan, detailing recycling/disposing of waste resulting from demolition and construction works
j) mitigation of noise and vibration arising from all construction related activities to (these details should also include suitable restrictions on the hours of working on the site including times of deliveries)
k) artificial lighting used in connection with all construction related activities and security of the construction site
l) site manager and resident liaison officer contact details (including their remit and responsibilities); and
m) details of engagement with local residents and occupants or their representatives.

The development shall be carried out strictly in accordance with the approved CEMP and no change there from shall take place without the prior written consent of the Local Planning Authority.
Reason: To safeguard the amenities of the occupiers of nearby properties in accordance with part 15 of the NPPF and xxxxx of the Local Plan

CEMPF Construction Environmental Management Plan - Footnote
Noisy construction related activities should not take place outside the hours of:
07.30 to 18.30 hours Mondays to Fridays
08.00 to 13.00 hours, Saturdays
With no noisy activities on Sundays or Public Holidays

Institute of Air Quality Management document *"Guidance on the assessment of dust from demolition and construction"* Version 1.1 2014 provides detailed information regarding dust control.

Kirklees Council has powers under Section 60 of the Control of Pollution Act 1974 to control noise from construction sites and may serve a notice imposing requirements on the way in which construction works are to be carried out. It has additional powers under Sections 80 of the Environmental Protection Act 1990 to prevent statutory nuisance including noise, dust, smoke and artificial light and must serve an abatement notice when it is satisfied that a

statutory nuisance exists or is likely to occur or recur. Failure to comply with a notice served using the above-mentioned legislation would be an offence for which the maximum fine on summary conviction is unlimited.

EVC1 Electric Vehicle Charging Points - Condition

Before the electrical system is installed, a scheme detailing the dedicated facilities that will be provided for charging electric vehicles and other ultra-low emission vehicles shall be submitted to and approved in writing by the Local Planning Authority. The scheme shall meet at least the following minimum standard for numbers and power output:

- A Standard Electric Vehicle Charging point providing a continuous supply of at least 16A (3.5kW) for each residential unit that has a dedicated parking space
- One Standard Electric Vehicle Charging Point providing a continuous supply of at least 16A (3.5kW) for at least 10% of residential parking spaces that are not allocated to specific dwellings
- One Standard Electric Vehicle Charging Point providing a continuous supply of at least 16A (3.5kW) for at least 10% of non-residential parking spaces

Buildings and parking spaces that are to be provided with charging points shall not be brought into use until the charging points are installed and operational. Charging points installed shall be retained thereafter.

Reason: In the interest of supporting and encouraging low emission vehicles, in the interest of air quality enhancement, to comply with the aims and objectives of Policies LP20, LP24 and LP47 of the Kirklees Local Plan and Chapters 2, 9 and 15 of the National Planning Policy Framework.

EVF1 Electric Vehicle Charging Points – Footnote

- A Standard Electric Vehicle Charging Point is one which is capable of providing a continuous supply of at least 16A (3.5kW) and up to 32A (7kW). The higher output is more likely to be futureproof
- Standard charging points for single residential properties that meet the requirements specified in the latest version of *"Minimum technical specification - Electric Vehicle Homecharge Scheme (EVHS)"* by the Office for Low Emission Vehicles will be acceptable. Basically, charging points that provide Mode 3 charging with a continuous output of least 16A (3.5kW) and have Type 2 socket outlet would be acceptable.
- At non-residential developments, the requirement for one standard electric vehicle charging point for at least 10% of parking spaces may initially be reduced to one charging point for at least 5% of parking spaces with the remainder provided at an agreed trigger point.
- For developments where some or all of the parking is likely to be used for shorter stay parking (30mins to 4 hours) then Fast (7-23kW) or Rapid (43kW+) charging points may be more appropriate. If Fast or Rapid charging points are proposed together with restrictions on the times that vehicles are allowed to be parked at these points then a lower number of charging points may be acceptable.
- The electrical supply of the final installation should allow the charging equipment to operate at full rated capacity.
- The installation must comply with all applicable electrical requirements in force at the time of installation.

Kirklees COUNCIL