Consultation Response from: KC Environmental Health (Pollution & Noise Control)		
2021/92488 Huddersfield Royal Infirmary, Acre Street, Lindley, Huddersfield, HD3 3EA		
Erection of clinical building to accommodate new accident and emergency department, associated vehicular access, car and cycle parking spaces, plant and landscaping		
Date Responded: 23rd August 2021	**Responding Officer: Rebecca Muff (Air Quality) Mohammed Nasim (Noise)**	**Responding Ref: WK/202121280**

The proposal is for a new Accident and Emergency Department at Huddersfield Royal Infirmary, which will be situated on the southwestern part of the site adjacent to the existing car park. The proposals include rerouting the car park access road along the southern perimeter of the hospital grounds.

We have reviewed the application and supporting information and make the following comments and recommendations.

Air Quality

The application is for the erection of an Accident and Emergency (A &E) Department at Huddersfield Royal Infirmary. The site is located in an area where air quality is mainly influenced by road traffic emissions along the local road network. The site is not within or adjacent to any Air Quality Management Areas, or roads of concern.

An Air Quality Assessment by Delta Simons (Ref: 20-1295.01) (dated: July 2021) has been submitted in support of the application. The assessment considers the impact of the development on air quality, as well as adverse impacts at nearby sensitive receptors, during the construction and operational phases. The pollutants modelled were nitrogen dioxides (NOX) and particulate matter (PM10) and (PM2.5) using techniques detailed in LAQM. TG16, the Institute of Air Quality Management (IAQM) Technical Guidance, and ADMS -Roads dispersion model.

Construction Phase

A qualitative assessment of construction phase impacts was undertaken in accordance with the Institute of Air Quality Management (IAQM) Guidance on the Assessment of Dust from Demolition and Construction. The assessment considered fugitive dust, and exhaust emissions from plant used on site, and construction vehicles. The report concludes that there is the potential for fugitive dust emissions during the construction phase. It identified the impacts on local air quality to be “medium to low risk” and therefore not significant. Nevertheless, the report recommends that these impacts can be further controlled through the implementation of best practice mitigation measures. Chapter 6.0 (page 22) of the report titled *Mitigation and Residual Effects* sets out the mitigation measures to be implemented based on the assessment results and in accordance with the IAQM Guidance.

Operational Phase

The proposed development has the potential to expose future users of the site to poor air quality. A quantitative assessment was undertaken across the site using ADMS-Roads (5.0.01) dispersion model in accordance with DEFRA Guidance. This was undertaken using monitored data provided by Kirklees Council, Defra background concentrations, vehicle emission factors and fleet information, in addition to traffic data provided by the project

transport consultants. The modelling used a baseline year of 2019 and an assumed opening year of 2026. The use of 2026 traffic data and 2019 emission factors and background concentrations is considered to provide a worst-case scenario, placing more confidence on the predicted pollution concentrations.

The proposed development is predicted to result in a redistribution of traffic with some road junctions experiencing an increase in Annual Average Daily Traffic Movements (AADT). Therefore, the modelling considered the changes in pollutant concentrations at various road links around the site, this also included the impact on sensitive receptor locations of relevant public exposure. Although the proposed development itself will not include any sensitive receptor locations it will be used by patients attending the A&E Department. Therefore, pollutant concentrations were also modelled at the facades of the proposed building to consider the potential exposure of future site users to poor air quality.

The report concluded that annual mean NO_2 concentrations were predicted to be below the Air Quality Objective (AQO) of 40 µg/m^3 at all sensitive receptor locations in the 2026 scenario (the predicted opening year). With some receptor locations experiencing a decrease in NO_2 concentrations. Overall, the assessment considered the impact of the proposed development on future users to be not significant.

Comments
For the construction phase of the development, we expect that the best practice mitigation measures as detailed in Chapter 6 of the assessment Page 22 tilted *Mitigation and Residual Effects* to be implemented.

For the operational phase we find the approach and methodology satisfactory. We accept the Air Quality Assessment by Delta Simons (Ref: 20-1295.01) (dated: July 2021).

Noise
The applicant has submitted a Noise Impact Assessment authored by Mott MacDonald dated June 2021 Ref HG0052-MM-ED-XX-RP-Y-000001 | P02. The noise assessment considers the implications of the existing noise climate at the site on the new Accident and Emergency Department building and the potential noise and vibration impacts of construction and operation of the Scheme on nearby noise sensitive receptors (NSR's).

The proposed new Accident and Emergency (A&E) Department at Huddersfield Royal Infirmary will be situated on land currently occupied by hospital staff accommodation and surface car parking to the southwest of the site. The development site is bounded to the north by existing hospital buildings, to the east by the car park and to the west and south there are residences located on Acre Street and Savile Road. These are the nearest noise sensitive receptors (NSR's) outside the hospital grounds. Figure 3.1 shows the site location in context with the surrounding area and figure 3.2 (based upon annotated excerpt from Architects drawing HG0052-IBI-ED-ZZ-PL-A-1000013) shows the proposed site plan including the proposed new A&E Department and new access route to the car park.

Short and long-term measurements were undertaken during the period 10:30 on 25 May 2021 to 16:00 on 26 May 2021 and the locations are shown in Figure 4.1. Noise sources were observed to be traffic noise emanating from the local road network and from vehicle movements within the site, noise from building services plant installations and noise from

pedestrians. Table 4.2 shows the short term attended noise measurements and Table 4.4 shows the typical background noise levels representative of nearest noise sensitive receptors which are 43dB L_{A90} for the daytime and 36dB L_{A90} for night-time.
Para 5.1 deals with construction noise and vibration and states that at this stage in the design process, full details of construction methodologies and programme are not available, therefore quantitative predictions of construction noise levels have not been carried out as part of this assessment. Control measures related to construction noise and vibration will be set out within the Construction Environmental Management Plan (CEMP) which will identify the series of measures to reduce the environmental effects, including noise and vibration, during the construction period and covers environmental and safety aspects affecting the interests of residents, businesses, road users and the general public in the vicinity of the works.

In the case of construction vibration, significant impacts would be anticipated only where percussive or vibratory piling operations were undertaken within some 30m from vibration sensitive receptors, or, in the absence of piling activity, where heavy plant was operating within a few metres of vibration sensitive receptors. It is not anticipated that construction activities at Huddersfield Royal Infirmary would have any adverse impact upon receptors external to the hospital grounds. However, as construction activities will be occurring close to existing hospital accommodation, careful implementation of best practical means (BPM) should be applied to ensure that vibration does not disrupt hospital operation.

Para 5.2 states the proposed new A&E Department will extend into the existing car park at the south of the site and reduce the extent of the existing car park, there will also be a new road providing access to the car park running between the southern façade of the proposed new A&E Department and the southern site perimeter. The nearest NSRs to the new road are the residences on Savile Road with front facing facades approximately 25m from the road and the residences on Acre Street with rear facing facades approximately 20m from the road.

Based upon measured traffic figures for October 2020, the predicted traffic data shows that there will be a relatively high flow of vehicles in the early morning into the car park that will produce noise that may affect residents of Acre Street and Savile Road, particularly in bedrooms on the first floor. As this is a new source of noise and the early morning period is at a relatively sensitive time of day it will need to be attenuated by a noise barrier that breaks the line of sight of cars from the furthest side of the new road (inbound traffic). Relatively fewer vehicles leave the site on this access road at the noise sensitive parts of the day, but the noise barrier would also provide noise attenuation for these vehicles in addition.

The report states that the noise barrier shown from the West Elevation in Figure 5.1 (based upon annotated excerpt from Architects drawing HG0052-IBI-ED-ZZ-EL-A-200001) should extend from the start point to the endpoint shown in the Proposed Site Plan in Figure 3.2. It should be 2.4m high and acoustically absorptive on the hospital side to reduce the potential for reflection of vehicle noise and with this mitigation in place, there would be no material increase in noise levels and no adverse noise impacts due to the revised parking arrangements are predicted.

Para 5.3 deals with the new fixed plant associated with the Development stating there will be two new air source heat pumps located in the car park as shown in the proposed site plan in figure 3.2 to provide heating to the proposed new A&E Department. Using noise source data provided by the manufacturer, these were assessed using the methodology described in BS

4142:2014+A1:2019 to predict the resultant rating level at the nearest NSR's. It was determined that in order to mitigate the plant noise, a 4m high acoustic screen which is acoustically absorptive on the plant side should be used to surround the air source heat pumps. This will ensure the rating level for the plant at the nearest NSR's are 5 dB below the background noise levels.

The nearest NSR's external to the façade of the new A&E Department are the rear elevations of residences situated to the west on Acre Street, approximately 60m away and to the south on Savile Road, approximately 25m away. As the type, number, locations and noise output of other new items of fixed building services plant associated with the development are not known, it has not been possible to predict resultant rating noise levels for plant at NSR's using the methodology described in BS 4142. The report states it is possible to ensure that control measures for building services plant are included. These may comprise -

- optimum location of plant to minimise noise emission,
- selection of quiet equipment options,
- use of attenuators,
- deployment of screening measures or
- other measures appropriate to the equipment specified.

Based upon all of the above, the rating levels at sensitive receptors of new building services installations are no greater than 5 dB below existing background noise level and therefore, no significant adverse impacts are anticipated at NSR's due to building services plant.

Para 5.4 looks at the existing fixed plant affecting the development and states there is a large cluster of condenser units adjacent to the main hospital building and existing car park. The northerly façade of the proposed new A&E Department will be located approximately 2.5m from the condenser units. Based upon the measured levels, the predicted noise levels at the façade given in Figure 5.2 will be used in designing the façade to ensure that the internal ambient noise levels do not exceed the requirements of HTM-08-01 (Health Technical Memorandum 08-01: Acoustics – Dept. of Health).

The findings of the report are accepted but conditions are recommended to prevent a loss of amenity to neighbouring occupiers.

Construction Environmental Management Plan (CEMP)
Because of the large scale of the development and the close proximity of residential properties to 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**.** It is therefore necessary for a condition requiring a Construction Environmental Management Plan to require the developer to use Best Practicable Means to minimise any adverse impacts from the construction phase.

Electric Vehicle Charging Points
Information provided in the application form, indicates there are to be 31 car parking spaces in addition to 6 bays with EVCPs. No information has been submitted regarding the type of EVCPs that are to be installed. Therefore, it will be necessary for a condition requiring this information.

Recommended Conditions

NC1 Implement Agreed Noise Mitigation Measures – Condition
Before the development is first brought into use, all works which form part of the sound attenuation scheme as specified in the Noise Impact Assessment authored by Mott MacDonald dated June 2021 Ref HG0052-MM-ED-XX-RP-Y-000001 | P02 -

a) shall be completed; and

b) written evidence to demonstrate that the specified noise levels have been achieved shall be submitted to and approved in writing by the Local Planning Authority.

If it cannot be demonstrated that the noise levels specified in the aforementioned Noise Report have been achieved, then a further scheme shall be submitted for the written approval of the Local Planning Authority incorporating further measures to achieve those noise levels.

All works comprised within those further measures shall be completed and written evidence to demonstrate that the aforementioned noise levels have been achieved shall be submitted to and approved in writing by the Local Planning Authority before the development is first brought into use

NC10 - Noise from Fixed Plant & Equipment - Condition
The combined noise from any fixed mechanical services and external plant and equipment shall be effectively controlled so that the combined rating level of noise from all such equipment does not exceed the background sound level at any time. “Rating level” and “background sound level” are as defined in BS 4142:2014+A1:2019.

Reason: To ensure the proposed development does not cause harmful noise pollution within neighbouring noise sensitive locations, in the interest of amenity, to comply with the aims and objectives of Policies LP24 and LP52 of the Kirklees Local Plan and Chapters 12 and 15 of the National Planning Policy Framework.

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) the construction access(es) and confirmation that adequate visibility splays shall be provided prior to the commencement of development including groundworks
c) 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
d) the parking of vehicles of site operatives and visitors
e) details and location of signage
f) loading and unloading of plant and materials
g) storage of plant and materials used in constructing the development
h) the erection and maintenance of security hoarding including decorative displays and facilities for public viewing

i) 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
j) measures to control and monitor the emission of dust and dirt during construction
k) a Site Waste Management Plan, detailing recycling/disposing of waste resulting from demolition and construction works
l) 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)
m) artificial lighting used in connection with all construction related activities and security of the construction site
n) site manager and resident liaison officer contact details (including their remit and responsibilities); and
o) 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 xxxxxx of the Local Plan

CEMPF Construction Environmental Management Plan - Footnote
Noisy construction related activities should not take place outside the hours of:

- 0800 to 1830 hours Mondays to Fridays
- 0800 to 1300 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:

- 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
- 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.