From: Guy Wakefield <GWakefield@ridge.co.uk>
Sent: 12 May 2020 18:55
To: Michael Higgins
Subject: RE: Application 20/0229/FUL Exeter Road Topsham Care Home
Attachments: 1704-Topsham-Commercial Ventilation Statement-P1.pdf

Michael,

Further to my email below addressing the EHO's response I have now attached a Note which deals with the Acoustic and Odour issue for Plant and Extracts. I'd be grateful if it could be forwarded on to the EHO along with the points raised below.

A condition could therefore be attached which for example states:

"Prior to occupation the specification of extracts and plant controlling noise and odour should be submitted to and agreed by the Local Planning Authority and be in general accordance with the document entitled Topsham Commercial Ventilation Statement."

You may have a more standard condition that you use.

It is my client's practice to procure the construction of the project by means of a JCT Design and Build Contract. By its very nature a Design and Build Contract means that the design is developed in compliance with the specifications as the scheme progresses rather than being completed now or at tender stage.

As such, whilst we would not object to the addition of a condition in respect of this matter we need to be based on prior to occupation of the building.

Happy to discuss.

Kind regards
Guy

Guy Wakefield BA Hons MRTPI
Partner
For Ridge and Partners LLP

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From: Guy Wakefield
Sent: 29 April 2020 16:52
To: 'Michael Higgins'
Subject: RE: Application 20/0229/FUL Exeter Road Topsham Care Home

Michael,

In the EHO consultation response the officer requests the applicant submit the Phase 1 and Phase 2 investigation reports. I therefore attach both those reports and would be grateful if they were forwarded on to the EHO.

Kind regards
Guy

Guy Wakefield BA Hons MRTPI
Partner
For Ridge and Partners LLP

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From: Michael Higgins <michael.higgins@exeter.gov.uk>
Sent: 07 April 2020 14:40
To: Guy Wakefield <GWakefield@ridge.co.uk>
Subject: FW: Application 20/0229/FUL Exeter Road Topsham Care Home

Guy

Further to my email yesterday please find attached an updated version of the Environmental Health officers consultation response.

Regards

Michael Higgins
Principal Project Manager (Development)
City Development
Exeter City Council

01392 265616

From: Michael Higgins
Sent: 06 April 2020 17:13
To: 'gwakefield@ridge.co.uk' <gwakefield@ridge.co.uk>
Subject: Application 20/0229/FUL Exeter Road Topsham Care Home

Guy

Please find attached consultation response from my Environmental Health colleague for your attention/action. This will also be available on the Council's website.

Regards

Michael Higgins
Principal Project Manager (Development)
City Development
Exeter City Council

01392 265616

STATEMENT ON CONTROLLING NOISE AND ODOUR FROM COMMERCIAL VENTILATION SYSTEMS

FOR

THE PROPOSED NEW-BUILD CARE HOME, TOPSHAM, EXETER

ON BEHALF OF

TOPSHAM CARE HOME LTD

Harniss Ltd
23 Paterson Road
Finedon Road Industrial Estate
Wellingborough
Northants
NN8 4BZ

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Email: info@harniss.co.uk

Revision	Date Issued	Description	Prepared	Approved
P1	05.05.2020	Issued for planning	CH	SG

1 Contents

1.0 Introduction

This statement has been prepared by Harniss Consulting Ltd on behalf of Topsham Care Home Ltd to provide a summary of the design criteria, to which the mechanical, electrical and public health systems shall be designed and installed at the proposed residential care home development in Topsham, Exeter.

The statement has been produced as part of a desktop review of the 'commercial' type fixed-buildings services systems in respect to mitigating potential issues from both noise and odour.

The specification produced for Topsham Care Home Ltd and the detail herein reviews the catering kitchen services requirements of the care home against recommendations and information from, the now withdrawn, *Defra Guidance on the Control of Odour and Noise from commercial Kitchen Exhaust Systems.*

The scheme is currently at initial planning stage and as such the design of individual ventilation systems and their components has not been fully detailed. However, the Employers Requirements and the early planning conceptual design has incorporated the following elements to ensure that the development harmonises with its surrounding residential setting.

2.0 Noise Criteria for Fixed-Building Services

The ventilation strategy for the building is via natural means (window openings), where achievable and practical; and as such this dictates that the building services plant shall be designed, selected and positioned to ensure a maximum noise level at the nearest residential façade, on-site and the maximum noise level at the boundary, of <38dB.

With an opening window achieving between 15-20dB noise reduction, this will exceed the noise reduction requirements to ensure the internal noise design criteria of 30dB at night and 35dB during day-time hours (07:00-23:00).

The ventilation and cooling plant shall be designed to be located within areas of less sensitivity such as within dedicated plant rooms, directly outside the main heat generating plant room, within service area and / or at roof level. These locations offer the best shielding of plant, but the overarching design criteria which forms the Design and Build contract will be the noise limit for plant design, selection and operation as stated in the above paragraphs.

The brief for the catering kitchen has yet to be completed and as such the detailed design of the ventilation system is not developed. The operation times of the system are potentially from 0600 through to late evening, however, the ventilation system is not fully operational throughout this period. The ventilation system shall be specified to provide full speed control from 30% to 100% of design duty to reflect the activity being undertaken i.e. during food preparation activities in the early morning the ventilation system would only be operating at c.30% of total system duty to meet the occupancy requirements, so the corresponding noise level will be significantly reduced. The kitchen ventilation plant shall also be located within the sunken well and shall also perform to the aforementioned noise criteria.

Community day spaces such as the dining and lounge areas shall be provided with mechanical heat recovery ventilation systems to provide a minimum of 3-air changes per hour to each space (or 10ltr/sec per person based on fixed furniture layouts, which-ever the greater air volume). The air

handling units serving these spaces are remote to them with ductwork distribution connecting to each space. Within these systems are attenuators to ensure that the air borne noise from the plant is not transferred to either the space served or the external surroundings. The units have been specified to achieve a maximum of 10dB(A) below back-ground and a maximum of 38dB(A) at the nearest residential façade, thus ensuring any noise from these systems is mitigated at source.

These systems include heat recovery devices to maximise system efficiency and reduce energy consumption. The heat recovery devices also include a by-pass for summer operation to aid in the dissipation of heat from the building.

There are also a number of community day spaces throughout the development which will be provided with comfort cooling.

Ventilation to the plant room shall be via louvred doors with insect mesh which will provide sufficient noise reduction to enable the heat generation plant to meet the maximum noise level of 38dB at the boundary.

The conceptual scheme has identified the following systems where external equipment or connections to the external façade are required with their proposed location identified for information: -

Ventilation		
Kitchen Ventilation	Supply and Extra Fans	Extract fan located at roof level within screened well. Noise breakout limited through design specification and air borne noise reduced to meet design criteria by way of in-duct attenuation.
Laundry Ventilation	Supply and Extract Fans	Fan units located at roof level within screened well. Noise breakout limited through design specification and air borne noise reduced to meet design criteria by way of in-duct attenuation.
Ventilation Systems serving day spaces & corridors	Local Heat Recovery Ventilation Units	Extract fan located at roof level within screened well. Noise breakout limited through design specification and air borne noise reduced to meet design criteria by way of in-duct attenuation.
Cooling		
Communications Room & Medical Stores	DX Cooling	External condensers at roof level within screened well. Noise breakout limited through design specification and screening, where required. Low noise equipment to be specified.
Reception / Café / Day Spaces	Variable Refrigerant Volume Heat Pump (VRF/VRV)	External condensers at roof level within screened well. Noise breakout limited through design specification and screening, where required. Low noise equipment to be specified. Systems shall only operate for cooling so will not be operating during night-time hours.

3.0 Odour

The kitchen ventilation system shall be designed and installed so to satisfy the following criteria to meet low standard of odour control envisaged for the scheme:

- The kitchen canopy itself shall be positioned directly over the hob area and shall be sized to suit the calculated air volume at 20 air changes per hour, as per DW/172 guidance. Filtration shall be provided within the extract system to ensure that grease and airborne waste products are not expelled to atmosphere.

- The supply/makeup air shall be provided at 85% of the air volume removed by the kitchen extract system. This ensures that the room operates under a negative pressure and therefore odours cannot escape through the building fabric of the room to atmosphere.

- The extracted air shall be discharged not less than 1m above the eaves level of the building.

- The kitchen extract system shall terminate via an accelerator with a discharge velocity of no less than 7m/s (under full system duty) to meet DEFRA's dispersion rating.

- If deemed a requirement by environmental assessment, fine filtration by way of either carbon filters rated with a 0.1second residence time or by counteractant/neutralising system to meet the same standard of filtration could be provided.

4.0 Kitchen Ventilation System Maintenance Requirements

To ensure the correct operation of the kitchen ventilation system is sustained, regular maintenance is required. Failure to do so can often lead to increased pressure drop within the system, flowrates dropping and hygiene levels falling. An increased risk of fire within the ductwork system is also likely due to grease build-up.

Due to the risks mentioned above, the *Defra Guidance on the Control of Odour and Noise from commercial Kitchen Exhaust Systems* recommends that the following maintenance is provided: -

- A visual inspection of the ventilation system be carried out at least once a week. All metal surfaces should be checked to ensure that there is no accumulation of grease or dirt and that there is no surface damage.
- Cooker hoods and grease filters should be cleaned on a daily basis.
- Baffle type self-draining filters and collection drawers should be cleaned weekly as a minimum. The cleaning period for mesh filters should be at least twice a week.
- Periodic 'deep hygiene cleaning' be undertaken by a specialist contractor. All accessible main ductwork runs and branches, including fitted equipment should be inspected and cleaned. [Note: periodic will be defined by the frequency in use of installed systems].
- All fans are maintained on a regular basis as recommended by the fan manufacturer.
- Ventilation grilles, where fitted have easily removable cores to facilitate cleaning;
- Change fine filters every two weeks; and
- Change carbon filters every 4 to 6 months.

The care home development team shall ensure that the above maintenance requirements are included within the buildings Operation and Maintenance manuals so that the operational management team can implement the schedule indefinitely.

5.0 Conclusion

Through correct specification the developer will seek to mitigate potential odour and noise issues emanating from the systems installed to achieve the high-level domestic environment to meet the specific needs of each and every building user, whilst ensuring harmony with the developments residential surroundings.