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Andy Phipps
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Ref: EPG/0212/2022/amended development

Dear Andy

New planning application – impact on required gas protection measures

Further to our telephone conversations and exchanged emails, I have reviewed the documents prepared for you by EPG during 2021 as follows:

- *Detailed quantitative gas risk assessment.* Environmental Protection Group, May 2021, reference EPG/8615/2021/DQRA/V1; and
- *Remediation method statement.* Environmental Protection Group, May 2021, reference EPG/8615/2021/RMS/V1.

EPG had prepared previous versions of these reports relating to the original planning permission for the site, reference F/17/80640, a hybrid commercial and low-rise/high-rise residential development covering a large site comprising northern and southern areas connected by a dog-leg. We subsequently reviewed, amended and re-issued the reports in 2021 based on an amended application relating only to the southern area, comprising a change from office buildings to high-rise residential buildings.

It is our understanding that a further amended application is to be submitted proposing a change to low-rise industrial units. The proposed layout is detailed in the preliminary drawing below, which differs in layout to those presented in the previous two applications.

Based on multiple lines of evidence, our detailed quantitative gas risk assessment report concluded that the site should be considered a Characteristic Situation 2 classification, with a requirement for basic gas protection measures. Details were presented within our remediation method statement. These were initially based on high-rise commercial (office) and subsequently high-rise residential end use and were conservatively defined as a Type B building. It is considered that identifying the current proposals as Type C or D would be inappropriate as they are likely to contain smaller rooms for office/washroom usage, and due to the number of units, adequate internal ventilation would not be easy to control by the management company. As such, we recommend that the new proposal is also conservatively defined as Type B.

As such, based on our review of our previous reports, I can confirm that the gas protection measures detailed for the original application are valid for the current proposed development. Discussions with your structural engineer have identified that block and beam floor slab construction is proposed, and as such the required gas protection measures are specified as follows:

Type B building in accordance with BS8485:2015+A1:2019 (3.5 points required):

- *Installation of a gas resistant membrane. The membrane to be specified in accordance with BS8485:2015 and installed/verified in accordance with CIRIA Report C735, Good Practice on the Testing and Verification of Protection Systems for Buildings Against Hazardous Ground Gases. Furthermore, it must be robust enough to withstand construction and should be a minimum of 0.6mm thick in between the scrim (e.g. Juta GP1) **BS8485:2015, Table 7 – 2 points**; and*
- *Construction of an open void (minimum 225mm deep) beneath all properties, passively vented via air bricks constructed on at least two opposite walls, providing an actual opening of at least 1500mm² for each metre run of wall. All beams and sleeper walls beneath the properties to be constructed so as to allow cross ventilation. **BS8485:2015, Table 6 – 2.5 points.***

Details of the proposed gas protection measures to be installed in Buildings A to D inclusive from the previous application were presented in the remediation method statement and approved under that application. I would recommend that you re-submit EPG's previous reports (detailed above), together with this letter as part of the supporting information with your application, however you may require an updated remediation method statement to reflect the current proposals and will certainly require detailed design drawings to show how the gas protection measures will be incorporated into the construction.

We are aware that the piling relating to the previous building layouts was completed in 2020, however given the amended layout of the current proposed development, additional piling will be required. Any piling must be undertaken in line with the piling risk assessment EPG produced in 2018:

- *Piling risk assessment.* Environmental Protection Group, April 2018, reference EPG/8615/2018/PRA/V1.

Be aware that within the remediation method statement the appropriately qualified persons were identified for both installation and verification of installation of the gas membrane – if you are intending to use alternative appropriately qualified persons for these roles, this should be made clear within a covering letter, and details of the intended persons (together with their qualifications) be provided.



I hope this is sufficient for your current purposes. If you have any queries, please don't hesitate to contact me.

Yours faithfully

Sarah Haines
Principal Engineer

For and on behalf of
The Environmental Protection Group Ltd