GEONATION20

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Dear Paul,
In response to your email of the I will endeavor to resolve the issues with regard to condition 11 of the planning requirements.
Remediation strategy.

The results of the hazardous ground gas monitoring and conclusions of the risk assessment have identified the presence of a hazardous ground gas regime below the proposed development area, and the provision of gas protection measures are required to be incorporated into the proposed residential development to meet a Characteristic Situation 2 classification. The provision of gas protection measures will be sufficient to remove the potential migration pathway into the new structures, and therefore provide the necessary protection to the proposed end users from hazardous ground gases.
The design details and specification for this site should be designed in accordance with BS8485:2015 + A1:2019 – 'Code of Practice for the Design of Protective Measures for Methane and Carbon Dioxide
In order to achieve the appropriate level of gas protection required for this site.
When considering the proposed remediation required for this site, there will be no requirement for long term monitoring and maintenance or post-remediation monitoring and maintenance for further verification.
Table 7 – Gas Resistant Membrane - The final element of the gas protection measures is the provision of suitable gas resistant barrier membranes, which should comply with the criteria listed in Table 7. At this stage, the proposed manufacturer / products to be utilised have not been confirmed, however, prior to the installation of the chosen products the specification sheets should be forwarded to Goanation20 for confirmation that they meet all the requirements of BS8485:2015 + A1:2019.
Once the chosen gas barrier membrane products have been confirmed to address the first 5 criteria given in Table 7, there is also the requirement for the verification of the gas barrier membrane installation, undertaken in accordance with CIRIA C735, to ensure that

the installation and construction of the gas protection measures meets the remediation guidance. Installation of the gas barrier membrane products should follow the guidance given below. The completion of these elements from Table 7 will achieve 2 points.

Installation of the gas barrier membrane

The gas barrier membrane should be installed in accordance with the manufacturers details
• Either, a blinding layer of soft sand should be applied to the floor construction, or the floor surface should be adequately cleaned, to prepare a smooth surface free from sharp debris, which may damage the laid membrane
• The membrane will be installed in a logical sequence across the footprint of the building, to achieve a minimum number of joints. A minimum overlap of 150mm is recommended where membranes sections are joined together, and the membrane should be joined together using either thermal welding and / or butyl double-sided jointing tape. The top lapped edges, where the membrane has been jointed using double-sided jointing tape, will be further protected by the application of gas resistant self-adhesive membrane, to prevent dirt and moisture ingress
• Where service entries penetrate the floor construction these should be suitably sealed, using a pre-formed top-hat or wrapped in gas resistant self-adhesive membrane. Any services fed through service ducts should be sealed using Filoseal+
• Following validation of the gas barrier membrane, it is the responsibility of the main contractor / groundworks contractor to protect the gas barrier membrane from damage by follow-on trades or during the construction of subsequent final floor layers, in order to maintain the integrity of the gas barrier membrane.

Passive subfloor dispersal layer: Inspection of minimum 150mm subfloor void, presence of cross ventilation in sleeper / party walls and installation of telescopic swan neck vents
o External wall vents: assess the number and size of telescopic swan neck vents and airbricks around the perimeter of the buildings, including the spacing of the side ventilation, and to assess that these are free from debris and extend beneath the gas barrier membrane into the passive sub floor dispersal layer below the precast suspended segmental subfloor
o The underside of the gas membrane: to assess that no uneven / rough surfaces are present o Gas membrane type: full product / manufacturers specification,
o Gas membrane condition: to assess that there are no punctures, tears, rips or other defects to the membrane
o Joining details: to assess use of thermal welds, and / or use of joining tape detailing the product type, brand, thickness, material, width and colour
o Lapping design: to assess whether joints are lapped and sealed in accordance with the manufacturers specifications (including double-sided taping, thermal welding and correct overlapping)
o Laps and sealed joints: to assess double sided tape has been used and thermal welds are undertaken correctly
o Service entries: to assess whether service entries have been appropriately sealed i.e. assessing top hat arrangements with the use of Jubilee clips, or suitably wrapped in gas resistant self-adhesive membrane. Once services have been fed through any service ducts these should be sealed using either Filoseal

Finally, with regard to the choice of membrane, this is pre-determined by the reference to BS 8485:2019
Whilst the level of contamination on this site is low (CS2) BS8585 requires that the membrane should be manufactured from 100% virgin polymer. Therefor my recommendations are:-
Rhinoplast Evolution and associated product or
Corden EPS2000 and associated products.

I trust this will enable the process to continue and look forward to visiting site.

Yours Faithfully

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