



Geotechnical &
Environmental
Consultants

Our ref: 43207/BP

20th September 2024

HSSP Architects
Pera Business Park
Nottingham Road
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Leics
LE13 0PB

For the attention of Mark Geraghty

Dear Mark

Re: 223 Station Road, Earl Shilton, Leicestershire – Ground Gas Protection Validation Works

Following your recent valued enquiry, we are pleased to provide our proposals to undertake verification of the ground gas protection measures in the 3No.residential properties at the above site.

PROJECT UNDERSTANDING

GeoDyne Limited have previously produced the following report for the above site:

- GeoDyne report: 'Station Road, Earl Shilton - Combined Phase I and Phase II Exploratory Investigation For Colin Burton Builders Ltd' Report No. 43207 dated 5th February 2024.
- GeoDyne letter report 'Station Road, Earl Shilton (Cable Percussion Works)' Reference 43207/BP, Dated 1st August 2024.

Our intrusive site investigation works identified the presence of a maximum carbon dioxide concentration of 6.9% by volume and a maximum flow rate of 0.2L/h, with concentrations of carbon dioxide exceeding 5% on four of the six monitoring visits undertaken. Based on the guidance in BS8485:2015+A1:2019 the site was classified as Characteristic Situation **CS2**.

We understand that the Client proposes to install a ground gas protection system within the proposed dwellings and that the Local Planning Authority, require '*full details of the gas protection measures should be submitted and demonstrating that they will correspond to Characteristics Situation CS2*'.

We understand that a membrane installer has not yet been appointed.

PROPOSED WORKS

In accordance the requirements of BS8485, we would propose to inspect the membrane in general accordance with current CIRIA Guidance C735 '*Good practice on the testing and verification of protection systems for buildings against hazardous ground gases*', therefore, we would propose to prepare a Ground Gas Verification Plan (GGVP), in advance of our inspection visits. Following our inspection of the membranes, it will be necessary to produce a Validation Report, to be submitted to the Local Authority as part of the planning process. The GGVP setting out the proposed method of validation combined with the submission of the final Validation Report should satisfy the requirements of the Local Planning Authority.



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We would request the following information is forwarded to GeoDyne as a minimum once the design of gas protection measures for the site have been finalised, to ensure that our GGVP is appropriate for the proposed precautions.

- Technical data relating to the membrane to be installed at the site.
- Drawings showing the proposed membrane installation details, inclusive of how membrane penetrations (i.e. service pipes, stanchions etc.), door entries and corners will be sealed.
- Drawings showing the floor slab construction and any sub-floor ventilation.
- Any correspondence with the Local Authority which relates to ground gas protection.
- Method statement for the installation of the membrane (prepared by the membrane installers).

It is proposed that validation of the installed membrane will comprise a visual inspection supplemented by pick testing. The validation will include inspection of all joints between membrane panels as well as the seals around service penetrations, door entries, corners etc. to assess the continuity of the membrane throughout building. It is recommended the membrane is inspected following installation and prior to any follow-on trades working over the membrane.

The above proposed works are based on current guidance and good practice and will be required to satisfy the Local Planning Authority.

Our fees to undertake membrane validation works may be summarised as follows:

- Preparation of a gas mitigation strategy and Ground Gas Verification Plan (GGVP) - £450.00.
- Attendance to site Visual Inspection and Mechanical Pick Testing - £450.00 per visit.
- Preparation of a Validation Letter Report - £350.00.

The works will be invoiced monthly based on the above rates to reflect the number of visits completed. Based on our current understanding we propose to attend site on a single occasion to validate the installation membranes in the 3No. plots. In this scenario, our total fees for undertaking the validation works would be **£1250.00** (+VAT). Any additional visits needed to suit changes to the build programme or where the membrane is damaged following our initial inspection would also be charged at the above rates. The above fees are inclusive of mileage and disbursements but exclusive of VAT.

We would intend to visit the site to carry out our inspection works whilst the membrane installation team are on site. This would enable any repairs to be made by the installers and re-inspected by ourselves at the time of our visit.

Our Inspecting Engineers have a number of years of experience of ground gas protection validation with our Engineers holding the NVQ Level 4 qualification in '*Verification of Gas Protection Measures*' or CL:AIRE SGPV status.

TIMESCALES

Upon receipt of the required information, we would propose to prepare the Ground Gas Verification Plan within 10 working days.

We would request that we are given a minimum of 5 working days' notice for an inspection visit to enable us to programme an Engineer in for the works.

COMMENTS

We trust the foregoing is suitable for your current requirements, however, please do not hesitate to contact us should you have any queries.

Yours sincerely

For and on the behalf of GeoDyne Limited



Ben Parry
Geo-Environmental Engineer

Encl Conditions & Limitations