



Project Former CSM Site, Holborn
Project No. 1129
Subject Radon Assessment
Client Heyne Tillett Steel Ltd

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1. Introduction

A-squared Studio Engineers Ltd (A-squared) has been appointed by Heyne Tillett Steel Ltd (HTS) to support the geotechnical aspects of substructure design for the proposed development at the site of the former Lethaby Building, Former Cochrane Theatre, 12-42 Southampton Row & 1-4 Red Lion Square (Former University Of Westminster Central St Martins College Campus), London, WC1B (the 'site').

This Technical Note presents a radon assessment for the proposed development to supplement *A-squared Studio, Geotechnical and Geo-environmental Desk Study Report, Former CSM Site, dated May 2020, ref. 1129-A2S-XX-XX-RP-Y-0001-02* (the 'Desk Study') and *RSK, Geo-environmental Site Investigation report, Grange Central St Martins, dated May 2020, ref. 372042 R01 (00)* (the 'Geo-environmental Investigation Report').

The Desk Study was submitted to the London Borough of Camden with Planning application reference *2020/2470/P* for the proposed development. Subsequently, full permission was granted subject to conditions. Condition 19 is related to potential land contamination and the Geo-environmental Investigation Report has been issued to the London Borough of Camden to support discharge of Condition 19.

Part of Condition 19 requires an updated Preliminary Risk Assessment (PRA) to understand whether radon protection is required for the proposed development. This Technical Note updates the PRA with supplementary radon assessment and recommendations for whether radon protection is required. An objective of the Technical Note is to support the discharge of Condition 19.

2. Technical Background

The Desk Study indicates the following in Section 4.10:

- 1). The site is located in a Lower Probability Radon Area as less than 1% of homes are estimated to be at or above the Action Level.
- 2). No radon protection measures are required in the construction of new dwellings or extensions in the area where the site is located.

The PRA included in the Desk Study (see Section 6) does not provide a risk classification for radon. A risk classification was not provided as a viable source of radon potentially requiring mitigation was considered not present (as per Section 4.10) i.e. there is no viable source-pathway-receptor linkage available for risk assessment in accordance with the adopted risk assessment methodology.

3. Supplementary Radon Assessment

Radon potential has now been further assessed with respect to the proposed development as set-out below:

BRE 211: Radon – Guidance on Protective Measures for New Buildings (2015) includes maps detailing where basic or full radon protection should be provided for new buildings. The relevant maps for England indicate the maximum requirements for radon protection measures in any location within 1-km grid squares to satisfy the guidance in *Building Regulations Approved Document C*. The 1-km grid square where the site is located indicates that the maximum requirement for radon protection is 'None'. Therefore, *BRE 211* is consistent with the findings of the Desk Study i.e. no viable source, no radon protection required. On this basis no further radon assessment, measurement or testing is necessary to inform the construction of the proposed development. Since no viable radon source has been identified, no qualitative risk classification can be provided for the updated PRA.

The above presents an assessment of the potential risks from radon in the context of the *Building Regulations Approved Document C*. It is considered that there is no unacceptable risk (in accordance with *Land Contamination Risk Management* guidance published by the Environment Agency on the UK Government website - which replaced CLR11 guidance last year) and therefore it is recommended that no protective measures are incorporated within the fabric of the proposed development including basements.

Building Regulations Approved Document C and *BRE 211* also make provision for an alternative approach to radon assessment using a site-specific Radon Risk Report. Where radon mapping indicates basic or full protection should be provided a site-specific Radon Risk Report can be used to see if it is possible to adopt lower level protection than indicated on the *BRE 211* maps. In the context of a Radon Risk Report the specifics of a proposed development can be considered and this should include the potentially increased risk due to basements. The proposed development including basements does not require a Radon Risk Report to justify adoption of lower level protection as the maximum requirement for radon protection is 'None' (as described above).

It is noted that there are workplace radon risk assessment requirements (including measurement of radon) in the context of the *Management of Health and Safety at Work Regulations*. A workplace radon risk assessment is outside the scope of this Technical Note and is outside the scope of a typical land contamination study. Workplace risk assessments are usually implemented by the employer and are highly specific to the task, employee(s) and various other factors associated with the operational site which cannot be reasonably anticipated at the construction phase. The radon assessment presented herein is specifically provided only in the context of the *Building Regulations Approved Document C* so that the requirements for radon protection to be installed within the fabric of the proposed buildings are understood at the construction phase.

4. Conclusions

In the context of the *Building Regulations Approved Document C* the potential risks from radon have been assessed for the proposed development. No viable radon source has been identified based on *BRE 211: Radon – Guidance on Protective Measures for New Buildings (2015)*. Since no viable radon source has been identified, no qualitative risk classification can be provided for the updated PRA. Therefore, and in accordance with *Land Contamination Risk Management* guidance, it is considered that there is no unacceptable risk and it is recommended that no radon protection measures are incorporated within the fabric of the proposed development including basements.

This Technical Note can be submitted to the London Borough of Camden to support the discharge of Condition 19 (Planning application reference 2020/2470/P) for the proposed development.



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