

**CONSULTING ENGINEERS** 

CIVIL • STRUCTURAL GEOTECHNICAL • ENVIRONMENTAL

REF/ST/21041

8<sup>th</sup> March 2021

Hurstwood Holdings Ltd Bridge Street Chambers 72 Bridge Street Manchester M3 2RJ

Attn: Mr S Ashworth

Dear Mr Ashworth

## **RE: Proposed Development At Church Lane, New Church, Rossendale**

Further to your recent instructions we have now undertaken an appraisal of the potential impact of the proposed residential development of this site upon the retaining wall to the southern boundary. We now write to advise you of the results of our assessment.

We have been provided with a Phase II Geo-Environmental and Geotechnical assessment report number 105371P2R0 dated July 2018 and prepared by REC which confirms the ground conditions present within the site. Generally, the strata within the site is proved to comprise of glacial till deposits overlying sandstone bedrock which appears to be located at depths varying between some 2.0 - 3.0m or so below existing ground level. At some locations the intrusive investigations have identified very dense sands and we believe that these most likely represent weathered bedrock material.

The southern boundary to the site is marked by a large dry stone type retaining wall extending to a retained height in the order of some 3.0m. This retaining wall provides support to the site area and clearly concerns have been raised regarding the potential stability of this retaining wall during the construction phase. At this time a detailed structural appraisal of the condition of the existing boundary retaining wall has not been undertaken and we would clearly recommend that such a survey be commissioned to determine the existing condition of the wall and identify where any important defects may be present. This structural appraisal should clearly be undertaken prior to any development works commencing.

Our assessment of the information provided within the Geo-Environmental report confirms that a traditional shallow spread type foundation may be an appropriate foundation type to the proposed dwellings. However, we are aware that the site does contain a number of large mature trees, the presence of which may impact upon the clay soils within the vicinity of the proposed dwellings. Accordingly after careful consideration of the surrounding factors we believe that the properties will require the provision of a deep trench fill type foundation to protect against possible tree root effects. At this site we believe that the required foundation depths will result in foundations being formed upon weathered rock material at a depth of approximately 2.0m below existing ground level within the vicinity of plot 2. Whilst it is possible that the foundations may be reduced in depth away from the trees, it is important to recognise that where bedrock is encountered within a foundation it is essential that the whole structure be formed upon the stable rock material to prevent possible differential settlements in the future.

**ROBERT E FRY & ASSOCIATES LTD.** 45, Bridgeman Terrace Wigan, WN1 1TT

Telephone: 01942 826020 Fax: 01942 230816 Email: mail@refa.co.uk Company Registration No. 2436911





Accordingly based upon the currently available information we suspect that a trench fill foundation extending to a relatively consistent depth of between 2.0 – 3.0m below existing ground level will be required for both proposed properties. In each case the foundations will be formed upon underlying weathered bedrock material. In the case of Plot 2 adjacent to the boundary retaining wall the current layout allows for a separation between the foundation and back of the wall of some 2.75m or so. With a retained height of some 3.0m coupled with the conjectured foundation depths it is clear that the completed property will be founded at a level at which it will not impose any loading upon the existing retaining structure. We have prepared the attached drawing no. 21041 which indicates the anticipated section through the retaining wall and proposed dwelling. Of course it will be important to ensure that the excavation machinery utilised for the foundation construction are of a suitable size and type to limit the loadings applied within proximity to the retaining wall but such plant and equipment is available.

In conclusion we can advise that the foundation to the proposed dwelling adjacent to the southern boundary will extend to a depth of some 2.0 - 3.0m below existing ground level and bear upon weathered bedrock material. At this depth the foundation will not impose any increased loadings to the retaining wall and as such the long term performance of the existing retaining wall will not be compromised by this construction. It is important to recognise that the building regulation and warranty requirements are such that these regulators consider it unacceptable for a property to be supported by an existing retaining wall and as such to comply with Building Regulation and warranty requirements the foundations must extend to a depth whereby the property is not supported in any manner by the existing retaining structure.

We trust this meets with your requirements at this time but should you require any further assistance regarding this matter then please do not hesitate to contact us directly.

Yours Faithfully

R E Fry B.Sc.,(Hons),C.Eng., M.I.Struct.E., A.M.I.C.E R E Fry & Associates Ltd