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Former Adur Civic Centre, Shoreham by Sea, West Sussex, BN43 9SA

Response to planning condition 22 – Piling and Groundwater

September 2023

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Contents

1. Introduction 3

2. Detail of Planning Condition 22 3

3. Information produced pursuant to condition discharge 3

4. Conclusions 4

5. References 4

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1. Introduction

Reuby & Stagg have been requested to respond to Condition 22 pertinent to the piling works and contamination for the proposed development at the Adur Civic Centre, Shoreham by Sea.

Planning permission has been granted for a mixed-use redevelopment comprised of two blocks of residential dwelling (6 to 9 storeys).

The site topography survey indicates it slopes very gently from SW to NE; the levels range between 4.1 m AOD and 3.38 m AOD. The nearest main river to the site is the River Adur which flows broadly southwards into the Shoreham harbour approximately 140 m to the south of the site. The sites geology is Chalk formation with overlying drift deposits recorded as Head consisting of clay, silt, sand and gravel. The site overlies a 'Major Aquifer High' but removed from the nearest Source Protection Zone (SPZ).

2. Detail of Planning Condition 22

The wording of Planning Condition No. 22 is as follows:

Condition 22
Piling or deep foundation using penetrative methods shall not be carried out other than with the written consent of the Local Planning Authority. The development shall be carried out in accordance with the approved details.

Reason
To prevent development from contributing to or being put at unacceptable risk from or being adversely affected by unacceptable levels water pollution in accordance with the paras 183 - 185 of the National Planning Policy Framework 2021 and Policy 34 of the Adur Local Plan 2017.

3. Information produced pursuant to condition discharge

The condition relates to prevention of downward migration of contaminants into the underling groundwater/aquifer. In this scheme Continuous Flight Auger (CFA) piles are proposed throughout the site. The management of the contamination risk from CFA piling is discussed below.

Continuous flight auger piles have been chosen to minimise risk from any contamination encountered on site. CFA piles are formed by drilling to the required depth using a hollow stem continuous flight auger. All arisings are lifted vertically by the auger, preventing any down drag of excavated material. After reaching the required depth, concrete is pumped through the hollow stem. The concrete or grout is pumped continuously under pressure while the auger is lifted smoothly and in one continuous operation removing the soil and forming a shaft of concrete extending to ground level. A reinforcing cage is then inserted into the fluid concrete. The CFA technique minimises risk of any moving contaminated soil downwards due to the uplifted helical spoil removal. Any high-level arisings can be treated and suitably remediated or placed beneath areas of hard landscaping.

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CFA piles are able to form a seal when augured through layered soil as the pressurised grout migrates into the surrounding soil eliminating a direct path for contaminates to migrate and is approved by the Environment Agency that does not allow cross contamination of underlying aquifers by contaminated upper soils.

4. Conclusions

Existing made ground will be partially removed with the installation of piling matt thus reducing the extent of any contamination in made ground. CFA piling is proposed to prevent downward pathway for contamination.

5. References

17882/MIR_R27 Main Investigation Report_17882 FINAL issued.pdf from Soils Limited

17882/MIR_R27 Supplementary Report from Soils Limited

10292 Flood risk assessment from gta Civils & Transport