REUBY & STAGG LTD.

Elmsbrook Exemplar Site Ph 3 & 4, Bicester

Response to Condition 67 of 10/01780/HYBRID

An intrusive site investigation was undertaken by Enzygo during October 2016 for the previous owners of the site – A2 Dominion, 32 no trial pits where excavated across the site to a depth of 1.0m – 2.0m, the report advised that no groundwater was encountered during the excavations or subsequent monitoring.

A further assessment of ground water and risk was undertaken by the geotechnical engineers Wilson Bailey on behalf of Crest Nicholson, this assessment is attached to this statement and concludes that ground water flooding poses no risk to the development.

It should also be noted that the site is in a relatively elevated position, there is a small watercourse to the south of the site (The Bure), however it has been reported that this is some 7.0m lower in elevation than the site (Hyder Drainage Strategy March 2010).

It therefore follows that the new development is not at risk of ground water flooding and therefore no precautionary measures are required.

MD/djp/10346
21/08/2018

WILSON BAILEY
GEOTECHNICAL & ENVIRONMENTAL

Carters Barn
Sherrington
Wiltshire
BA12 0SN
Tel: 01985 850882

2 March 2018

Your ref:
Planning ref:
Our ref: J17038dbc03

Chris Gardiner
Crest Nicholson Regeneration
Crest House
Pycroft Road
Chertsey
Surrey
KT16 9GN

Dear Mr Gardiner,

RE: ELMSBROOK DEVELOPMENT BICESTER PHASES 3 & 4

DISCUSSION OF SITE DRAIANGE AND WATER PROOFING TO BUILDINGS

This letter provides a discussion of the site drainage issues with regards to the requirement for waterproofing provision to the proposed ground floor slabs to proposed new buildings that are intended to be constructed using a 'Nu-Span' system of insulated segmental suspended floors rather than the more traditional suspended beam and block floors.

It is understood that 'Nu-Span' as a result of the waterproofing details that is required as part of a the 'Nu-Span' system it must be proven that there is either a low or receding water table level due to the building works or that the ground is sufficiently free draining so as not to allow a buildup of water below the slab.

This letter is intended to provide a discussion of the groundwater regime at this site with respect to these requirements and is provided in accordance with our standard terms, conditions and limitations.

The near surface ground conditions at this site comprise clay soils over weathered Cornbrash Limestone and groundwater monitoring carried out by others as part of an initial site investigation report by the vendor indicate that groundwater was not encountered during the site investigation works or monitoring period. This has also been substantiated by limited supplementary site investigation works carried out by Wilson Bailey Partnership. These findings demonstrate that groundwater is not present at or close to the ground surface of the proposed development.

Furthermore, soakage testing carried out as part of the previous ground investigation report by others has confirmed the weathered Cornbrash Limestone to have a reasonably good permeability with infiltration results of between 1.1e-5m/s to 8.9e-5m/s, although the near surface clay soils are noted as being essentially impermeable. These findings support the view that the limestone may be considered to be free draining ground.

On the basis of these finding, it is therefore considered that providing a connectivity can be established through the superficial clay soils into the underlying weathered limestone, then the ground may be defined as having a low groundwater level and to be free draining and as such would not allow the build-up of water below the slab.

It has been suggested that this connectivity may be established through the provision of a sump beneath each plot that will ensure that, in the unlikely event of any superficial water entering the underfloor void, this water would be able to drain through the sump into the free draining limestone beneath.

The detailed design of the sump is being carried out by the architect and engineers separately to ensure coordination with foundations and other elements of the substructure.

We trust that this letter provides sufficient information although please do not hesitate to contact me should you have any queries or questions.

Yours sincerely
Wilson Bailey Partnership

Dominic Brightman
BSc MSc DIC FGS CGeol ARSM

Encs