The Stables, Hook Mill Lane, Lightwater GU18 5UD

Report on Flood Resilience Measures

Introduction

The purpose of this report is to address the requirements to discharge condition 10 of planning permission 21/0398. The wording of the condition is:

No development above slab level shall be undertaken until flood resilient measures have been submitted to and approved in writing by the Local Planning Authority. These shall be retained and maintained for their designated purpose in perpetuity or if necessary replaced with similar.

The Flood Risk Assessment

Section 6.6 of the FRA says:

*The average ground level within the proposed dwelling location is around 39.5m AOD. As such, establishing the FFL of the building at a minimum of 300mm above the general ground level (i.e. **39.8m AOD**) would exceed the recommendations of the EA in respect of climate change, with the FFL raised **0.88m** above the 1 in 100 year flood level, and **0.74m** above the 1 in 100 year plus 70% climate change level.*

Section 6.7 of the FRA goes on to say:

It should be noted that the FFL will be set such that the dwelling is flood resistant, and resilience measures should not be required.

The only reason that section 6.7 qualifies this statement by referring to an event of more severe flooding is because the EA was not able to provide information in respect of a 1 in 1000 year flood. The statistical likelihood of flood water ever entering the building is so remote as to be inconceivable.

The substructure and ground floor construction

Nevertheless, the following information is provided to demonstrate that, even in the highly unlikely event of a flood, the substructure and ground floor construction is resilient to the effects of flooding.

Substructure:	Concrete piles and reinforced concrete ring beam
Floor:	Proprietary concrete beam + block with closed cell aircrete blocks Closed cell phenolic insulation Sand/cement screed Porcelain tile finish
Walls:	Cavity walls with an outer leaf of either brick or medium density concrete block plus decorative timber cladding. The timber cladding is not integral to the construction and could be replaced if damaged. Dense concrete blocks with concrete filled cavity below ground level Closed cell phenolic insulation in the cavity Inner leaf of closed cell aircrete blocks Internal finish of plasterboard on adhesive dabs. This can be regarded as sacrificial and could be replaced if damaged.

Drawing AD10 is attached indicating a typical wall/floor junction detail.

External cavity wall construction:
Outer leaf 103 facing bricks laid
in Flemish bond with cut headers
150 cavity with 100 Kooltherm K108
100 Thermalite 'Shield' or equiv. inner leaf (LAMDA 0.15)
Concrete filled cavity below GL
Cavity roll or equiv. DPC at 300 from GL.
S/steel wall ties in accordance with Table 6
of Approved Document A.
Cavity closers: Thermabate.
Internal finish: Wallboard + skim on adhesive dabs
U-value 0.14

Floor construction:
25 finishes zone to suit client specified finish
75 mesh reinforced s/c screed incorporating
u/floor heating on
1000g polythene VCL on
150mm Kingspan Kooltherm 103 floor insulation on
1200g polythene DPM taken up and lapped with wall DPC on
proprietory beam and block floor installed to manufacturer's
instructions over ventilated void incorporating air bricks
30mm Kingspan Kooltherm 103 perimeter insulated upstands
to full depth of screed
U-value 0.10 (P/A 0.3.6)

s/steel wall ties
and retaining clips

Cavitray Type G or similar
cavity tray over air bricks

Glidevale MV650 or similar weepvent

DPC

Glidevale MV250 or similar
air bricks with Glidevale MV251
or similar periscope vents with vertical
adaptors at 2000mm max c/c

facing bricks below DPC
to be F2 or S2 laid with
mortar designation (i)

300

coursing block

150 ventilated void

Dense blocks with concrete
filled cavity below ground level

Pile cap ring beam by
specialist contractor

0 50 100 150 200 250
mm

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Project title
The Stables
Hook Mill Lane
Lightwater

Drawing title
External wall type 1:
wall / gnd floor
detail

Project Nr.	Drawing Nr.
2020	AD10

Scale	Date	Revision	Drawn by
1:5 at A3	20.1.22		CCA