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18—11—2022

22 Kemplay Road - Foundation and Surface Water Strategy

Sophie George
SG Architecture Ltd
60 Ravenswood Avenue
Tunbridge Wells
Kent, TN2 3SQ

To Sophie,

The attached drawing outlines the structural and surface water strategy at 22 Kemplay road, relating to the implications of lowering the floor level throughout the lowerground floor.

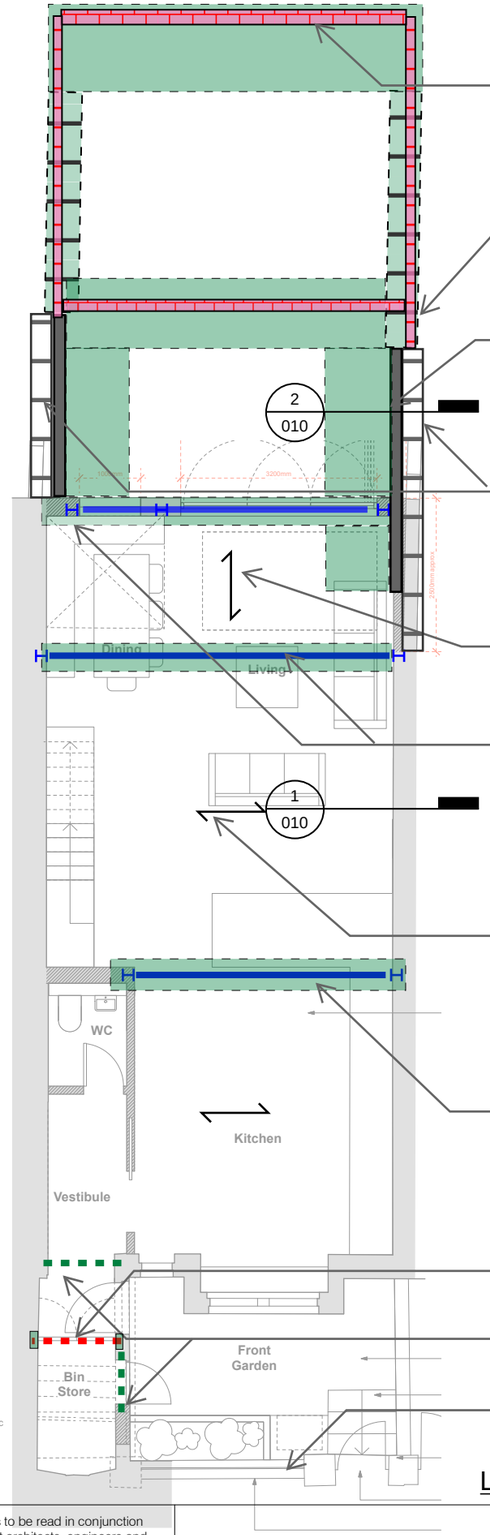
Internally, the existing suspended timber floor with vented void below will be removed and replaced with a suspended reinforced concrete slab at lower level. Trial pits around the perimeter of the building have been dug to establish the depth of the existing foundations to the masonry party walls. The new structure will not be constructed any lower than the existing foundations. With this we have shown that at no point during the installation of the new slab the existing foundations will be undermined, and the structural integrity of the parent and neighbouring buildings will be maintained.

Externally, lowering the ground levels to the rear will mean the existing masonry garden party walls will need to be underpinned and a new retaining wall placed in front. Please see attached drawing for more details.

The surface water management strategy has also been carefully considered to mitigate the risk of flooding, details of which can be found on the attached drawing.

Yours faithfully.

Henry Burling
Senior Engineer



1000mm high reinforced blockwork retaining wall with 330mm masonry wall on top, reinforced concrete strip foundation

215mm thk reinforced block retaining wall on stepped reinforced concrete strip foundation

approx. 1300mm high, 200mm thick RC wall in front of underpinning with 1000mm long x 350mm thick RC toe

mass concrete underpinning to party wall in maximum 1000mm sections in hit and miss sequence, sequence to temporary works specialist details

suspended RC slab, 200mm THK on 50mm blinding

new steel box frame to maintain stability, bottom member encased in concrete

suspended RC slab, 200mm THK on 50mm blinding, supported on existing masonry corbelled foundations, no excavation to be deeper than bottom of existing foundations unless noted otherwise as underpinning

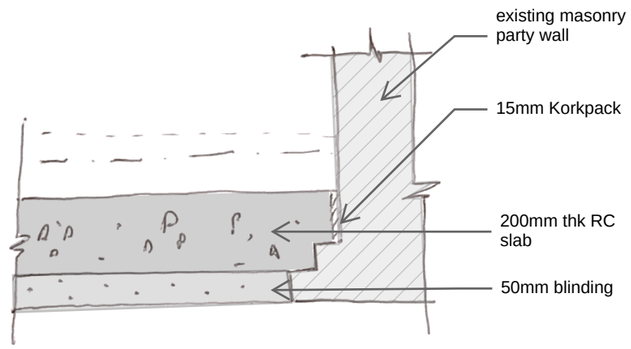
new steel box frame to maintain stability, bottom member encased in concrete

new 152x89 UB as lintel over in location of demolished wall

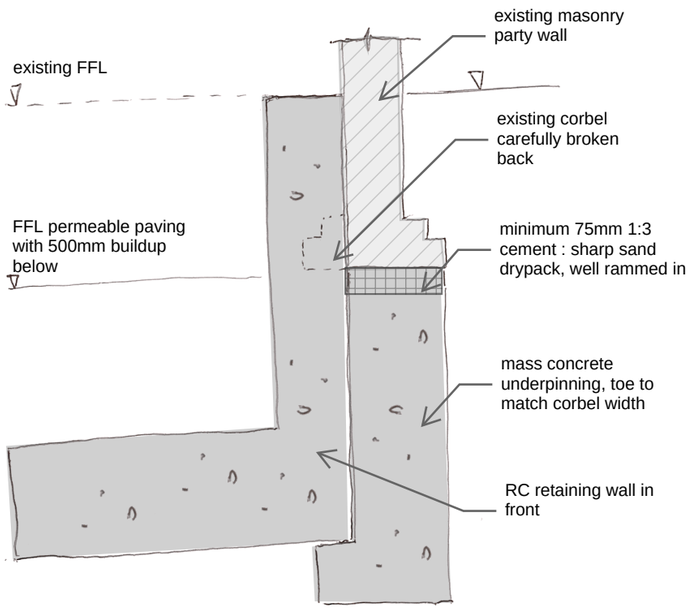
new precast concrete lintels

wall rebuilt on new foundation, with lintels bridging over tree roots TBC

Lower Ground Floor Plan



Section 1



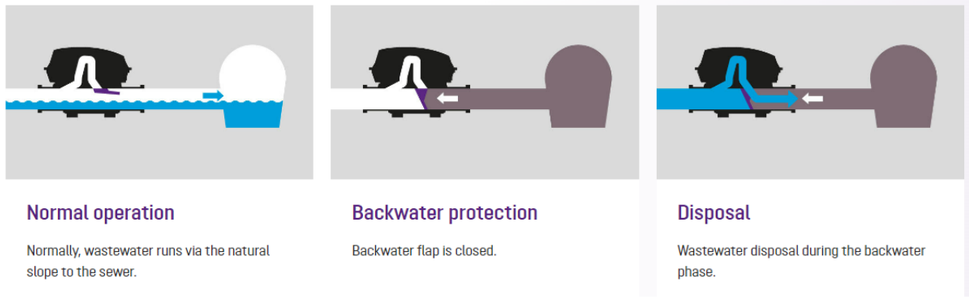
Section 2

Surface Water Drainage Strategy

We have procured a CCTV drainage survey identifying the extent, condition and levels of the existing drainage on site. The existing outfall drain on site is approximately 1.26m deep and the reduction in floor level will not effect this.

In addition, the drainage proposals will include a Kessel backwater pumping station. Under normal operation, this pump discharges flows in line with a typical gravity drainage system. However, during periods of intense rainfall when the outfall pipe to the public sewer within Kemplay Road may be surcharged, the pump closes a valve which prevents the backwash of water into building. The pump then starts operating, pumping water against the surcharged water preventing flooding occurring to the lower ground floor of the building.

The proposed RC floor will prevent the rising of groundwater and will prevent groundwater flooding.



This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

Do not scale from this drawing.

rev	date	by	chk	description
P2	Nov '22	HB	FG	Preliminary
P1	Nov '22	HB	FG	Preliminary

Drawing title: Foundation and Surface Water Strategy

scale (s): 1:50@ A1; 1:100@A3 | date: November 2022 | drawn: HB

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Project: 22 Kemplay Road

Drawing status: Preliminary | Status S2 | Revision P2

Project no.	Originator	Zone	Level	Type	Role	drg no.
220303	-EW	-ZZ-	ZZ-	SK	-S-	010