

## Proposed Work

Garden Flat of Maryon Hall, 19 Frognal Lane, London NW3 7DB

### A. Explanation of the sources considered and expertise consulted in resolving the flat's problems

The primary reason for undertaking work at the Garden Flat is to resolve some fairly major problems with the flat making it almost uninhabitable and at risk. These include flooding and damp problems, and movement of the flank wall on the Frognal Lane side of the house, as described in the Design & Access Statement. There has also been some damage to the ceilings from renovation work in the flat above.

Experts have been consulted about these, and the following is the proposed work based on their recommendations:

#### 1) *Resolving flooding and damp problems*

Proofing methods such as damp proofing injection that might apply to a modern house are clearly inappropriate for a house of this age with its thick walls and for the sub-soil conditions. The pottery/workshop walls show signs of previous attempts at wall injection which, not surprisingly considering the thickness of the walls here, have failed.

On the advice of *Michael H de Freitas PhD, DIC, CGeol, C.WEM*, Emeritus Reader in Engineering Geology, Imperial College London, narrow pipes have been pushed down into the ground, and the level of groundwater measured during and after periods of heavy rainfall. It seems there are small surges in the groundwater after rainfall that so far have reached 1.06 metres below the surface of the path, but 0.29 metres above the floor of the bathroom. It would seem this is indicating capillarity rather than actual surges in water table flow so that attention to surface water ingress around the house and drains overflow near the front door should prevent the intermittent flooding that is occurring.

*Margaret I. Steele BSc, CSRT* Independent Damp and Timber Surveyor of Harper Steele Associates LLP Andridge Hill House, Sprigs Holly Lane, Radnage, High Wycombe HP14 4DZ, has been employed to survey and propose a new strategy to deal with the damp and flooding. This consists of

- i) Re-laying the York stone paving along the northern side of the house with a very gentle fall to direct rainwater or garden hose water from next door away from the house towards the flowerbeds, and with a U-drain along the wall and partly below the York stone as in the diagram 'Existing floor plan with potential positions for sumps'. This York stone paving is in any case very uneven due to expansion of the larger roots of the lime trees here, and will be laid and cut around these where necessary to prevent the current fairly major trip hazards.
- ii) If this proves insufficient and groundwater surges still cause water to enter the flat, then sumps can be dug under this path to lower the water table and re-direct groundwater away, with the York stone re-laid on top.  
Sumps may also be required along the Frognal Lane external house wall (placed invisibly under the lightwells/redundant soakaways here). Testing so far indicates that this will not be necessary, however approval at this stage will mean that another application will not be required if this does prove necessary. See 'Existing floor plan with potential positions for sumps'.
- iii) Overhaul of the drainpipes coming from the main and southern 2-storey extension roof down to the area to the left of the front door and into a new trap and drain out to the main drain under the main path to Chesterford Gardens. Renewal of spalling lime render and the wall/ground joint here.  
The garden flat entrance is marred by modern brick walls that support the steps to the ground floor flat, and contain the drainage pipes and trap here. It is proposed to re-build the wall (and the

threshold step) using bricks more sympathetic to the building while rebuilding the trap. If a sump is required here this can go below the trap, its pump diverting ground water to the drain system.

- iv) Cove joints already exist in the pottery/workshop area. These will be continued around the main flat wall/floor junction to stop any water entering the flat here and encourage it to find another way. These are not to be cut into the terrazzo but cemented to it to form a barrier to water penetration. No cove joints at floor level will be placed where the Victorian green and white tiling currently exists; there has never been any water coming from this tightly fitting junction in any case.
- v) Renewal of the hall (new kitchen) floor with a new membrane and insulation to modern standards with voids filled if found below (see Floor insulation calculations 1D121M762D.pdf and drawings 'Structural Proposed Floor Plan 14084-010' and 'Structural Proposed Details 1 14084-020.pdf').
- vi) The significant void under the living room terrazzo floor created by erosion - washing out of silt fines by water escaping from the drainage system by the front door and possibly by ground water action over many years - is to be filled by injection through a few small holes made through the existing crack in the floor. This is to prevent water collecting under the floor, and provide support for the floor. The large floor crack (see photo 1), now filled, has been there for many decades, but with a large void below the floor (it previously was laid onto the soil below) we have some concern for its weight-bearing strength, and wish to rectify this, as well as improving the previous crack fill whose marble chips are of too small a grade. It is thought this will tend to stop water flowing below the floor which would in turn prevent further erosion and void formation in the future.



**Photo 1:** Part of filled crack in living room terrazzo floor

The recess to the left of the living room fireplace revealed in 1997 is to be retained, although it is planned that this will contain shelving, and a wall/floor cove joint taken fully around this feature, as this is where most water enters the room.

- vii) The current lime plaster is to be replaced with 'Unilit 30' lime render to prevent water penetration. This is a breathable natural hydraulic lime, but has added waterproofing and insulation properties. The render will go down only just below the top level of the skirting boards to prevent water from soaking upwards if flooding should ever occur again. The house previously contained no skirting boards below the ground floor; current modern skirting boards all require renewal due to extensive and prolonged water damage.

The large space in the main bedroom where the original kitchen range would have been within the large chimney breast will be lime plastered as now and its integrity retained. The chimney will be retained too, though - as now - closed off and ventilated.

## **2) Resolving external flank wall movement**

Jacqui Osborne BSc (Hons) MStruct E C Eng Structural and Architectural Engineer of Osborne Edwards Ltd was consulted about the movement of the Frogmal Lane side flank wall, in addition to providing calculations for planned internal level and wall changes.

A trial hole was cut in the living room ceiling to allow visual inspection on her advice. She determined that the external wall above the garden floor flat was considerably thinner than the wall below it. By resting on its outer side, the weight of this upper 3-storey wall was causing a turning moment in the lower wall at this point, exacerbated by the fact that the wooden floor/ceiling joists were merely resting on top of the thicker wall and not tied to it. She has made recommendations which include tying the joists to the outer wall here (see drawings 'Structural Proposed Floor Plan 14084-010' and 'Structural proposed details 4 14084-023.pdf'). None of this work will be visible externally or internally: bolting of joists will be within the ceiling and floor void; twisted tie-bars will be sited between bricks and re-covered in matching lime mortar.

The side walls of the external light wells along the Frogmal Lane side flank wall should be acting as buttresses to stop further movement, but in fact are not even touching the walls, suggesting their foundations have subsided due to erosion. Since the walls around the light wells are in a poor state in places, rebuilding them with the existing bricks or identical second hand bricks exactly as they are but so that they again act as low small buttresses can be done at the same time.

## **B. Further Proposals: Flat rationalisation; Changes to make better use of space**

As presented in the Design & Access Statement, while doing fairly extensive work to the several major problems that are affecting the habitability of the flat, we would like to take this opportunity to rationalise the flat to make better use of the space. This includes the following:

### **1) New guest bedroom with en-suite bathroom and sauna + utility area.**

The part of the pottery studio / workshop that is currently used for storage will be rendered and used as a guest bedroom (Bedroom 2). A door opening will be made to the current boiler/washing machine room. The walls here are currently formed from some Victorian and mainly 20th century bricks and concrete block which will be rendered, and with a new door opening will form an en-suite bathroom. A door opening will also be made from the new Bedroom 2 to the bath area of the current main bathroom to form a sauna. The current opening to the bath area will be blocked off. This is below a fireplace in the ground floor flat above. The old supporting pillars will be retained and a shelf formed between them rather than using a supporting lintel.

The 'Pottery Studio' (as named in 1962) itself will be retained as it is, as a place for hobby craft work. A Victorian pine door will be fitted to close it off from the new utility area using and extending the existing door posts.

### **2) Formation of new kitchen and dining area**

The current kitchen is a corridor, far from the dining table (the current study area table) which is down three steps, while the hall is a large room. It is proposed to form a more integrated kitchen from most of the hall and the large walk-in cupboard area currently off the bathroom by making an opening in the wall between.



*Photo 2: White & green tiling in current kitchen*



*Photo 3: Wall section above white & green tiling to be removed*

By retaining the tiled wall between the current kitchen and hall (currently pierced by a modern window) but taking it down to the level of the top of the tiles (see photo 3) and retaining its curved-off end, this area will be opened up into the new dining area beyond (part of the current kitchen), making it possible to pass food and crockery to and from the kitchen and the dining area. This will also open out the area so that it feels more spacious and less like a corridor, though the fact that it was a corridor will still be clear from retention of the original green and white tiling. The current doorway to the current kitchen area will be removed, and the Victorian door re-used within the flat.

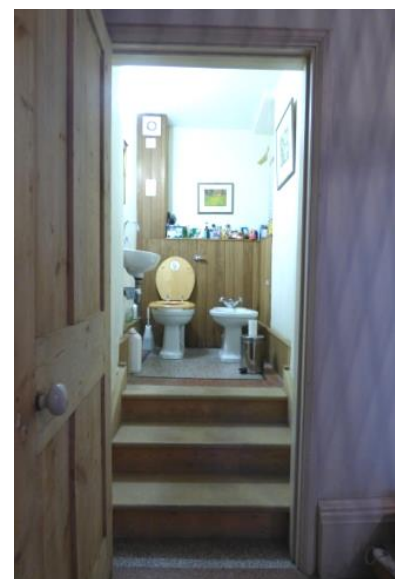
The current hall was poorly tanked in the 1970s, is very damp (see photo 11 in the Design & Access Statement), and the small 4cm difference in height from the hall into the main flat (see photo 4) means that many guests both trip up and fall down this step. A trial pit has confirmed that in the current hall area there is no existing Victorian terrazzo beneath the concrete floor.

Since the new kitchen area requires re-tanking and insulating we would like to lower this floor by 4cms to the level of the terrazzo. We have now obtained advice on the feasibility and the calculations required to lower the current hall floor from structural engineer Jacqui Osborne (see drawings 'Structural Proposed Floor Plan 14084-010'; 'Structural Proposed Details 1 14084-020.pdf'). This is in addition to her calculations for providing support to allow removal of a section of wall between the hall and cupboard behind, and lowering the wall between the hall and kitchen (drawings 'Structural Proposed Floor Plan 14084-010'; 'Structural Proposed Details 1 14084-020'; 'Structural Proposed Details 2 14084-022').

- 3) Lowering Bedroom 1's en-suite WC floor.** The en-suite WC to the main bedroom is accessed via three steps (see photo 5). These steps are proving problematic at night time and it is proposed that while modernising the sanitary ware here, the terrazzo floor be very carefully cut out, lowered and moved outwards to the terrazzo of the rest of the bedroom, removing the three steps (see drawings 'Structural Proposed Floor Plan 14084-010.pdf' section 4-4 and 'Structural Proposed Details 2 14084-022.pdf'). The gap behind will be filled by sympathetic and hygienic flooring under the WC. While this removes a feature of this part of the room, the wooden steps here are not original: the previous steps had rotted due to flooding incidents and dampness here and required replacement in 1997. This would help enable us to remain in the flat for 25-30 years. We have concerns that night-time visits to the WC up three steps would become dangerous as we become more elderly. There has already been a nasty fall here, and permission to do this would be welcomed.



**Photo 4:** Small 4cm step from terrazzo floor in current kitchen up to concrete hall floor - the cause of many trips



**Photo 5:** Three steps up to en-suite WC off Bed 1 (previously a corridor)

Retaining the ceiling height will we believe preserve the sense that this was originally a small corridor down the left side of the original large kitchen range in its chimney breast to the room behind.

- 4) The doorway to the pottery studio / workshop area – 68cms wide and reduced further by the door posts - is very narrow (see photo 6). Given the wall thickness here, this makes it very difficult to move larger furniture/ objects through and turn the corner. This doorway is unlikely to be original and, probably in the 1960s, was fitted with a modern door (since replaced with a more fire-resistant door) and a concrete step for the change in levels. The doorway could have previously been unnecessary as there was originally a wide (102cm) entrance to the corridor where the cooker is currently (see photo 3). It is proposed that the doorway to the pottery studio / workshop be widened here to 94cms, but the sense of an original 51cm-thick wall be retained by hanging the new door in its current position at the far side of the doorway and deepening the step.



**Photo 6:** *Narrow doorway to pottery/workshop area, to the right of the front door, with step*

- 5) **Windows.** As revealed in the previous renovation when all modern plaster was removed, the windows, their wood surrounds and the internal brickwork immediately surrounding these are Victorian, of a size matching the window widths above, unlike the previous smaller Georgian windows. It is proposed to fit internal shutters to the main bedroom, current study area and living room windows rather than curtains. It is proposed that these are identical in appearance and mechanism to the Victorian window shutters on the floor above (mentioned in the listing). Where older (Victorian?) window bars exist (inside the 2 small sash windows to the pottery studio / workshop and outside the large sash window to the new study) these will be retained, but treated against rust and painted grey to match the flat above rather than black. No further window bars are proposed; all windows currently have secure window locks fitted that restrict opening and the flat is already fitted with an alarm system which will just be up-dated by the same firm.
- 6) **Boiler.** The boiler will be moved to a currently unused area under the steps up to the pantry on the mezzanine floor. The flue for the boiler will share the extraction point used by the Saniflow from the main bedroom's en-suite WC, as seen in photo 5 in the Design & Access Statement and as in photo 7.



**Photo 7:** *Current extractor outlet between window and drainpipe.*

## **F. Details of the expected impact that the proposed development will have on the special interest of the listed building or structure and its setting (and adjacent listed buildings)**

There are no proposed changes to the exterior of the building apart from:



- i) One small extractor fan outlet (other extractor fan outlets remain as current, re-using those already there). The new outlet will be at the rear of the house on a wall at 90° to the line of sight here, at near ground level and partly hidden by existing drainpipes, so essentially barely visible. Its internal position is immediately above a grill on the outer wall just above the lower render (see Photos 7 and 8) so it is hoped to direct the outlet downwards to this point and to clean-up and retain the existing grill as a cover. If this proves impossible, then a similar narrower pierced metal grill will be placed above this, below the current horizontal drainpipe here.



**Photo 7:** Proposed extractor site above render.



**Photo 8:** Pierced metal grill above render

- ii) An overhaul of the down pipes from the roof of the 2-storey section and part of the main roof and mansard gully that pass the side of the front doors to the garden and ground floor flats. These pipes are a visual mess near the main entrances to the ground floor and garden flats (Photos 9 and 10). The spalling render here and to the right of the front door will be replaced with waterproof lime render.

They are also contributing to the significant intermittent flooding of the lower flat. The larger cast iron drainpipe will be retained; the smaller cast iron and several plastic and collapsing small drainpipes will be rationalised into a better quality and adequately-sized drainpipe feeding directly into a new trap, thus more sympathetic and protective for the building.



**Photos 9 and 10:** Downpipes passing front door to the trap within modern brick 'box'.

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