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THE GATEHOUSE, WITANHURST NW8:
REPORT ON CONDITION OF THE EXTERNAL FABRIC – DRAFT 1

1.00 INTRODUCTION

1.01 The following report is an initial report on the inspection of the external fabric of The Gatehouse carried out on behalf of Witanhurst Construction Management Limited.

1.02 The purpose of this report is to report of the condition of the external fabric and make recommendations for conservation repairs and general maintenance that is required to bring the building back to an acceptable standard of condition while the building is refurbished under the current project to bring it back into beneficial use.

2.00 DESCRIPTION OF BUILDING

2.01 The Gatehouse is a statutorily listed (Grade II) early 20th Century gatehouse built in 1929 and subsequently extended to provide a second archway to the north in the 1970's.

It undoubtedly is an important contribution to the Highgate Village Conservation Area lying at the key junction between Highgate West Hill and The Grove.

2.02 The archival search and assessment is based upon the information made available to us by WCML and it's consultants, together with other publicly available images, and is intended purely to set the context of the building today and included the following:

- Copy of layout plans prepared by WCML and dated Jan 2012.
- A copy of the Listing for The Gatehouse.
- Extract on the Site History and Building Development carried out by Adam Architects in July 2009.

3.00 SURVEY AND FURTHER RECOMMENDATIONS

3.01 The initial inspection was carried out on Friday 07 June 2013 by Stephen Twine from Scott & Twine Architects using only visual inspection from accessible areas. No invasive opening up or other investigation works were carried out.

Limited access was obtained to the main roof area and the northern extension lower roof.

3.02 The weather conditions were generally fine throughout the inspection from 1.00pm through to 5.00pm.

Further Recommendations

3.03 The following further surveys/inspections are recommended arising from the initial inspection covered in this report.

1. Access to roof spaces to inspect roof structure for damp and decay.
2. A structural inspection of the floor structures internally and observations on vertical cracking noted in the external brickwork at various locations around the building.
3. Test/Inspection of the underground drainage system in the environs of the Gatehouse (Clean/CCTV).

4.00 DESCRIPTION OF AREAS INSPECTED

4.01 The Gatehouse is a narrow building set across the north-east corner of the Witanhurst site and provides it' sole vehicular access point.

Built in the Queen Anne style, it was originally a gateway, with lodges either side at ground floor, a continuous first floor and single storey rear extensions. To this a further arch and lodge were added on the north side, giving the double archway appearance of the Gatehouse today.

The main roof is covered in clay plain tiles, the two single storey side wings are flat asphalt covered roofs, the centre rear extension being lead clad flat roofing. All roofs drain via chute outlets to cast-iron/lead hopper heads and downpipes on both east (front) and west (rear) sides of the building.

The main accommodation is set over two floors, with masonry walls and timber floor structures.

External walls are solid yellow and red stock brick masonry with red brick dressing, decorative pilasters and surmounted by a decorative brick cornice and parapet with stone copings.

Windows are generally a combination of fixed painted timber lights or timber vertical sliding sashes.

4,02 The interior of the building retains much of its original plan form, but has largely had interior fittings and fixtures stripped out, with room walls now generally dry lined in plasterboard.

The building has been utilised for office use and accordingly the fabric includes the consequent level of services and fire precautions to facilitate such a use.

Most services tend to be surface run in dado or skirting trunking.

4.03 The building is set along the frontage of Highgate West Hill, set back from the pavement line and flanked on the north side by The Grove (The End House) and on the south side by the boundary wall to Highgate West Hill.

The building is generally surrounded by hard standing or paths, and the ground levels in the archways have been lowered to facilitate construction vehicle access during the works.

Roofs

4.04 The main roof is a pitched roof running north-south clad in clay

plain tiles. It is drained on all sides by a parapet valley gutter, lined with lead sheet.

While handmade clay plain tiles pre-dominate on the front (east and south) slopes, the rear slope if predominantly of machine made clay plain tiles.

Overall the tiling is nearing the end of its life, with significant areas of decay and de-laminating tiles.

Half round ridge tiles appear to be later concrete tile replacements, which are poorly bedded.

4.05 It is recommended that the tiling and ridge/hip tiles be replaced as many are at the end of their serviceable life.

4.06 There are two square brick chimney stacks at the southern end of the Gatehouse, which relate to former fireplaces within the original Gatehouse. It could not be ascertained whether these flues are capped, but both stacks have an air vent located on the front (east) elevation – presumed to be for ventilation of the flue.

4.07 The lead gutter linings are laid to falls with steps at the south end, while the northern end appears to have minimal steps and continuous lengths of lead. These gutters have been heavily repaired in a series of temporary repairs, with extensive splits in the lead sheet evident.

Lead cover flashing have in many instances come away from their seats.

These gutters are beyond the limit of their serviceable life and will need to be replaced and the gutter falls reconfigured to meet current standards.

The narrow width (sometimes less than 200mm) should be addressed to facilitate safer maintenance access. Consideration ought to also be given to a fall arrest system.

4.08 The centre roof of the three lower roofs is a flat lead roof, with lead rolls with chute outlets on each side.

This was not inspected at close quarters.

4.09 The two outside single storey extensions are both asphalt covered, with remnants of solar reflective coatings evident.

The asphalt displays a number of general defects (blisters, indents, etc), but notably a number of serious defects that would ultimately (or already have) lead to water ingress through the covering:

- The upstand to the first floor of the Gatehouse is 'sagging' and splitting. There are no cover flashings to the top of asphalt upstands.
- There are cracks within the coverings, particularly adjacent parapet and abutment upstand.
- Previous leaks have obviously been made good temporarily with applied membranes (Fig. x).

Roof Structure

4.10 Whilst no access was gained to the loft spaces, observation from the loft access hatch indicates that there is a timber roof structure, condition unknown.

There are no obvious external signs of distress on either roof slopes of gutter boards, but the presence of internal rainwater leaks (evident on ceiling/wall finishes) would indicate that further inspection of roof timbers, particularly at their bearing on the external walls would be prudent.

It is recommended that the roof structure be review for structural soundness and that if found necessary, a timber damp and decay survey is carried out to ascertain the condition of the roof timbers.

Security staff have also advised of previous infestation of 'wasps' in the roof spaces and voids – dealt with by Pest Control, but a reoccurrence of such infestation should be considered a possibility.

Rainwater Disposal

4.11 The roofs are all drained via chute outlets to hopper heads of various designs via external downpipes to gullies connected to the existing below ground drainage system.

Downpipe that survive from the original Gatehouse have larger decorative rectangular hopper heads and square lead rainwater downpipes.

The rainwater goods associated with the extended Gatehouse to the north are generally in 3"x4" cast iron downpipes, with smaller, more utilitarian hopper heads.

While the fixings of the downpipes seem generally secure, a number of fixings are loose and corroded. There are cracks evident on the cast iron rainwater goods and it is recommended that downpipes are dismantled and inspected (to facilitate re-pointing) and defective sections replaced as necessary.

Lead downpipes should be similar treated, with repairs being the preferred option in instances where damage or splits are found.

Roof outlets on the main roof are generally via square (75x75mm) outlets in the parapet gutter sole discharging to the hoper heads. There are no wire cages to prevent blockage of the outlet and it is recommended that these be include in any refurbishment.

The front (east) outlet has an 'emergency weir' overflow (2 No. Leads pipes) a prudent detail that should be applied to all parapet outlets.

4.12 Rainwater goods discharge in some instance via a shoe over a gulley grating, others via back-inlet gullies.

All gully locations should be inspected to ensure that they are not defective and run clear to drains.

Walls

4.13 External walls are generally masonry, assumed solid brick wall construction, with red and yellow stock bricks laid English bond externally, with red brick dressings, including a number of rubbed brick features including a decorative cornice and capitals to the brick pilasters on the elevation.

4.14 Brickwork is generally in good order, with very little brick decay of any concern. There is any element of low-level decay in the plinth and ground level, probably due to the generally prejudicial presence of concrete or other hard standing right up to the wall.

There appears to have been some damage to the brick work face resulting from an abrasive clean in the past (most evident on the side walls of the northern arch).

There are a number of areas of brickwork that are damaged as a result of previous interventions (additions or removals) which should be made good during any refurbishment of the facades.

4.15 It is generally the areas of repointing that will require most attention. The building has been variously repointed, but generally always with a hard, unsympathetic cement mortar, which is prejudicial to the brickwork.

It is recommended that trial are undertaken to investigate whether the mortar – in some instances only 3-4mm in depth can be removed without damage to the brick faces.

There are two main types of pointing:

- An older hard cement mortar with very coarse aggregate – 'Ministry of Works' mortar. This is of greater depth and may be the most difficult to remove.

- Later mortar recent cement mortars, generally much shallower surface repointing that may quite easily fall off. These have been poorly tooled and are 'smeared' across the brickwork faces/edges and may require a degree of subsequent cleaning to remove the surplus mortar.

4.16 Archival sources suggest that the original (southern portion) of the Gatehouse was constructed utilising reclaimed brickwork from the former stables that stood on this part of the site. These are principally red stock bricks laid English bond.

The later extension to provide the North arch and lodge appear to have been constructed predominantly in yellow stocks – the English bond suggests solid masonry.

Whilst these two portions are designed and detailed to read 'as one' there are some 'unfortunate' areas of poor brick selection (size and colour) in the newer extension that adversely affect the appearance of the building.

The main instance of this is over the north arch on the front (east) facade, where two prominent patches of red brick (later replacement) have been inserted into the predominantly yellow brickwork along with a 2 course band of red brick.

It is recommended that consideration be given to the replacement of this brick to 'harmonise' the elevation more in accordance with the original intentions of the extension.

4.17 The brickwork to the arches (inner and outer) has been protected in the south arch (inspection not possible), but is exposed on the north arch and exhibits significant signs of impact damage from vehicles.

Repairs to the brickwork will be necessary and a vehicle management policy instigated to avoid future damage.

4.18 As a general policy, redundant fixings (conduit, cable clips, etc) ought to be removed during the course of works.

A number of other fixings should be removed where they are prejudicial to the building fabric (e.g. old railing embedment on SE corner), but will require consultation and consent from the Conservation Officer.

Where listed as 'historic assets' such fittings should, wherever possible, be retained and conserved as part of the historic fabric.

Decorative Brickwork

4.19 The decorative brickwork cornice runs around the entire building, with decorative pilaster ion corners (and former corners) of the building.

This is generally in good order, with the main effects of weathering being exhibited on the top course of the cornice, the most crucial element for run-off. The top edge of this course is weathered with a mortar flaunching, which in instances has failed and will rapidly lead to increased weathering and decay of the cornice.

This hard mortar flaunching may not be easily removed and it is recommended that if trials confirm this to be the case, that alternative weathering, including lead cover flashings are explored as an alternative.

4.20 The brick pilasters have decorative capitals, with trigalypths formed in red brick. A number have decayed and may upon closer inspection required replacement.

Generally, elements that do not form crucial weathering should be retained and conservation repairs, including mortar repairs, carried out wherever possible to ensure the retention of historic fabric.

Copings

4.21 Parapets around both upper and lower roofs are all finished with stone parapets.

Generally the parapets on the 'original' Gatehouse are in sandstone (Yorkstone), while the later extensions are in a lighter limestone (Portland Stone).

4.22 Coping stones are generally soundly bedded on mortar, with only a small number of copings noted as being loose.

Coping stone joints are generally weathered and open and display evidence of multiple attempts to prevent water ingress though open joints via mortar pointing, mastics, liquid applied membranes and 'flashband'.

It is recommended that all copping stone joints be raked out and repointed to an adequate depth – in conjunction with a full inspection of any loose stones and their rebedding.

4.23 It was noted that 1 No. Coping stone on the west side (Yorkstone) had lost a corner, which should have a short section replaced or pieced in.

4.24 The north elevation could not be inspected due to the overgrown climber from the adjoining property (The End House). This will

need to be maintained and kept cut back below parapet height to ensure proper shedding of run-off.

Stone Cills

4.25 The stone window cills, while painted (obscuring condition), appear to be in good order with little evidence of delamination, cracking, etc. Leading edge drip appears to remain functioning, albeit weathered.

Stone cills appear to be confined to the 'original' Gatehouse, the later extension having painted pre-cast concrete sub-cills.

Door, Windows and External Joinery

4.26 External doors are generally painted timber, with a variety of modern security locks for controlled secure access to the building.

While doors are generally of a similar design (6 panelled doors with glazed fanlight over), a number are clearly modern replacements, with standard door leafs adapted to fit the existing frame opening.

Door frames are generally in reason able order, but are affected by decay in their lower portions. Decayed timber should be replaced with scarfed-in repairs of suitable timber. Frame fixings need to be inspected for soundness/security and pointing made good at junctions.

Missing weather bars should be replaced to door leafs.

4.27 External decorations are generally in very poor order, with all joinery elements requiring thorough preparation and redecoration following any necessary repairs or replacement of joinery elements.

4.28 Timber vertical sliding sash windows, together with a number of fixed lights are utilised throughout the building.

Most remain operational, but equally most exhibit some defects in their condition, mainly due to the effects of inadequate maintenance and onset of weathering and decay in the timber, most pronounced in cills and bottom embers of sashes and window frames.

4.29 Unsurprisingly, window detail varies from the 'original' gatehouse to the later extensions, the variance being most pronounced in terms of quality of construction, detailed embellishment and glazing bar profile.

4.30 There are predominantly 3 type of glazing bar, the wider bar profile from the original Gatehouse predominating, while later slimmer bars designs (2) are generally confined to the north side extension and the rear extension.

The window fitted to the later extension to the Gatehouse are of a simplified detail (no cover moulding externally) and slimmer glazing bars to the sliding sashes. They also appear to be of an inferior quality and construction.

4.31 General defects to window include:

- Advanced weathering of cills (possible replacement of piecing in repairs).
- Decay of cover mouldings at base/junction with cill.
- Decay of sash box/frame at lower jamb – previous scarfing in repairs evident. Further repair exercise required.
- Decay/defect in sashes joints along bottom members. Assessment required to ascertain whether repairs are possible, of replacement of sash should be undertaken.

4.32 A significant element of the elevations is the bay window on the south east side of the building. This two storey timber structure has been unsympathetically repaired, with timber panels having been replaced with ply sheet and mouldings replaced with PSE timber sections.

The SE facet requires significant replacement and window cills and cover mouldings require replacement of a general basis.

The render panel below the ground floor window cill appears sound, but should be reviewed in conjunction with a structural inspection of this element.

Metalwork

4.33 Archival evidence suggests that the gates to the south arch may have been panelled timber gates, but that these were replaced with metal gates in both arches, which are currently in storage.

Fixing positions in the outer arch are still evident and is the keep from the drop bolts in the southern arch driveway.

The condition of these gates is not know and should be subject to further detailed assessment by a specialist metalworker. There is however a set of archival photographs taken by WCML prior to their removal that record their condition visually and indicates that there were significant areas of damage that would require repairs and restoration.

4.34 Railings to the south side of the Gatehouse have been removed

and the remaining potion attached to the West Hill boundary wall are a modern mild steel replacement.

It is recommended that these are replaced with railings of a more appropriate design to the building's character.

4.35 The handrail and balustrade to the steps leading to the middle lodge would appear to be original and in relatively good order.

The handrail and guarding to the steps of the north lodge are modern unsympathetic mild steel, but are in good order.

Site Features

4.36 Outside of the actual building, there are few site features worthy of note that may be relevant to the Listing of the Building.

The bollards and chains to the entrance and boundary wall leading to The Grove are significant and contribute to the setting of the historic building, but hard standings and planting have generally all been lost and need to be replaced in an appropriate and sympathetic detail; to the setting of the building and the wider site.

Summary of Condition: Interior

4.37 Whilst the scope of the inspection was confined to the external fabric of the building, reference is made to the interiors where this is relevant to the condition and structural integrity of the building.

4.38 Internally, very little of the historic fabric remains, but the plan form has not altered dramatically from that indicated on the original designs (refer to appendix).

The building appears to have undergone generally unsympathetic, but non destructive refurbishments in the latter period of occupation.

Rooms have generally been 'dry-lined' with plasterboard, overlaying existing walls, the condition of which cannot therefore be ascertained. New timber skirting has been applied to new plasterboard linings.

Ceilings appear to have been over boarded with plasterboard and again, the condition of the underlying fabric (if any) could not be ascertained.

Door and window joinery have been retained, as have the 2 No. Original curved staircases to first floor.

4.39 Internal; floor structures, partition walls, etc were not inspected, but it is recommended that these be subject to a structural engineers inspection to ascertain general condition and capabilities in terms of floor loading, etc as part of any refurbishment proposals.

Services

4.40 Review of the services were not part of the inspection, but are being assessed by the services consultants (Vector) with a presumption to replace the existing electrical and mechanical services as part of any planned refurbishment. Mains connections are likely to be via the House system in accordance with best practice.

The presumption is to reuse existing below ground drainage connections.

Fire Precautions

4.41 Review of the fire precautions and provisions for means of escape were not part of the inspection.

Security Precautions

4.42 Review of the security precautions were not part of the inspection.

5.00 SUMMARY OF FINDINGS AND RECOMMENDATIONS

5.01 The main fabric of the building would appear to be in sound and robust condition. Very little movement was detected in the structure on either of the floors. This is also the case with the floor and roof structures, neither of which displays any signs of distress or defect.

Despite significant defects in the parapet gutters, water ingress into the first floor seems to have caused only localised damage and be associated with rainwater outlet positions on the roof above.

The plain tiled roof finishes appear to be at the end of their serviceable life, while the asphalt flat roofs to the north and south rear extensions are also indicating defects and a history of previous 'patch' repairs indicating a history of leaks.

Brickwork to the original Gatehouse appears to be pointed with a very hard mortar with a coarse exposed aggregate typical of so many 1930's structures. Whilst this give cause for concern in the longer term, it is in relatively good order and its removal is likely to cause greater damage to the brickwork.

Decorative brick moulding will require conservation repairs, but these are not extensive and are designed to maintain the water shedding function of elements like the cornice.

External joinery appears to have suffered from a general lack of regular maintenance, which has resulted in significant decay in the windows in particular, with damage to cills, sashes and applied mouldings. Most of these defects can be addressed through joinery repairs and replacement on a like for like basis.

There are a number of redundant services and more modern light fittings on the building exteriors in addition to modern unsympathetic service installations (extracts, etc) which need to be addressed in any refurbishment.

5.02 A programme of conservation repairs and maintenance tasks should allow the Gatehouse to be presented in a much more sympathetic light which would enhance the character and setting of this Listed building as well as the setting of other Listed buildings in the surroundings.

Scheduled of Recommended Repairs

5.03 This schedule of recommended repairs is based on the assumptions that the Gatehouse will continue in beneficial use and its ancillary function to the main house as a gatehouse receiving

visitors and guest alike. These repairs will allow it to continue to function adequately.

1. Replace existing tiled roof coverings (mix of various machine and handmade tile) with new Keymer Traditional clay plain tile (mix of Antique and Wealden Red).
2. Replace existing lead parapet gutters with new Code 5 lead on new timber gutter boards set to falls in accordance with current LDA recommendations.
3. Replace existing steeped flashing with new Code 4 flashings on 2 No. Chimneys, repointing chimneys with 1:1:6 mix mortar to match existing.
4. Rebed loose copings, 1 No. short (300mm) section to match existing sandstone, rake out and repoint all joints with 1:1:6 mortar to match existing.
5. Strip and replace existing defective asphalt roof on the North Lodge and provide new Code 4 lead flashing to all asphalt upstand on parapet walls and other abutments. Repoint existing Portland stone copings.
6. Carry out specialist brick mortar repairs to the decorative brick cornice where drips and leading edges have been lost. Replace flaunching with new 1:1:6 mortar flaunching.
7. Carefully cut out redundant services from the elevations and make good these and other former service apertures with new replacement bricks to match the existing mix of London yellow and red stocks.
8. Consider rebuilding the panel of red stocks over the north arch to achieve a better blend of brickwork appearance across the front (east) elevation.
9. Remove all external flues, foul drainage pipework and extract fans from the existing elevations and window openings. Reroute were necessary internally and terminate vents via new Keymer propriety tile vents located behind the parapet walls on the main roof.
10. Overhaul and repair existing rainwater goods. Consider replacement of later cast iron goods (front elevation) to match lead downpipes and hopper heads on the original downpipes to the rear.
11. Carry out conservation repairs to window on the original 1929 extension to match the original softwood (Pitch Pine) and profiles. Consider re-glazing these existing sashes to with new slim-line doubled glazed sealed units within existing glazing bars.
12. Consider replacement of later narrower sashes in the 1970's extension to the Gatehouse with new double glazed sashes to match the profile of the original building. Add timber profiles to sash boxes/brick reveal junction to match existing and decorate.
13. Remove hard standing from around the building perimeter where possible to allow 'breather gap' between walls and hard surfaces.