



37 NORTH ROAD

FAÇADE MASONRY CONDITION INVESTIGATION

JOB NO. 162-58



PKS ARCHITECTS

28 NOVEMBER 2024

REVISION B (FOR METHODOLOGY)

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1 INTRODUCTION

1.1 AUTHORITY AND REFERENCE

Hutton+Rostron Environmental Investigations Limited carried out a site visit to 37 North Road, N6 4BE on 28 November 2024 in accordance with instructions received from Mr Douglas Paskin by email dated 18 November 2024. Reference was made to drawings supplied by the client for the identification of structures. For the purpose of orientation in this report, the building was taken as facing east onto North Road

1.2 AIM

The aim of this investigation was to determine the construction, evolution and condition of the external facades. Recommendations and risk management advice for the refurbishment are provided. Under revision A of this document, various small clarifications have been made

Under revision B of this document, issued in February 2025, methodology has been laid out for the works recommended by H+R

1.3 H+R STAFF ON SITE

Tim Jordan
Ryan Donoghue

1.4 PERSONNEL CONTACTED

Douglas Paskin - PKS Architects
Site Team

For limitations that apply to this report please refer back to revision A of this document

REFERENCE	ITEM	RECOMMENDATIONS	METHODOLOGY
RPT.1	Roof finish	<i>H+R understand that the client will overhaul the roof finishes</i>	The existing roof finishes should be carefully lifted by hand. All historic slates from the front pitch should be tap-tested to determine possible delamination and reviewed for excessive nail hole penetrations; any failures to be discarded. All other modern slates on other pitches to be discarded New linear vent straps from Nicholson airtrak should be laid along hip, crown roof and gutter abutment. New softwood retreated battens should be laid along with new bat-safe breather membrane. New and salvaged Penrhyn Welsh slate should be laid in uniform coursing with sizing and exposed margin to match the original. Fixings should be by double copper clout head nails at the overlap. Slate-and-a-halves should be used for cut junctions at hips and dormers Dormers and the crown roof should be re-laid in new lead sheet with underlay membrane and code thickness specified by a heritage leadworker (likely code 5)
RPT.2	Chimneystack	<i>Consideration could be given to re-lining flues. In any case, H+R recommend trickle-ventilation is provided up all flues</i> <i>All pots to be lifted and re-laid into a replacement flaunching of NHL5 lime mortar (with a party wall agreement, it would be optimal to do this for the neighbouring pots too). Ideally these would be replaced in historic replicas (see other commentary)</i> <i>Asbestos containing materials should be inspected by a specialist and carefully removed under controlled conditions</i> <i>Allow to rake-out and re-point all brickwork on the chimneystack using NHL5 lime mortar. Bricks with spalled faces should be cut-out and replaced in a brick of matching type and imperial size</i>	To re-line a flue which is to be brought back into use, flexible steel liners of a diameter to suit intended usage are fed up the brick riser void with the aid of a rope to draw it up from above. To provide trickle ventilation to redundant flues, red clay mushroom cowls (potentially bespoke to suit pots) should be loose laid into the head of the pot and above the internal fireplace, the aperture/throat should be sealed-off using a waterproof board (marine ply or similar), an intumescent air transfer grille (all joints filled using intumescent sealant) To re-lay a chimneypot entails levelling and packing-out the flue head aperture using Welsh slate before building-up a flaunching of NHL5 lime mortar. Flaunching should be a rounded profile to shed rain in service. Mortar to be sponge-finished and allowed to cure fully with temperatures not falling below 5 celcius and dampened hessian used to protect from sun/wind (proper curing without shrinkage cracks to be confirmed before scaffold strike) To remove asbestos containing materials is a specialist task with its own methodology. Broadly, this entails encapsulation, capture of any fibre-release and responsible disposal off-site Raking-out should ideally be done with a plugging chisel and lump hammer to a depth of 25mm or until sound material is reached. If cement mortars are very well adhered a mini hand held angle grinder may be necessary but care is needed to cut mortar only and not cut into brick arris or faces. Defective bricks should be removed at this stage (by raking out all bed mortar until the brick comes away). New pointing should be installed using NHL5 lime mortar. Raked-out brickwork is to be rinsed down the clean water to remove loose material. Deep joints (over 25mm depth) are to be dubbed-out with mortar in the first instance, along with re-bedding replacement bricks in areas needing repair/rebuild. Re-pointing should be to a flush profile with a brush-finish (protection whilst curing to be as per flaunching commentary above)
RPT.3	Front slope of party wall	<i>With a party wall agreement, it would be optimal to remove and replace the entire wallhead (new lead flashing onto roof slates, partial repair/rebuild of brick substrate, new 'Roman cement' render finish). The modern equivalent of 'Roman cement' is a product known as 'Prompt'. As per the original, the setting time of this product is very fast so application is a specialist task</i>	To remove the defective masonry of the existing wallhead should be done using hand tools (chisel and hammer) which should be straightforward due to its fragmentary state. Replacement brickwork should then be installed using replica stock brick laid into NHL5 bed mortar. 'Prompt' render should then be applied in three coats to an overall thickness of 25mm. This should be allowed to cure prior to using a grinder to cut a chase in for a code 4 lead flashing (interfacing with Welsh slate roof finish and zinc soakers)
RPT.4	Rear slope of party wall	<i>Allow to rake-out and re-point all brickwork on the chimneystack using NHL5 lime mortar. Bricks with spalled faces should be cut-out and replaced in a brick of matching type and imperial size</i> <i>The flashing at the roof line should be replaced in lead</i>	Methodology as per chimneystack commentary above Methodology as per front slope of party wall commentary above

REFERENCE	ITEM	RECOMMENDATIONS	METHODOLOGY
RPT.5	East elevation Wallhead and cornice	<i>These sections of wall should be carefully dismantled, being sure to take photographic records during this process. It is important that the process of dismantlement is closely supervised and not allowed to progress excessively (although none of the historic mortars may be entirely 'solid', the dismantlement must stop after reaching a point where the wall is reasonably intact). Reconstruction should use the original materials where possible but the expectation should be that matching new replica materials will be needed. New brickwork to be laid in NHL5 lime mortar, new render to be a 'Prompt' product as mentioned above</i> <i>All paint to be removed using chemical paint softener and pressurised steam lance. Cracks to be filled with 'Prompt' mortar. Small debonded areas do not require remediation. Redecoration to be made using Keim Mineral Paint</i> <i>Allow to record and remove the leadwork forming gutter lining and wallhead capping. Underlying flashband and cement patches should be removed and made good using 'Prompt' mortar. Conservation leadworker to be consulted on their preferred substrate build-up for laying lead onto masonry; a timber substrate and/or underlay membrane is normally called for</i>	Overall view photographs should be taken before commencing dismantlement and repeated as each section of render is detached and as each course of brick/stone is lifted. Dismantlement should be done by hammer and chisel (hammer-drills not to be used due to risk of loosening more of the wallhead than is necessary to dismantle). Each course of bricks/stones should be labelled by permanent marker and set aside on the scaffold for potential re-use. Upon reconstruction, the wallhead should be wetted and rinsed-off to remove loose material before laying salvaged or matching new bricks, stones and clay tiles in the same arrangement as per the original construction. New bed mortar should be of NHL5 binder with protection whilst curing to be as per launching commentary above. New render should be the 'Prompt' product, applied in three coats to an overall thickness of 25mm (additional thickness for ornamentation to be built-up and allowed to cure in increments no more than 25mm at a time). The decorative anthemion is to be replicated in the original methodology which was pre-casting as a block prior to embedding in fresh backing render in-situ Chemical paint softener products such as 'Tavec 201', 'Peelaway 1' and 'Peelaway 7' can be trialled to determine which one or which combination will effectively remove all existing paint layers (product methodology set out by the manufacturer but generally entailing thick application of gel, covering in sheeting for a set dwell time, removal by hand scraper and rinsing-down with water). Crack-filling will entail raking-out the cracks using a serrated small tool, flushing-out with water and pressing-in 'Prompt' mortar using a filling knife. Decoration using Keim paint will be as per manufacturer methodology (generally entailing proprietary primer layer followed by at least two finish coats) As part of wallhead dismantlement and re-build described above, the lead gutter/capping should be removed (along with flashband and cement mortar substrate). Reinstatement of these elements should be in the form of replica masonry and render. Setting-out of the finished wallhead arrangement should be co-ordinated with suitable drainage levels/falls, space to accommodate timber formwork and lead dressing and space to accommodate the Structural Engineer's strengthening measures at the corner of the wallhead
RPT.6	East elevation First floor	<i>Loose material to be removed before making good by building-up coats of 'Prompt' mortar. Replication of the pilaster capital will likely need to be done off-site using a reverse-moulding taken from the remaining capital at the party wall (check that it is the same as that seen at the neighbouring property at the other end of the terrace), again this should be done using a 'Prompt' mortar. All of the pilaster and other painted render features should be stripped and re-decorated as described above</i> <i>Failed previous repairs to be removed. Bricks with spalled/damaged faces to be cut-out and replaced in a brick of matching type and imperial size. Pointing for these areas should replicate the surrounding (modern) cement profile because it would be excessively damaging to attempt replacing cement pointing throughout. Products such as 'dyebrick' can be used to tone-in brick and mortar to match. This area of render should be replaced in a 'Prompt' mortar. The brick substrate (including sill and lintel) may be in need of repair/replacement</i> <i>Specialist cleaning contractor to be engaged to carry out cleaning trials. This may entail 'poultice' cleaning repeatedly to draw-out salts. The wall will require many months of drying and may be subject to recurring salt emergence</i>	Methodology for render and paintwork as per wallhead commentary above Removal of failed previous repairs (mortar patches) can be readily done by hand due to their present state of failure. Removal of spalled brick faces (in those areas not already intended to be re-built towards the wallhead) will entail raking-out all bed mortar until the brick comes away which could be done using hand tools (or, if needed, a brick plunge saw). Matching new bricks to be bedded into lime mortar and pointed in a cement mortar to match the surrounding aesthetic. Colour-matching using 'dyebrick' is described within manufacturer methodology (generally entailing mixing-up a solution and gradually applying thin coats of dye until bricks and mortar match the adjacent material as closely as possible) The specialist cleaning contractor will devise their own methodology from their position of prior experience. This is likely to entail application of a thick putty-like material onto the brickwork, covering with sheeting for a set 'dwell-time' prior to removal. The process may be repeated until salt staining dissipates satisfactorily

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		<i>Ivy suckers can be removed by careful use of flame gun</i>	Flame-gun removal of ivy should be done slowly and carefully with the minimum application of heat to burn-off the vegetation residues. There will be no need to use scrapers (this should be avoided due to risk of disfiguring brick faces)
RPT.7	East elevation Ground floor and basement lightwell	<i>Defective areas of render should be replaced in a 'Prompt' mortar. All paintwork to be removed, cracks filled with 'Prompt' mortar and allowed to cure prior to re-decoration using 'Keim Mineral Paint', as described above. Within the range of products available from Keim, there are primer products which can provide a more even surface finish</i> <i>Defective bricks to be replaced, as described above</i> <i>Poultice cleaning is suggested, as described above</i> <i>Ivy suckers can be removed by careful use of flame gun</i>	Methodology for render and paintwork as per wallhead commentary above Methodology for brick replacement as per first floor commentary above Methodology for poultice cleaning to remove salts as per first floor commentary above Methodology for ivy removal as per first floor commentary above