

**41 / 42 CHESTER TERRACE
STUCCO CONDITION REPORT.
Rev A.**

Author R Greer

Dated 15th July 2014

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EXECUTIVE SUMMARY.

The facades were inspected using a combination of binocular surveys and a hammer test to the four elevations accessed by abseil rope technicians to ascertain the overall condition of the facades.

Whilst the elevations would appear to be well maintained, there is evidence of some cracking and displacement that should be investigated further by the design team.

On the west elevation there is a trend line fracture the full height of the building along the line of the party wall between the two properties.

Above some of the window heads there is evidence of fracturing and it would be prudent with the level of intervention proposed with the redevelopment to assess the condition of the window lintels which could be timber.

On all elevations the modillions and decorative Corinthian capitols sounded hollow and this is expected if the details were constructed from an early form of terracotta or Coade stone. At this stage we have investigated the fixing of the modillions to the cornice.

With regards to the weathering of the building, we would recommend that all of the lead cappings and flashings are replaced to provide a long term weather proofing solution.

INTRODUCTION.

The term 'stucco' is of Germanic origin and its use has had many applications since the Middle Ages. These range from a coarse plaster or cement used chiefly for covering rough exterior surface of walls in imitation of stone, to a fine plaster, especially one composed of gypsum and pulverised marble, used for covering walls, ceilings and floors, and for making cornices, mouldings and other decorations. Consequently, the materials used in producing stucco vary considerably. Binders have included fully burnt gypsum; limes, sometimes with pozzolanic additives such as brick powder; cements; and linseed oil (mastic). Aggregates have included marble dust, crushed stone and sand. All have been used in varying mixes and hydraulic strengths with a wide range of colorants and other additives.

The use of stucco or smooth render to simulate finely dressed stonework or rustication became popular in parts of Britain in the early 19th century. The material was often applied over brickwork but also sometimes over rubble stone. Not only was the appearance of finely jointed work or rustication achievable in stucco, it was also far more affordable than stone in many parts of the country.

External stucco had been introduced into London in the later 18th century and was increasingly used to satisfy the Regency and early Victorian taste for smooth, evenly coloured house fronts, its cost amounting to about one quarter that of stone. Mid-Victorian fashions, however, as well as the fall in the price of stone, helped to phase out stucco very quickly after 1860. Later in the century, terracotta came into its own as a cheap and durable material for applied decoration and aggrandisement.

In the early Victorian period stucco was used in a variety of developments ranging from the highly prestigious to the less expensive. John Nash used stucco extensively in the early 19th century for his terraces in London, Brighton, Hastings, Southsea and Torquay as well as his Gothic and Italianate villas in Malvern,

Leamington and Harrogate. Perhaps the finest example was his development of Regents Park, arguably his greatest work.

MATERIAL

Stucco renders are of three basic types:

- a fat lime and sand mix sometimes with animal hair as reinforcement;
- a hydraulic mix containing either hydraulic lime and sand,
- fat lime with a pozzolanic additive and sand; and various forms of mastic.

Correct identification of the material used is essential when carrying out repairs to ensure both historical continuity and structural compatibility, as a different mortar mix may well be incompatible with the original.

LIME BASED STUCCO.

Generally, a pure or fat lime would have been prepared by slaking quicklime (calcium oxide) made from a pure limestone or chalk. Dry hydrated lime is sometimes used today for repair work, although mature fat lime is generally preferred.

A faster set could be achieved by using either a hydraulic lime or by adding a pozzolanic additive such as brick dust to a fat lime. Roman cement, used in stucco from the 1790s, is one form of hydraulic lime which was made from an argillaceous limestone (septarian nodules) and has a distinctive pinky-brown colour. The sand and other aggregates used in a repair should match the existing in particle size, colour and type. For new stucco, washed and graded pit sand complying with the British Standard should be used. This should be hard, sharp, gritty and free from clay and organic impurities.

Lime plasters perform best in layers of uniform thickness. They are applied in two or three coats. The mix should be as dry as workably possible as this reduces the shrinkage and cracking on drying and, prior to the application of each coat, the surface should be sprayed

down with clean water. This wetting helps to prevent moisture from being sucked out of each stucco application too rapidly, which results in cracking, loss of bond, and generally poor quality stuccowork.

The success of external lime-based stucco is in the tending. The longer it takes to dry out the better it will perform. Each coat of a fat lime stucco should be allowed to dry for between seven and 21 days, depending on the mix, season, weather and temperature, prior to applying subsequent coats. For a hydraulic lime mix the interval between coats can be as little as two or three days. It is most important to protect the work during and after application to prevent either accelerated or prolonged drying. In hot weather or situations where rapid drying is likely, the work should be protected with damp hessian. In addition, work must be completed long before the first frost.

MASTIC.

In the late 18th and early 19th centuries different mastic recipes were patented by a succession of people trying to produce a high quality but inexpensive stucco. These included 'Adam's New Invented Patent Stucco' used by the Adam brothers, Robert and James (in fact based on stucco recipes patented by David Work in 1763 and Liadet in 1773), Christopher Dehl's mastic (1815), and Hamelin's Cement (1817).

The various forms of mastic generally consisted of a fine aggregate such as limestone, sands, crushed pottery and glass bound with linseed oil, often with litharge (lead monoxide) to aid drying. Dehl's mastic, for example, which is believed to have been used by Nash at Regent's Park and Carlton House Terrace, London, was made of 'linseed oil boiled with litharge and mixed with [fired] porcelain clay, finely powdered and coloured with ground brick or pottery, turpentine being used as the thinner'. The background was liberally coated with linseed oil before applying the mastic.

Mastic can be recognised by the fact that it repels water. The material did not age well and tends to be very brittle. Where large areas have failed, it is recommended to use a stucco made from

hydraulic lime as an alternative to mastic. However, it can generally be said that repair of mastic stuccos is fraught with problems. On the whole the principal of 'like for like' may be followed.

Mastic as a topcoat of stucco was a smooth, trowelled finish, and scored or lined in imitation of ashlar. This effect could be achieved in three ways: joint lines could be marked on while the top coat is still green using a tool called a jointer; the joints may be formed by sunken, slightly chamfered battens fixed to the second coat and then removed after the top coat stucco has set firm; or they may be run by a double horsed running mould. Special care must be taken to match to the existing work in position, spacing and style.

Generally, traditional renders of any period were painted, with the exception of some early experimental stucco recipes which were self-coloured, sometimes enhanced with a wash of copperas (iron sulphate) to give the appearance of Bath stone, but often it was left unpainted, particularly where fine aggregates were used. A thin line of white lime putty, graphite, or some other pigment sometimes enhanced the illusion of masonry joints. If using pigments today, it is important to ensure they are compatible with lime.



HAMMER TEST SURVEYS.

On the following pages we have provided a set of elevation drawings marked up with the current condition of the stucco.

Red lines indicate obvious fractures through the stucco

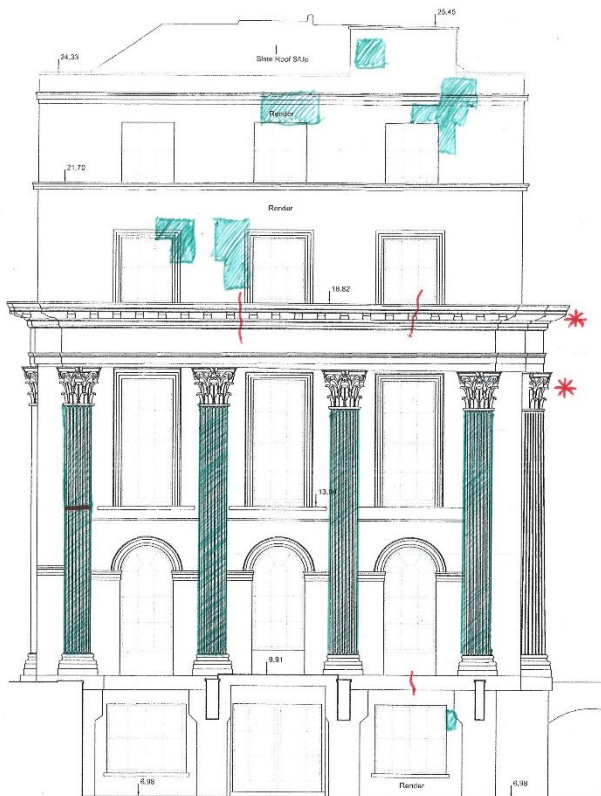
Green areas are areas of stucco that sounded hollow and debonded from the substrate when tapped with a metal chisel.

With regards to the boundary wall we have also considered the verticality and displacement caused by railing connections, trees etc.

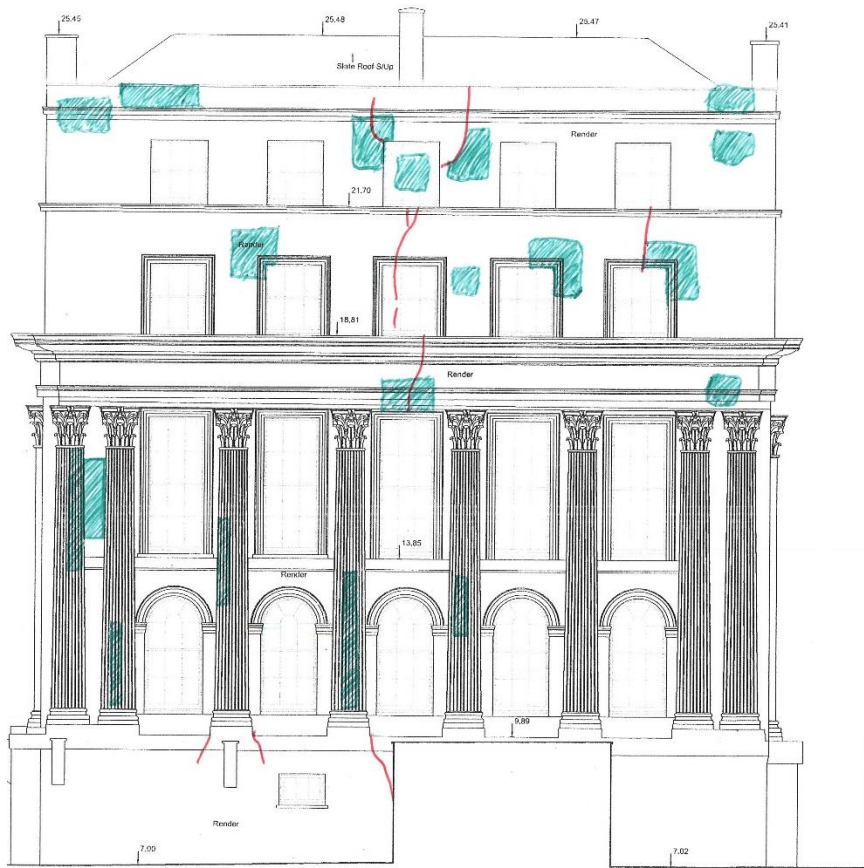
With regards to the rear elevation of the boundary wall we were unable to inspect due to the existing foliage and trees and we will inspect these once access is available.



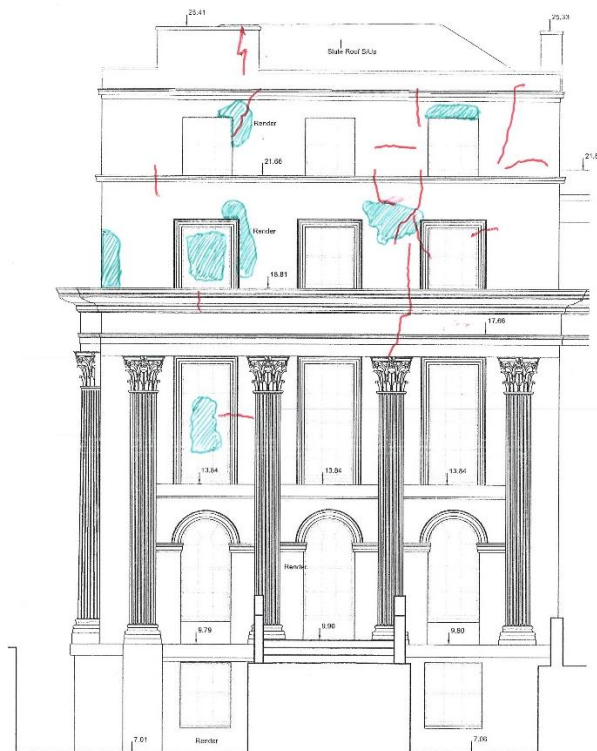
EAST ELEVATION



NORTH ELEVATION

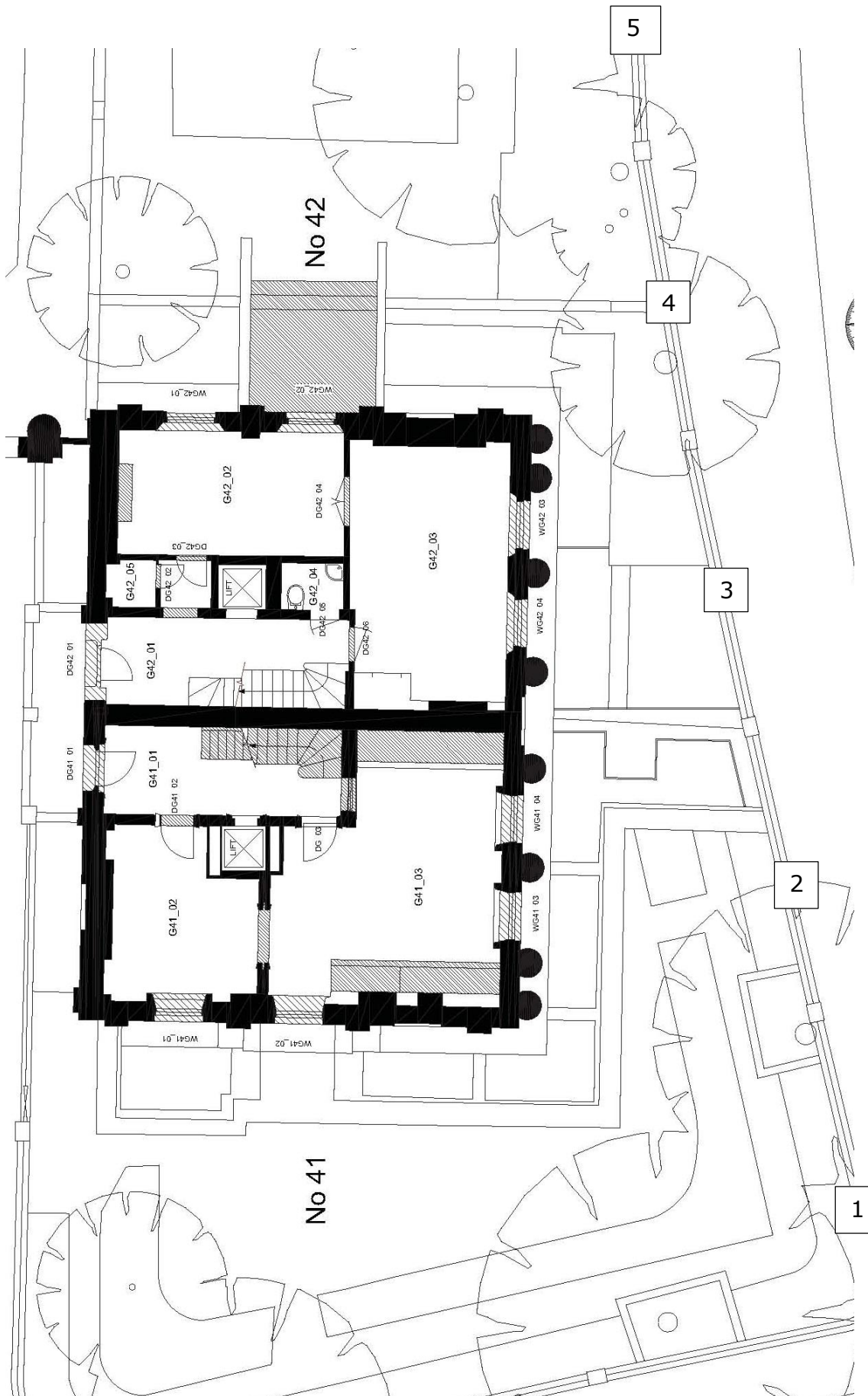


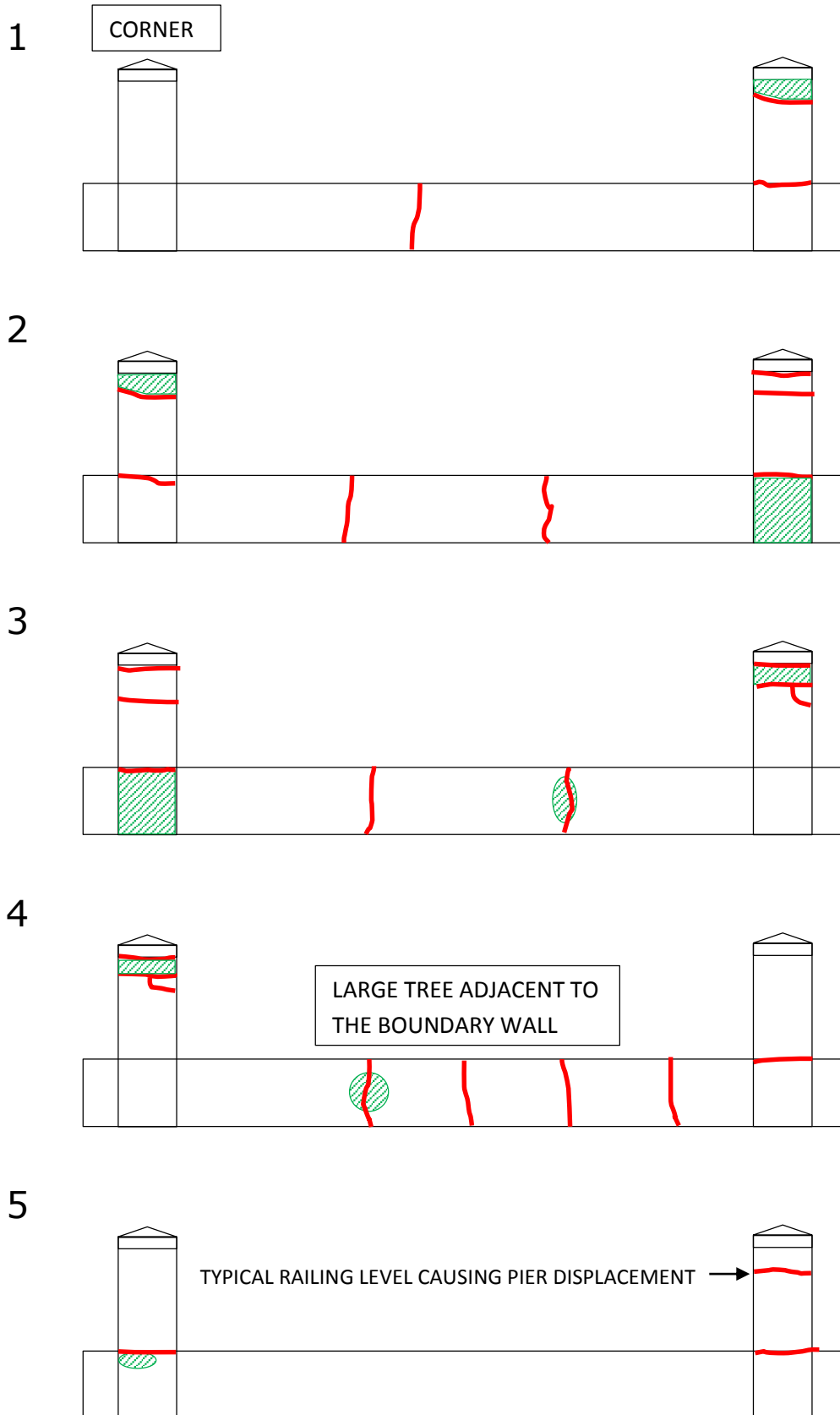
WEST ELEVATION



SOUTH ELEVATION

BOUNDARY WALLS





Typical bay length	7200mm
Typical plinth wall level	+645mm level
Typical railing level	+1380mm
Overall pier height	+1695mm
Pier plan dimension	385mm x 485mm

METHOD OF REPAIR.

Record the area to be conserved prior to commencement as well as during the works. Particular attention should be taken to detail the areas of loose, defective and inappropriate render.

Mortar samples are required to ascertain the most appropriate repair mix for replacement areas of stucco and trial patches should be undertaken to satisfy the Conservation Officer's requirements.

Remove the inappropriate and poorly bonded materials and methods of repair and replace with the appropriate stucco/render. However, removal should only be carried out if this does not put greater risk on the original fabric. The perimeter of the repair should be undercut using a fine bladed variable speed grinder to prevent debonding creep as the defective mortars are carefully removed and to provide an appropriate perimeter key for the new render.

New mortars should be well mixed and applied in layers not exceeding 12mm in thickness then allowed to set and cure sufficiently prior to the application of the subsequent layer of render or finishing coat. Depending upon the render layer being applied the surface should be scratched whilst setting to provide an adequate key for the next coat.

As mentioned previously, the lining of stucco renders was used as a method to replicate and mimic natural stone joints. The record surveys prior to commencement of the works will establish the extent of stucco lining remaining (if at all applied) and provide a discussion topic with the Conservation Officer to determine the extent and type of stucco lining to be incorporated in to the stucco repairs

Cracks greater than 2mm in the stucco should be carefully cut out to form a slight undercut which will act as a key, and thoroughly flushed out with water to remove dust and loose debris before being filled with fresh mortar based on trial results. Obviously a finer aggregate will be required where the crack is fine or hairline and it is often deemed unnecessary to undercut as the space is easily filled especially if limewash is to be applied.

Salt efflorescence may be dry brushed and removed from all surfaces, as should all algal growth. A suitable biocide should be applied to affected areas only, to remove remaining algae and prevent re-growth.

Friable areas of a lime-based stucco may be consolidated with repeated applications of limewater. To avoid a white bloom it is most important not to let the limewater sit on the surface but to sponge it off with clean water.

Substituting modern materials for the original should always be avoided if at all possible. Wherever a high proportion of original stucco has survived a hundred years or more in the British climate, bear in mind that the original has been proved to work. This historic material, produced by craftsmen long ago, has its own intrinsic value like any antique and, with careful consolidation, suitable repairs and thorough maintenance, it should be possible to ensure that the original stucco work can still be seen by future generations.

PAST EXPERIENCE.

KENWOOD HOUSE, LONDON.

PAYE completed the restoration of Kenwood House in 2013 having ve had a constant presence on site for three years carefully conserving the internal and external fabric.

The work involved transforming the former Service Wing in to a café and visitors centre, conserving the Orangery and restoring the main house which English Heritage vacated during the works.





GERMAN EMBASSY, BELGRAVE SQUARE, LONDON.

This Grade I listed residence was built in 1825 in Graeco-Roman style and forms part of four grand terraces facing Belgrave Square in West London.

The facade suffered heavily from weathering and poor levels of craftsmanship in previous renovations.



Substantial work has been carried out to reinstate the historical grandeur of the building. This has involved detailed technical analysis and historical research of existing features, materials and structures. The restoration concept was carefully planned

in close collaboration with English Heritage. During construction the residence building remained in occupation, while meeting high level security requirements





Client: Federal Republic of Germany Ms Melanie Jankovic vw-11@lond.diplo.de

Architect: Uber Raum Architects Mr Markus Siefferman
ms@uber-raum.com

PQS: MDA Consulting Mr Chris Bancroft
CBancroft@mdaconsulting.co.uk

CLIVEDEN HOUSE, TAPLOW, BERKSHIRE.

Designed by Sir Charles Barry in 1851 to replace a house previously destroyed by fire, the present house is a blend of the English Palladian style and the Roman Cinquecento.

The Victorian three-story mansion sits on a 120 m long, 6.1 m high brick terrace or viewing platform which dates from the mid-seventeenth century and the fabric of the exterior of the house is a combination of rendered Roman cement on brick, terracotta additions such as balusters, capitals, keystones and finials and natural stone.

PAYE's craftsmen are currently on site repairing years of neglect and poor workmanship

- reroofing the Cockeril Pavillion,
- carefully dismantling, repairing and reconstructing the grand staircase to the South Terrace
- designing, supplying and installing a large childrens fun slide as a summer revenue stream for the National Trust
- cleaning the water storage tanks and confined spaces underneath the terrace to create bat nesting sites



Client: National Trust

Mr Victor Wojcik

Architect: Julian Harrap Architects Mr Bob Sandford

robert@julianharraparchitects.co.uk

AVAILABILITY

Repairing and conserving historic buildings has become a very important and highly skilled area of work requiring a thorough understanding of both traditional construction and new technology.

PAYE have become a very successful specialist in this area. The quality of our work and the standard of service have been the foundations on which the success has been built and we are proud to have become one of the most highly regarded U.K. companies in this field. The company was formed by Bert Goodwin and Adrian Paye in 1992 and has gradually grown to become the largest specialist conservation and masonry company in England with a turnover in excess of £20million.

We have repaired or adapted many of our country's national monuments - the Royal Opera House, Windsor Castle, The Tower of London, Southwark Cathedral, the Royal Albert Memorial, The Royal Albert Hall and the Houses of Parliament to name but a few and we are equally proud to have been associated with projects involving local churches, housing associations, commercial and private properties.

With a team of forty specialist site managers, supervisors and foremen we are able to provide a wealth of experience across all disciplines in house to manage and complete the works to the highest standard of craftsmanship required.

Current high profile projects include:

- Battersea Power Station
- German Embassy, Belgrave Square, London
- Cliveden House, Taplow, Berkshire
- Apsley House, London
- 30 Queen Annes Gate, London SW1
- 32 Queen Annes Gate, London SW1
- Knole House, Sevenoaks, Kent

We confirm that the management team are available for the duration of the works as required.

PERSONNEL

MANAGEMENT PROPOSALS / ORGANISATION CHART / CV'S OF KEY PERSONNEL.

Proposed management structure.

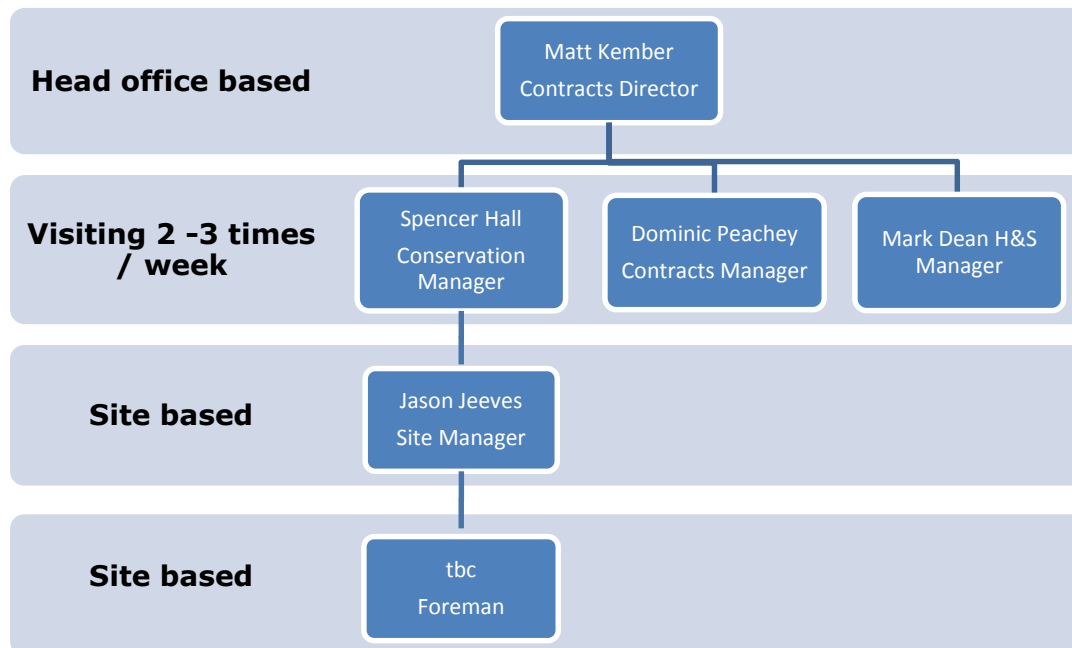
PAYE has extensive experience of managing the repair and restoration of the fabric of historic buildings especially when the works involve occupied buildings and the close proximity of the general public.

We recognise that working on prominent and high profile projects requires a strong management structure with clear lines of reporting and responsibility to ensure that decisions are acted upon correctly.

The management structure shown below is able to provide the depth of support and knowledge available to the site team to ensure that the project is delivered successfully.

The proposed team is as follows:

Contracts Director	Matt Kember
Conservation Manager	Spencer Hall
Estimator	Graham Staple
Site Manager	tbc
Stucco restoration foreman	tbc



On the following pages we have provided details of the site team and their experience.

CONTRACTS DIRECTOR MATT KEMBER



Profile

Matthew joined PAYE Stonework & Restoration in March 1994, and is the company's Contracts Director, whereby, he runs and oversees many varied high profile projects with the assistance of Contracts and Project Managers.

Matthew is also responsible for the management of the Contracts Department. He has good technical and practical knowledge of the industry having worked within construction for 20 years.

With responsibility for a large number of prestigious and complicated restoration and conservation projects, Matthew maintains regular contact with Client and Professional Teams to ensure that the PAYE Project Teams are effectively managed from initial enquiry through to final account stages.

Projects

Projects managed and completed by Matthew include the following :-

- Darnley Mausoleum
- The London Hippodrome
- The Grange, Ramsgate (Grade I Listed Building)
- Osborne House, Isle of Wight (Grade I Listed Building)
- St. Michael and All Angels Church, Kingsnorth, Ashford (Grade II Listed Building)
- The Archbishops Palace, Canterbury (Grade I Listed Building)
- The Royal Artillery Memorial and Duke of Wellington Memorial – Hyde Park Corner (Grade II Listed Monuments)
- St. Mary's Church, Hampton
- St. Barnabas Church, Kensington
- St. Cuthbert's Church, Earls Court
- Holy Trinity Church, Sloane Street
- St. Stephen's Church, Tonbridge
- H.M. Tower of London - River Wall Repairs
- Knole House – Sevenoaks
- Albemarle House - Piccadilly
- Aspley House - Hyde Park Corner
- Harley House - Marylebone Road
- The Royal Marsden Hospital - Brompton Road
- Epsom Clock Tower - Epsom, Surrey
- Aylesford Priory - Aylesford, Kent

CONTRACTS MANAGER DOMINIC PEACHEY BSc(Hons)

Qualifications

Dominic obtained an Honours Degree in Construction Management from UMIST in 2004 and joined PAYE Stonework & Restoration Limited as a Trainee Site Manager immediately after.

Dominic has worked his way up to Contracts Manager, and has been involved in a variety of jobs including, principal contract, façade retention, conservation work and new build projects.

Profile.

As Contracts Manager, Dominic will report directly to the board. He will be responsible for all aspects of the contract including determining the site objectives and ensuring that these are met as well as managing the overall commercial aspects of the project.

He will take overall responsibility for all site operations including site safety and security, management of the site teams, co-ordination and management of the subcontractors, the supply and direction of labour and materials, standards of workmanship and progress monitoring.

Relevant Experience

With nearly ten years experience in the conservation and repair of the fabric of historic buildings Dominic has overseen more than 250 projects and all within the South East of England. Some examples are as follows:

Whitechapel High Street 2012 Regeneration.



As part of the 2012 Olympic Legacy PAYE have restored over 100 properties correcting decades of neglect and poor maintenance including the replacement of the timber shopfronts to restore the streetscape to its original condition.

Client: LOCOG / Tower Hamlets
Value: £6,000,000

3 – 10 Grosvenor Place, London.



Complete external façade restoration to a full terrace of Georgian stucco properties as part of the transformation in to high value apartments on behalf of Grosvenor Estates.

Client: Grosvenor Estate
Value: £1,200,000

CONSERVATION MANAGER SPENCER ADAM HALL ACR

QUALIFICATIONS

2011 ICON Accredited Conservator Restorer
1998-2000 Bournemouth University MSc Historic Building Conservation & PGDip

EMPLOYMENT HISTORY

Spencer has twenty years experience conserving and repairing historic buildings from commencing at Hirst Conservation gradually increasing his level of experience, qualification and responsibility culminating in a senior management position at Cliveden Conservation Workshop.

2007-2013	Director	CLIVEDEN CONSERVATION WORKSHOP
2005-2007	Architectural Projects Manager	CLIVEDEN CONSERVATION WORKSHOP
2004-2005	Site Manager,	CLIVEDEN CONSERVATION WORKSHOP
1998-2004	Senior Conservator	SKILLINGTON WORKSHOP LTD.
1998-2001	Senior Conservator	CLIVEDEN CONSERVATION WORKSHOP
1994-1998	Conservator	HIRST CONSERVATION WORKSHOP LTD.

PROJECTS OF NOTABLE DISTINCTION

2005 to Present	<p>The Grill Room, Café Royal - BARCO BV - Donald Insall Associates</p> <p>Stowe Phase III - Stowe Preservation Trust – PMT Architects</p> <p>Shotover House - Sir Beville Stanier - Longmore Ltd</p> <p>Kent House, London - London Interspace HM Ltd - Robin Walker Architects</p> <p>Royal Institution of GB, London Client; ISG Interior/Exterior - Rodney Melville & Partners</p> <p>Ballyfin House, Ireland – Private - Purcell, Millar & Tritton</p> <p>Art Deco London Underground Facades, London - Gleeson MCL – OPUS Architects</p>
2004-2005	Stowe Phase II (approximate contract value £750K) - Stowe Preservation Trust - PMT
2003	St Paul's Cathedral, London - Cathedral Works - PMT
2002	<p>Peterborough Cathedral - Cathedral Works - Julian Limentani</p> <p>Exton Church Monuments - World Monuments Fund</p>
2001	<p>Bolsover Castle, Derbyshire - English Heritage</p> <p>Ightham Mote, Kent - The National Trust - Stuart Page Architects</p>
1994 -2000	Norwich Cathedral - Julian Limentani Architects



Project Management of Award Winning Projects

Ballyfin House - RICS Project of The Year 2012

Stowe House Phase II – Highly Commended – Natural Stone Awards 2011

The Royal Institution of Great Britain – Commended – RICS Awards 2010

Stowe Marble Saloon – Winner Eastern Region Country Life 'Restoration of The Century' 2010

Petworth Rotunda – Sussex Heritage Trust Awards 2008

SITE MANAGER JASON JEEVES

Qualifications

Jason is a time served apprentice mason who has worked his way up the management ranks to become one of our most experienced and effective site managers.

Profile

Jason would be the permanent on site representative for PAYE reporting daily to the Contracts Manager. He will be responsible for the 'hands on' day to day management of the project including the supervision and coordination of all the subcontractors and suppliers liaising closely with the clients team.

He can be relied upon to utilise his technical knowledge and expertise to quickly identify and overcome potential problems, ensuring the smooth progression and timely delivery of the project.

Jason is responsible for ensuring that our Health and safety policy is strictly adhered to. All Site Managers are required to undertake our stringent Health and Safety training programme as well as a variety of additional training courses including First Aid certification and the promotion of management and communication skills.

Relevant Experience

Jason has managed numerous multi tenanted projects for PAYE including the following:



Knightsbridge Estate

London

Located adjacent to Harrods Store on the Brompton Road the project involves three separate scaffolds and the coordination of multiple retail and residential tenants as part of the regeneration of the prime retail estate.

Client: Chelsfield Properties

Value: £500,000



Northumberland Avenue

London

Situated directly opposite Nelsons Column and Trafalgar Square the project proved to be extremely challenging involving a complex logistics and liaison strategy as well as daily coordination meetings with TfL and Westminster Council

Client: Capita Symonds

Value: £85,000

HEALTH AND SAFETY.

PAYE employ an in house Health and Safety Adviser – Mark Dean who provides key safety management guidance across the company to ensure its exemplary Health & Safety record is maintained to the highest standards. Mark is supplemented by a team of external consultants known as ‘The Health and Safety People’ who specialise in providing health and safety advice to construction specialists.

The team provide support on all issues associated with health and safety including:

- Corporate governance and up to date advice for compliance with changes in Health and Safety legislation.
- Policies and procedures to enable us to discharge our responsibilities and duties correctly
- Audit and checking of our management team to ensure that we are up to date with our operations.
- Site inspections to ensure that all health and safety advice has filtered down to site level and all projects are undertaken safely.
- 24hr advice line and support.

The Health and Safety Team will take a prominent role in the management and delivery of this dismantling project with a series of regular inspections and review of procedures including:

- Development of a Project Specific Health and Safety Plan for the project that incorporates the fundamental requirements of the Key Health and Safety Standards for Contractors.
- Site H & S Inspections Physical inspection of standards Fortnightly
- H & S Audits Review of procedural compliance Monthly
- H & S Tours Site management team inspection Weekly
- Procedural review Monthly

We recognise that close scrutiny and management of our health and safety procedures for the project will assist in creating a more efficient and safer working environment. On the project the proposed health and safety inspectors is Mark Dean supplemented by Chris Ivey as necessary.

MARK DEAN - (Tech IOSH)

Mark joined PAYE Stonework & Restoration Limited in January 2012 as the company Health & Safety Manager having previously worked as a Consultant to several construction firms for an external Health & Safety Consultancy in London.

CONTINUED PROFESSIONAL DEVELOPMENT.

Mark has attended the following C.P.D. training courses:-

- Nebosh Certificate – IOSH/British safety Council (Tech IOSH)
- Fire Management Course – Vulcan Fire Training/IFSM (Tech IFSM)
- First Aid Course
- CSCS Managers Accreditation
- Asbestos Awareness
- Fall Arrest Harness Training/Train To Train Harness Course
- Hydra-Jaws Testing Course (Scaffold Tie Tests) – Hydra-Jaws
- Fire Warden/Marshall Training
- Hot Works Permit Training
- Fire Extinguishers Training

RESPONSIBILITIES.

Mark is responsible for monitoring, enforcing, auditing and reviewing health & safety across the company and also for managing external health & safety resources.

He has a good technical and practical knowledge of health & safety in the construction industry having worked as a consultant or in-house advisor for the last 5 years and had previous safety experience working in the armed forces and on de-mining projects.

PROJECTS.

Mark has worked on the following projects for PAYE:

- Strand Palace Hotel
- Blackfriars Bridge
- Brompton Cemetery
- Hadlow Tower
- Kenwood House
- 1-6 Lombard Street
- 11 Knightsbridge

Mark has worked as a safety consultant on, amongst others, the following projects:

- Swiss Church
- Houses of Parliament

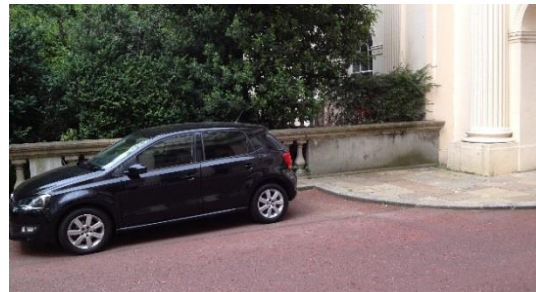
PHOTOGRAPHIC RECORD.



- 1 The Chester Terrace balustrade walling adjacent to the communal garden gate is undecorated reconstituted stone with some minor discolouration and carbonation.



- 2 The pointing to the plinth wall and balustrade connecting to the house is open and should be repointed.



- 3 The pointing to the southern end of the balustrade is also defective. The level of the balustrade and gate post has also lifted and displaced which was probably caused by the roots of the adjacent tree



- 4 The balustrade along the garden line dividing the private garden from the communal garden is in a poor condition with excessive displacement and settlement.



- 5 A majority of the bottles have split and fractured and require replacing. It is anticipated that the remaining bottles are in a similar condition and the whole wall should be reconstructed.



- 6 As a general comment tree root damage has caused alignment and stability issues with several sections of the balustrade.

Also the surface of a majority of the copings is heavily eroded.

7 As with all elevations the Chester Terrace elevation is in reasonable condition with limited defective stucco render.

8 To maintain the quality of the facades we would recommend that the asphalt and lead guttering details and coverings to cornices are replaced.

9 Within the entrance porch the paint is debonding in sheets which is indicative of the impermeable quality of the paint system and the extent of water ingress from the flat roof above.

10 The current rainwater discharge from the porch is via a small cast iron hopper and 50mm diameter downpipe with no lead shoe to the outlet.

11 The hopper contains tree growth and also plastic cups impeding the flow from the porch roof.

12 The Chester Terrace perimeter wall is in reasonable condition with no evident hollow render.

As with all balustrades we were unable to inspect the internal face due to vegetation and tree growth.



- 13 The boundary wall to the Cumberland Place elevation is constructed of three bays.



- 14 The conifer tree screening has been planted close to the boundary wall but at present root disturbance is not evident.



- 15 The wall is in reasonable condition with only minor shrinkage cracks evident that would be covered with the decoration scope of works.



- 16 The screening to some of the bays have been replaced with plywood screening which is sat on the plinth coping. Over time this will increase the moisture content within the stucco which could cause freeze thaw damage.



- 17 The pier on the corner of Outer Circle and Cumberland Place has been repaired previously.



- 18 The top rail of the Cumberland Place balustrade has been disconnected from the boundary wall pier.



- 19 The outer circle boundary wall comprises of 5 bays of cast iron balustrading set between cementitious rendered brick piers. The decorations are in a poor condition due to traffic pollutants and the texture of the stucco.
- 20 The vegetation covers a considerable amount of the railings and it is difficult to determine the condition of the iron railings.
- 21 The pier between bays 1 & 2 is showing signs of fracture in two levels.
- 22 The connection between the pier and the boundary wall has fractured which is most probably due to the dissimilar thermal movement patterns of the masonry and the cast iron.
- 23 The stucco render just below the capping stone has blown which is most probably attributable to the saturation of the pier cap and water ingress through incorrectly applied stucco renders.
- 24 The stucco to bay 2 walling is in a reasonable condition and requires cleaning and redecorating.



- 25 The stucco render to pier 2/3 has failed in three locations. The junction between the cap and column has failed in a similar manner to pier 1/2.



- 26 The stucco to the bottom of the pier has blown and failed



- 27 The pier has fractured at the level of the balustrade top rail. On closer inspection it is apparent that the corrosion of the top rail is the cause of the fracturing.



- 28 The reconstituted stone coping stone to bay 3 is heavily eroded and not decorated.



- 29 A small patch of hollow render is evident to bay 3 located either side of a fracture through the balustrade wall.



- 30 A small planter box has been constructed directly behind the wall which is providing a water trap to the coping detail and allowing the stucco to become saturated.

- 31 The pier cap to pier 3/4 is fractured and hollow due to a combination of water ingress and displacement caused by the corroding railing top rail connection.

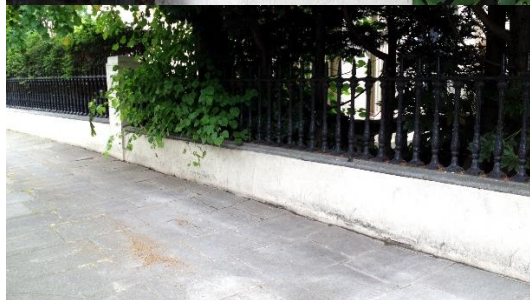


- 32 The pier column is fractured at the junction with the balustrade wall.

- 33 The render to the pier cap is sounding hollow on all sides.



- 34 The wall to bay 4 is fractured in 4 locations with render sounding hollow around one of the fractures.



- 35 The column shaft to pier 4/5 is fractured at the connection with the balustrade wall.



- 36 The railing connection within the southern pier to bay 5 is fractured at the level of the top rail and at the junction between the column and the balustrade.



- 37 Where window grills have been removed within the basement area damage has occurred around the redundant fixing holes that require making good.



- 38 On the west (Outer Circle) elevation there is a fine vertical fracture approximately on the line of the party wall.



- 39 The fracture is shown on the marked up drawing of the west elevation running through the basement wall, second floor cornice, through the blind window on the second floor and then either side of the third floor windows.

- 40 The fracture is most noticeable through the lintel and frieze of the second floor cornice.



- 41 It would be prudent to ascertain the method of cornice construction and window lintel construction once access is available to allow any repair strategy to be finalised.

- 42 Fracture through the basement wall / column plinth.



ROOF REPAIRS.

The roof is constructed of Welsh slate with a shallow pitch falling towards the outer wall.

The water is then directed towards the hopper located within the corners of the building. The gutter is a lead box gutter stepped at approximately 2m centres.

The slate roof hips are covered with a lead capping with a lead roll over ridge detail. The main roof is covered with lead, roll jointed and laid to a fall.

It should be noted that there were very few chimney penetrations evident and the roof access is limited. A modern skylight has been constructed over the flat lead roof of No 41 Chester Terrace.

The question regarding lead repair vs replacement and the wholesale replacement of the slates is somewhat dependent upon the anticipated lifespan / maintenance regime required by the client and we would welcome further detailed discussions regarding this.

We would anticipate that 50% of the slates would be salvageable.