

# Application for Accreditation as Conservation Architect

**Samuel Cooper**  
RIBA Member No: 12058040



## Supporting Documentation

28.09.2018



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## Curriculum Vitae

### Samuel Cooper

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#### Education

1993 Eltham College; A-levels Art A, Economics C; Geography C  
1998 University of Sheffield BA Hons Architecture  
2002 University Brighton PG Dip Architecture  
2005 Westminster PG Cert Professional Practice in Architecture  
2011 BRE BREEAM Accredited Professional  
2018 RIBA Conservation Course  
2018 Historic timber structures and roof coverings course

#### Practice

1999 Bruce Henderson Architects, Melbourne, Australia. New build residential.  
2000-2002; 2004-2007 Jestico+Whiles  
2007-present E2 Architecture+Interiors, founding director

## Summary Statement

Sam Cooper grew up helping his parents renovate and repair various family homes which are historic buildings. Latterly this included a grade II\* listed building The Pagoda in Blackheath which was converted back to a family home after being left semi-derelict after being a children's home for 30 years. See below for more details. Sam has always had a practical interest in the detail of how things are made and the materials which are used and pre-university he spent 2 years working on the repair and maintenance of yachts, which taught him a great deal about the behaviour, decay and preservation of materials and the application of appropriate techniques and crafts. Sam went on to study architecture and pursue a passion for modernism and sustainability. During the course of his degree at Sheffield University he studied history of architecture under Prof. Blundell Jones. During his PG Dip at Brighton Sam focused his studies on the use and properties of natural and traditional materials in modern construction. He then began practice at Jestico + Whiles where often he would be working on projects involving historic buildings, including repurposing, change of use and conservation.

Sam set up E2 Architecture+Interiors in 2007 with the intention of integrating environmental and sustainable principles into daily practice. Working in London has meant that invariably there are projects in the studio which involve historic buildings in conservation areas and with listed status. Sam realised early on that his skill set was well suited to this type of work. More recently his expertise in contemporary interventions and works to listed buildings has become a focus of business development for E2, which they are now offering as a practice specialism. The company employs three including Sam and Sam leads all the conservation work and strategic decision making on all projects.

Sam has realised that negotiating listed building consents in some boroughs is becoming more difficult. For this reason and to further his knowledge he sat the RIBA Conservation Course with a view to becoming a Conservation Architect so that he can approach projects and conservation officers with the right degree of eruditeness so that the negotiations might be more equitable and successful for the applicant and the heritage asset we are seeking to preserve and enhance.

## Chronological Career CV of Selected Conservation Projects



01. The Pagoda 1925



02. Reopening moon window and exposing swept eaves rafters



03. The Pagoda 2010

**1990-2014 The Pagoda, 1765, Listed II\*** Chinoiserie folly by William Chambers. Extended into dwelling in Victorian times with various additions until it was spot listed and converted into children's home in 1950's. Sam's family bought the house in a semi-derelict state and converted it back to a house and cottage. Sam worked hands on tools in spare time between A-levels with his father. Working to uncover original features, repairing timber panelling, reinstating blocked windows, making sense of the plan, repairing 1930's timber conservatory, restoring 1930's landscaping in the style of Gertrude Jekyll. Witnessed many skilled craftsmen working on renovation and repair of detailed lead roofing, parquet flooring, plastering, window repairs. Sam then moved away from home but his family continued to live there and maintain the building until 2014. More details on building history in dossier 'The Pavilion'.



04. Gray's Inn Buildings facade retention



05. facade detail

**2005-2007 Gray's Inn Buildings, c.1887-1889,** (at Jestico+Whiles), conservation area, large tenement block, brief for redevelopment to modern standards. Sam was assistant architect in a small team working on all aspects of the project from concept through to tender. Sam researched the Survey of London and news paper archives to ascertain the cultural history of the buildings, who had lived there and what events had occurred over time. It was found to have been built as artizans dwellings as enabling works for the new Rosebury Avenue construction. The flats were unpopular with the early residents due to shared WCs and sculleries and the building fell vacant. In the 1960s it was occupied as an artist commune which was culturally significant for the development of new music and counter culture of the time. Latterly it became a squat and then housing association rental. This lead to advising the client that a conservation approach should be taken. Sam carried out number of surveys and studies to establish the historic significance and construction of the building fabric and how the structures could be repurposed to meet the requirements of the Housing Quality Indicators. It was concluded that whilst the architectural and cultural history of the buildings were significant it was mainly the building as a whole rather than the flats within it that were significant in their contribution to the character of the conservation area and the cultural history of London. Due to the configuration of structure and staircases it was concluded the majority of the building could not be adapted economically. The southern building could be refurbished keeping the original structure and stair. The rest of the scheme became façade retention. Sam was involved in detail surveys of the façade and making proposals for repairs and replacement windows. Specialist input on the light-red reconstituted stone was obtained.



06. Proposed canopy extension



07. Dartmouth Row refurbished and draft proofed sash windows

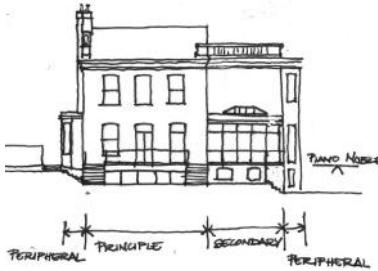


**2006 Earls Court Exhibition Centre c.1930,** (at Jestico+Whiles), adjacent conservation area, rare example of art-deco. At the time a campaign by the 20th Century Society to have the building listed became very political. Brief to find new uses and create sub-tenancies to ensure the economic viability of the building. Sam was project architect and largely autonomous on the project. Extensive surveys of this huge building to identify areas which could be converted to different uses including office and entertainment. Research through the building's immense archive of material relating to the design, construction, exhibitions and alterations. This revealed significance on a number of levels. A rare interwar example of art deco architecture. Massive, early example of complex reinforced concrete engineering over underground railways. Major contribution to economic and cultural development of the nation. I advised client to make use of internal spaces and preserve and repair the main front elevation. The building owner wanted to develop on top of the main entrance canopy, contrary to my advice as I deemed this could not be done without significant harm to the historic façade and its contribution to the area. The brief developed into forming a unit for a casino including an extension over the canopy. I designed a simple pure form to minimize the impact on the façade. During this time the client made an application for a Certificate of Immunity from listing. A planning application was submitted but later withdrawn by the client. With regret the building has since been demolished as part of a local master-plan.

**2010 Dartmouth Row, private house, c.1915,** conservation area. Brief for retrofit to improve energy efficiency and maintain period features. Many existing original plaster and timber moulding features on interior walls meant that insulation to walls was dismissed. Therefore strategy to insulate floors and roof developed. As house is under occupied intermediate floors were also insulated to zone the heating. Research into appropriate insulation materials to avoid damage to historic fabric. Sheep's wool specified for suspended floors and ceiling level at roof. All installed from above. Sloped ceilings of rooms in roof insulated from below with multi-foil insulation. Care to ensure ventilation of voids maintained. All existing windows retained with replacement timber draft staff and parting beads. Extract ventilation to wet areas. Solar thermal and PV specified for rear elevation.



08. The Knoll south elevation



09. Making sense of the east elevation



10. Birchencleffe



11. Complete external



12. Central organising gallery



13. Elevation over wall of Greenwich Park



14. New stair



15. Morden College main quadrangle



16. Listed garden wall repairs



17. Sketch for new gateway through existing security building and boundary wall

**2011 The Knoll, country house c. late 18th Century**, conservation area. New building owner with brief for advice on reconfiguring the split of the building to reinstate it as a large family home to include various alterations. On viewing the building it clearly had historic and architectural significance designed in the style of Sir John Soane. Research in Pevsner and local historian Neil Rhind's Buildings of Blackheath show it is not Soane's work but that of George Gibson. Its age meant that it was one of the older buildings in Blackheath and was built when the area was countryside outside London. It is therefore surprising it is not listed. The building was unsympathetically subdivided into two residences in 1903. Investigations and surveys to ascertain the original Georgian plan form and the various substantial Victorian extensions. We were then able to make informed proposals for removal of non historic fabric and minor additions and alterations to create two new separate dwellings within the existing structure through a strategy of horizontal division to allow the original plan to be read in full on each level.

**2012 Birchencleffe Farm, Grade II listed**, Peak District National Park, shippon stone barn, brief to convert into a house. New owner bought the barn with LBC to convert to a dwelling. Our role was to comment on the approved proposals and make suggestions to improve the designs. Research on the national parks design guides revealed this to be an important example of the type. Review of the building history as compiled by the previous owner showed it was a very early example and possibly more significant than the grade II listing. We advised the client on a strategy that should avoid any alterations or new structural openings. This made the planning of the internal layout very challenging and we advised the client to drop one bedroom so that a double height space which would allow light from the odd level openings into a central space around which the house can be organised and the historic timber trusses could be revealed.

**2015-2016 Macartney House, Grade II listed, UNESCO World Heritage Site, 1694-1855**, apartment in converted house, brief to make alterations to improve layout and general refurbishment. It was clear from observation that this apartment was in part of a large house which had been extended and altered many times throughout history. Research told that the north wing was the last substantial addition made to the house in 1855. We believe it may have been a stable on ground due to heavy timber floor structure and some form of living room to the main house above, due to large sash windows overlooking Greenwich Royal Park. Obvious additions when converted in 1950s to apartments include bay windows at ground and timber casement windows. Evidence that it was originally two flats converted into one over two levels. Non original staircase was small and compromised the significant upper floor with its views. Having ascertained that this part of the building was less significant than the earlier parts and the layout non-original we proposed a new staircase creating a double height hallway and new views through existing windows into the park. Original joists from the new opening were used to infill the old.

**2015-ongoing Morden College, Grade I listed almshouses, 1695**, E2 are retained as heritage architects for this charity which was set up with the building and still operates under the same charitable charter funded by the income from a large property portfolio of buildings built by them. We advise on any repairs and alterations to the estate and ascertain if LBC may be required and lead on strategy, permissions and specifications. This has involved research in their own archive to ascertain the history of the buildings. Current projects are: looking at alterations to a historic boundary wall to create a new entrance to a visitor centre under construction; feasibility study for alterations to listed sheltered flats to improve accessibility. See dossier on Garden Wall.

**2017 Whiteleaf Hotel, Grade II listed, c.1850**, feasibility study for refurbishment and upgrade. This is a typical Bayswater terrace designed as a whole to appear as one palace. As they had poor external space and are very vertical town houses they have been mostly converted to either hotels or apartments. This hotel is a pair of houses badly converted and with terrible extensions. Very strict SPG for the conservation area. Strategy to identify the original structure and plan form and as much as possible reinstate so that a case for LBC can be made for additional guest rooms through enhancement with more sympathetic replacement extensions.



18. Goodwins Court repaired facade.



19. Joists dislodged from main beam



20. New stair and repaired brick work.



21. Durrant's Hotel main facade



22. Archive research



23. Light touch sketch proposal

**2016 Goodwins Court, small private property, early 1800s or earlier** sui generis, conservation area, 18m<sup>2</sup> property on an old laneway off Saint Martin's Lane, Covent Garden. A photograph included in the heritage statement for our St Martin's Lane project features this property. Therefore we were already aware of the local history of the area. This property is interesting in that it is the only building on Goodwins Court which is not listed. We presume this is because it is so small it has been overlooked. New owner wished to renovate and repair the property. Initial survey identified serious structural deterioration with bowing structural walls, rot, water ingress, live plaster work. Devised a strategy with the engineer for a careful hand strip of finishes to expose structure. This revealed faults in the original work, damage done by subsequent work, fire damage and damage caused by lack of maintenance. It also revealed that the building was probably originally an extension that was separated from the host building by blocking in of doorways. Much of the original timber structure was condemned but an original beam was repaired and kept in place with a new timber column to support. Replacement timber was obtained from a reclamation yard. Lime plaster with cork granules to internal walls for air-tightness, insulation and damp control.

**2012 & 2018 Durrant's Hotel, Grade II listed, 1780-1800** Georgian terrace converted to hotel in late 19th century, Portman Estate. 2010, retrospective LBC for air conditioning units at roof level. Ascertained they were not visible from the public highway and on top of an extension to the rear. Proposed sloping screening in form of a louvred mansard to mitigate impact on private views and acoustic nuisance. 2018-ongoing Feasibility study to convert part of existing basement to guest rooms. Light wells and windows exist, which we have recommended to the client are not altered or filled in to preserve the character of the front elevations and the street scene. Strategy to fit within existing structure, with some minor alterations. Recommendation to the client that a sequential consultation with the Estate, Historic England and Westminster to establish principles. Alterations to existing services and provision of additional services to new rooms will be one of the biggest challenges in both viability and conservation terms. Have recommended early engagement of M&E consultant so that principles and details can be worked into an application for LBC.

**2018-ongoing Coborn Street, Mile End, Grade II listed** third rate Georgian terrace, Existing LBC by another architect for a side infill two storey extension to match others on the street. Client wanted a conservation led architect to ensure that construction materials, techniques and details are true to the original as best as possible. The challenge is to survey existing openings, gauged lintels, windows and stucco to recreate these details in the extension with a cavity wall construction. Strategy to use full fill mineral insulation with lime mortar to minimise need for perpend weep holes, with cut heads Flemish bond brickwork and rubber gauged lintels.

**2018-ongoing The Old Drill Hall, Farringdon c.1888**, conservation area, drill hall converted to office c.1980. Brief to replace failing roof coverings. Large free span metal trusses with timber purlins, lower pitch covered with concrete tiles upper pitches metal glazing bars with patent glazing. On initial survey I identified that the roof may not be original as I felt the technology post-dated the date over the main door. Desk top research into the technology and history of iron and steel confirmed that we must be looking at a hot rolled steel structure and the dates don't match. Further research into the history of the area revealed a First World War zeppelin bomb hit Farringdon Road and the roof of the drill hall was destroyed. Therefore the roof structure and glazing is post-1918. We have instructed the client to arrange safe access to carry out a detailed survey at high level inside and out to ascertain the state of the glazing bars and the capacity of the structure to take double glazed units. There is a long history of failed applications for air-conditioning units, there are drapes hanging under the glazing to deal with glare and the tenant complains reaching internal comfort is impossible for large portions of the seasons. Investigating heritage mild steel patent glazing systems which can be integrated into the existing structure and include modern treatments to the glass to deal with the above problems whilst maintaining the sightlines and appearance.



24. Drill Hall entrance elevation



25. Mild steel roof structure

# Dossier 01

## The Pavilion

Planning and Listed Building Consent Applications  
for a new build house in the grounds of The Pagoda, Grade II\* Listed.  
Extracts taken from Historic Analysis and Design and Access Statements, author Sam Cooper

Project dates: 01.12.2009 - 07.06.2014

ICOMOS Education Guidelines Covered: A, B, C, D, E, G, H, I, L, M, N



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# 1 Status and Importance

The Pagoda is a Grade II\* listed building. It is important because of its age, the first part built in 1767, as a folly in remote gardens for the house of its architectural heritage as a rare surviving example of chinoiserie by Sir William Chambers and its cultural and historic significance as a residence of Princess Caroline the estranged wife of The Prince Regent. The attribution to Chambers is inconclusive in both the listing and Pevsner but the client had evidence that it was most certainly him, an opinion supported Neil Rhinde the local historian and accepted by English Heritage (now Historic England).

It is also within the Blackheath Conservation Area, which is one of the first designated conservation areas in the country and one of the largest. The building is one of the more significant houses in the area and is well known as a distinctive heritage asset that is enjoyed by locals and visiting enthusiasts. As such it makes a significant contribution to the character and appearance of the conservation area as described by the local historian Neil Rhinde in the forward of the conservation area appraisal.

The client had carried out extensive research in conjunction with Neil Rhinde into the history of the construction, ownership and evolution of The Pagoda which was invaluable in analysing and establishing both the status and importance. Much of this was published in the heritage statement for the purposes of information but is not pertinent to the conservation judgments made.

## 2 Project Brief

To gain planning permission (PP) and listed building consent (LBC) for a modernist new build house with the highest environmental credentials possible in the grounds of The Pagoda.

The challenge was to justify in conservation and planning terms the principle of dividing the site and where the partition of the site might be appropriate; defining what the setting of the listed building is currently and what it has been historically; defining how a new development can take place whilst preserving or enhancing the setting of the listed building and its contribution to the conservation area.

I set the planning brief with the client that we would need to present a fully considered scheme at pre-application if the principle was going to be given any consideration by the conservation officers. This would entail a full historical analysis and design statement with a fully detailed and illustrated architectural design which demonstrated resolution of the many conflicting constraints, not least the listed building. This would have to be an outstanding design with outstanding presentation.

## 3 My Role

E2 were appointed as lead consultant. Sam Cooper is founding director of E2 Architecture+Interiors and was the lead on this project for heritage analysis, conservation brief and architectural design.

## 4 Project Team

Architect: Sam Cooper at E2 Architecture+Interiors

Client: Philip Cooper

Local History: Neil Rhind

Sustainability Engineer:

Consultees:

English Heritage

The Georgian Group

The Blackheath Society

London Borough of Lewisham

Neighbours

## 5 Critical Analysis

The brief was extremely challenging from a conservation point of view. How could new house be built in this location without harming the setting of a very significant listed building? Therefore the focus of the analysis was on the setting of the listed building and the conservation area both in the existing state and their evolution through time so that this can inform how development may be carried out without causing harm and so that the setting may be preserved and enhanced.

The client with assistance from the local historian had amassed a detailed history of the ownership and development of the Pagoda from folly to house along with the development of the local area. This information enabled me to analyse the setting and to locate the building through time in relation to the setting as it evolved. Three historic plans were critical to this process along with OS mapping, they were a plan of the land shortly before The Pagoda was built, the Tithe Map and a lease plan dated 1855 showing the ownership for the next century.



## 1758-1790: Montagu House & Lord Cardigan

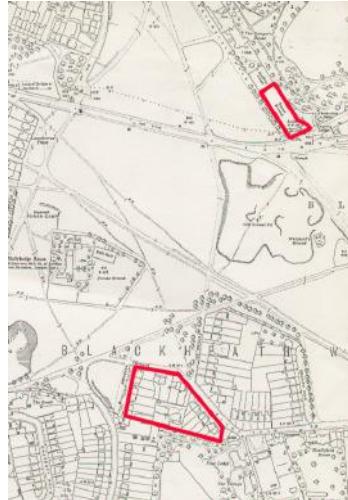
The Pagoda was constructed in the remote gardens of Montagu House which itself stood within the corner of Greenwich Park alongside the Ranger's house. Montagu House was on a cramped and narrow site, and because it was squeezed between Greenwich Park and Blackheath, there was little prospect of the plot being enlarged by purchase.

In or around 1758, Lord Cardigan leased a three acre plot of land about 500 yards away to the south, from the Legge family, Earls of Dartmouth and Viscounts Lewisham, the largest landowners in the area. This was in order to have the stables and gardens necessary to support a substantial suburban house. There is a plan of this plot dated 1762, entitled 'The Right Honourable the Countess of Cardigan; Plan of the Garden and Stables on Black Heath in Kent'. This shows that various walled gardens, an ice house, stables and coach house were already there, but the Pagoda is not marked.

The Pagoda was constructed to the Chinese design of Sir William Chambers maybe recognising, by the gable thistle motifs, the Duke of Buccleuch who had married the Duke of Montagu's daughter two years earlier.

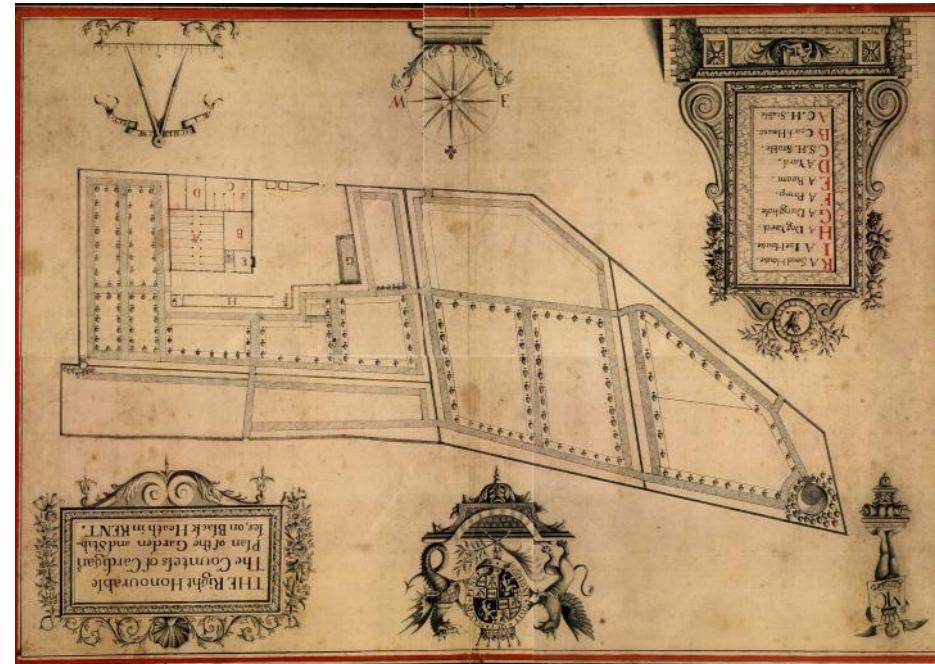
The Pagoda at Blackheath unfortunately does not retain any interior detail from Chambers' original design, but the generous curved roof and large round and oval "moon" windows together with use of massive brickwork are redolent of his drawings of the Cantonese Pagoda in his book of Chinese designs and his earlier Pagoda at Kew in 1762.

The building is well described in the Listing being a three storey brick building built off the original garden walls. The brickwork of the garden wall running parallel with the natural slope of the ground on that side of the heath, forms the lower part of the building on the east side. This slope is clearly visible on the Baines engraving of 1823 (opposite), which appears very steep indeed having been taken from a viewpoint at the top of what is now Granville Park. The top of the Pagoda can be seen as a triangular shape just visible above the high brick boundary wall on the present line of the front of the western side of Aberdeen Terrace.



01. OS Map 1913

Montagu House to the north and the remote 18th century gardens to the south.

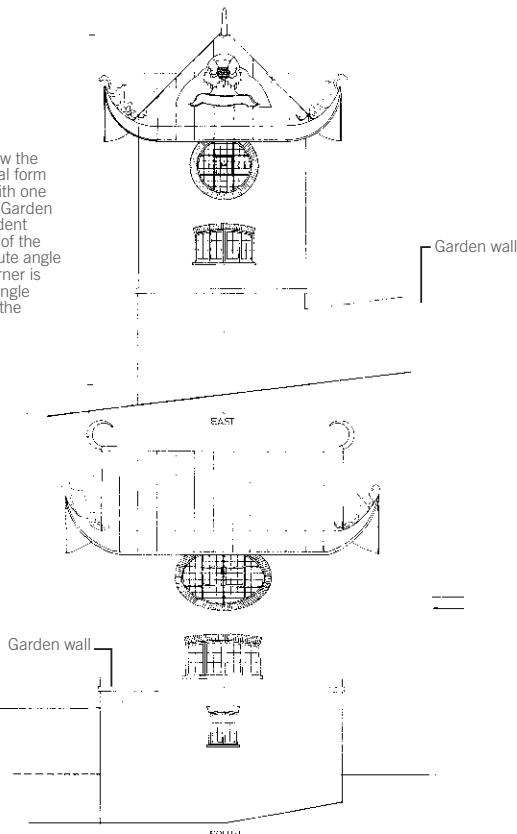


This plan of the remote garden in 1762 shows no Pagoda

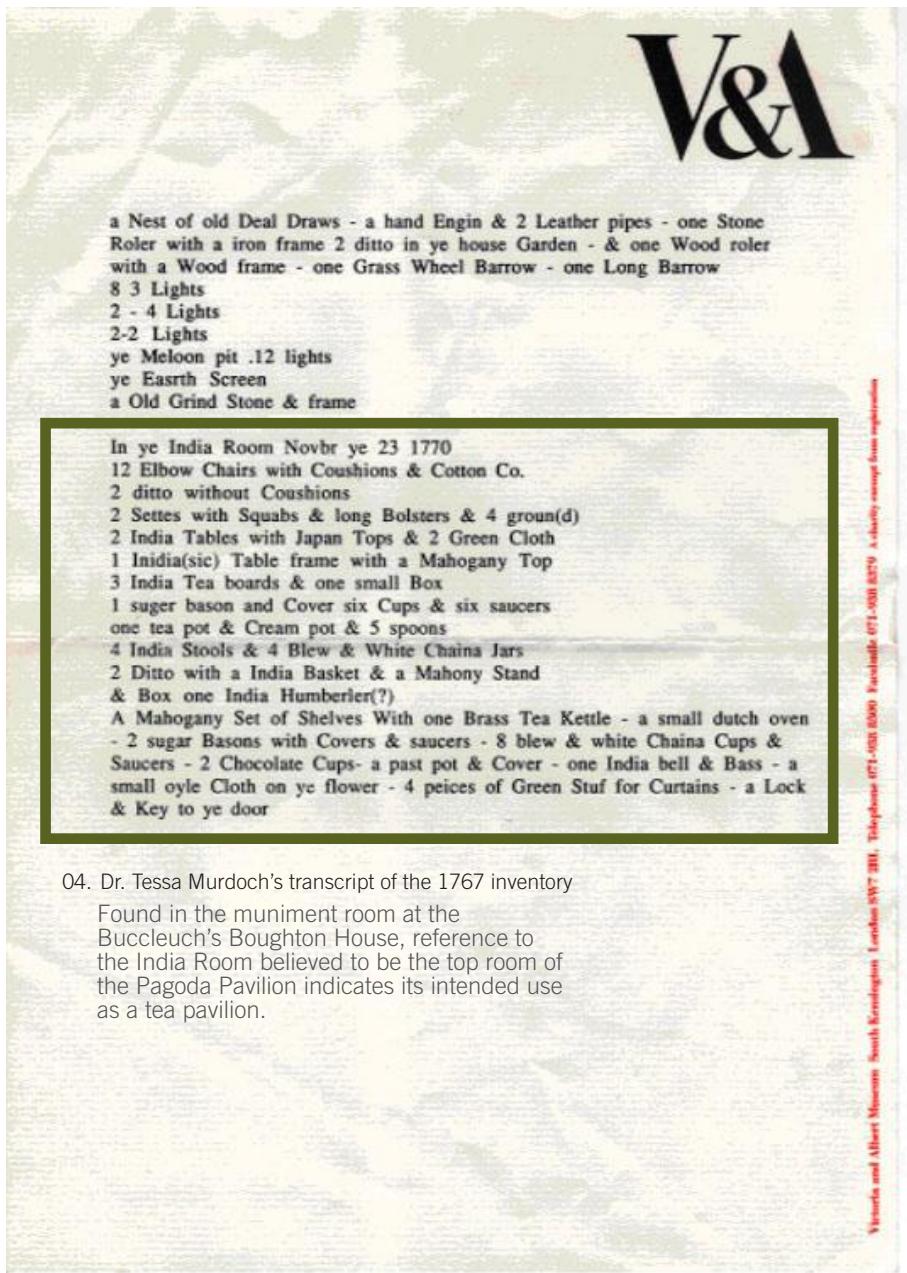
02. Plan of garden and stables for the Countess of Cardigan, 1762.

Note: Plan has been shown here rotated 180° so north is to the top of the page consistent with other maps shown in this document. The compass marked on the page has the south and north points in the wrong orientation. The outline of this plan can be recognised in subsequent plans up to the present day.

These drawings show the Pagoda in its original form almost as a tower with one room on each floor. Garden walls are clearly evident in the lower section of the building and the acute angle in the north east corner is reminiscent of the angle seen in the walls of the Cardigan plan.



03. Architect's impression of the original Pagoda pavilion as built in c.1770



1798-1843: Princess Caroline - Robert Buck

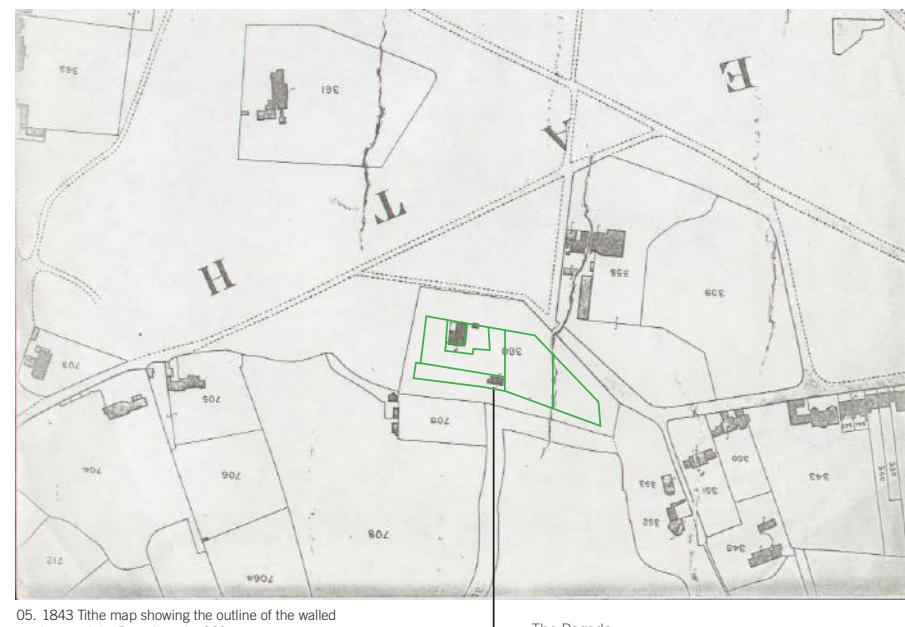
The Buccleuchs left Montagu House in 1798 and the family never returned to live there. It seems that George III arranged the lease of Montagu House and the walled gardens including the Pagoda for Princess Caroline of Brunswick estranged wife of the Prince Regent and her daughter Charlotte in 1799, in the aftermath of her disastrous marriage...

...Caroline left Montagu House in about 1812 and it was demolished in 1815. The earliest known print of The Pagoda, with a golfer on Blackheath, was published in the same year.

After Caroline, in 1815 the “garden house, coach house, Chinese pleasure house, stables, a large walled garden” as they were described in the lease, reverted to the Dartmouth Estate, who kept it very much the same until it was let in 1832 to the Hon & Revd Henry Legge, Vicar of Lewisham. Legge was the Earl of Dartmouth’s fourth son and he continued to use the gardens and the Pagoda as a pleasure garden, living at the nearby Holly Hedge House (now demolished). Now known as “the Blackheath Gardens” it was then leased to a gardener Robert Buck, who probably used the land as market gardens.

## 1843-1951: Pavilion to House

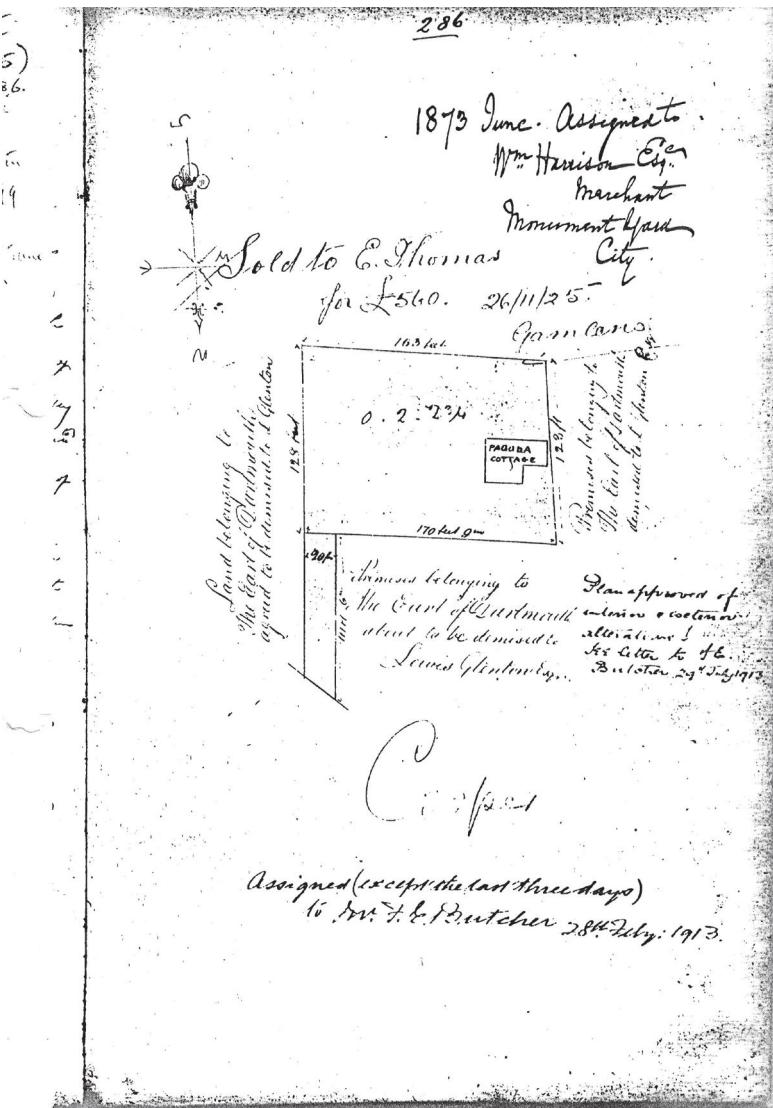
The first person to actually live in The Pagoda was Spencer Shelley , a Treasury clerk, with his wife, two daughters and two servants c.1843. What is now the large living room and bedroom above were added at around this time to the west of the original Pagoda pavilion in order to accommodate such a household.



05. 1843 Tithe map showing the outline of the walled gardens and the Pagoda as lot 360

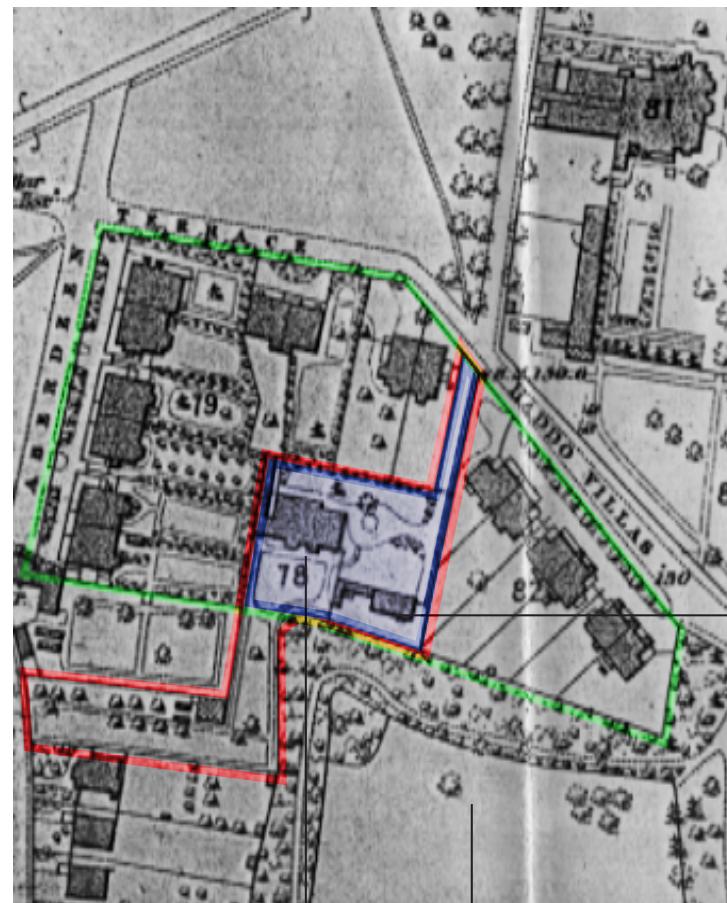
The outline of lot 360 in the Tithe map follows that of the original plan of the gardens for Lord Cardigan in 1762 shown in green. The buildings as drawn on the 1762 map can be seen as a black square to the north and the Pagoda to the middle south of the plot. This map would not have shown the garden walls internal to the lot.

This inventory of 1770 describes an India Room amongst garden buildings. With lower floors as store for tools. Together with the plan above this dates the Pagoda between 1762 and 1770.



07. Original lease plan for 'Pagoda Cottage with Prince of Wales feathers on north point

The lease plan shows the land belonging to the Earl of Dartford as leased to L. Glenton in 1855. All the owners of the lease are named and dated up to the last private owner occupier Mr E. Thomas in November 1925. His wife sold the Pagoda in 1951 to the LCC. It is interesting to note that despite the various acquisitions of neighbouring land by the various owners during this time the lease plan remains the same for the Pagoda house for a period of almost a century.



The extended Pagoda garden can be seen set within the new plot boundary shown in red. The Tithe boundary is shown in green. The 1855 plot as leased to Glenton is shown blue.

The main changes to the original fabric took place, however, when the Shelleys moved and Lewis Glenton, a local developer took a 99 year lease on The Pagoda and gardens in 1855, with permission from the Dartmouth Estate to build. Not only did he construct Aberdeen Terrace and Haddo Villas along the north, east and west boundaries of the gardens, but he extended The Pagoda to the north and west and built a small mews complex including stables etc. and separate conservatory in the grounds which extended south beyond the original boundary of the Duchess of Montagu's land. The extensions were probably to the designs of his architect John Whichord, who later became president of the RIBA.

The lease was assigned in 1866 to a Lloyds broker George Farrar, who stayed there until 1873 when it was advertised as a 7 bedroom house with bathrooms, bachelor suite and billiard room, a four horse stable and coach house with an acre and a half of ground (over twice its present area). In 1873 William Harrison took the property and after him in 1894 a Charles Cooper.

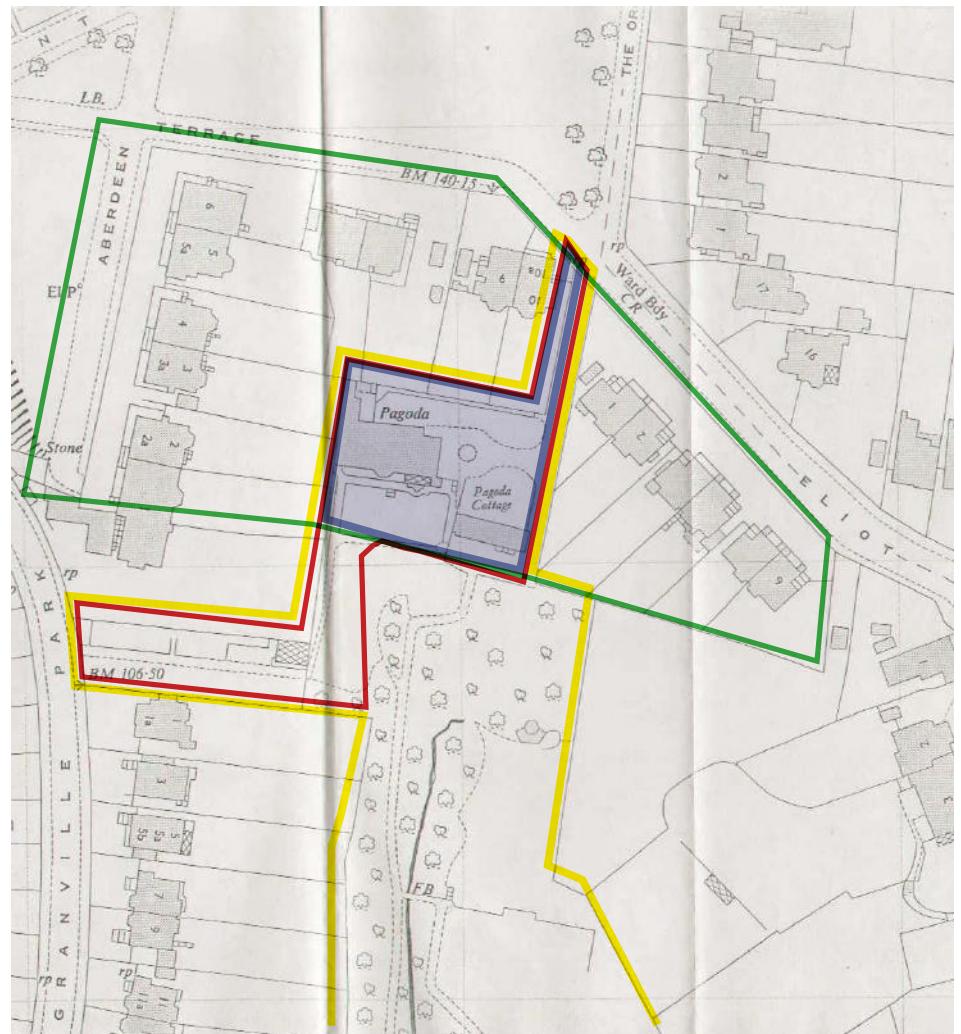
Frank Butcher took the house in 1913. He had expanded the successful local photographic business set up by his father. At The Pagoda he remodelled the interiors of the principal rooms and staircases using 'tudor' style panelling; and in the drawing room, Western Red Cedar panelling and oriental lacquer panels with fretted screens to house and display the collection of jade and oriental porcelain. When sold in 1925, it was described in the sales particulars as a "Small Tudor Manor House", with no reference to its more oriental provenance.

Bought by the local builder Edwin Thomas (of Thomas & Edge) the house was extended and the gardens underwent their final major remodelling with further land being added to the grounds. The old kitchen wing was demolished and a new kitchen and pantries with bedroom, bathroom and maids rooms over was added. The conservatory was rebuilt. However, the Thomas' totally redesigned the gardens setting out and terracing the gardens in the style of Gertrude Jekyll, using huge quantities of York stone in the construction of drystone walls and terraces. Architectural features that were added are a barley sugar brick open domed pergola, an oriental water garden using gigantic rocks, Portland stone, a marble bench with its own small pergola and brick details and niches.



09. Photograph of garden, kitchen and conservatory prior to sale in 1925

Outline of Thomas' enlarged garden in yellow, Glenton's enlargement in red and Tithe in green, 1855-1951  
Lease in Blue



08. OS extract from 1949 showing extent of Thomas' enlarged garden.

## 1951-2009: Institution to House

Mrs Thomas finally sold The Pagoda in 1951. The family by then had not lived in the property for some time before the building and its extensive grounds were purchased by the LCC for redevelopment. It was the LCC's intention to demolish the Pagoda to make way for housing. Public outcry ensued and it was spot listed in 1954 as Grade II\* (see above for listing details).

Eventually the new Pagoda Gardens Estate was completed by the LCC in 1961 on some of the land purchased by Edwin Thomas before the war. The new estate road was formed by moving the original gates to the property that stood at Eliot Vale between Aberdeen Terrace and Haddo Villas and creating a vehicular link between Eliot vale and Granville Park. The nineteenth century stabling was demolished to make way for the new road and was replaced by a row of garages and an electricity sub-station. The garden that remained to the north and west of the estate road became the garden for the Pagoda which was converted into a local authority children's home. After the demise of the LCC the ownership of the Pagoda and the Pagoda Gardens Estate was transferred to the London Borough of Lewisham.

The Pagoda and its garden had a sad history of neglect after it ceased to be used as a children's home in the 1980s. The building became more and more run down and the garden was stripped of its shrubs and left to become overgrown. As a result, the property was then added to the "SAVE" register of buildings of architectural merit that are at risk prepared by the charity Save Britain's Heritage.



11. South elevation and garden 1991



12. Upper lawn of southern garden 1991

By 1985 the building had been vacated and let to the London and Quadrant Housing Association, who used it as a hostel for Sri Lankan refugees. In 1990 it was vacant again and subjected to further neglect and vandalism. Finally, the Council sold it to the present owners in 1991.

The garden of The Pagoda had become overgrown with self-sewn saplings some 4 metres in height and the garden of Edwin Thomas had been virtually lost with little structure and no shrubs remaining. The lower section of the garden which was outside the original 18 century walled garden and forms the present application site was merely an overgrown field bounded by a chain link fence some trees and cyprus hedge.

Prior to purchase in 1991 by the applicants, planning permission and listed building consent LE/692/A/TP were granted for the change of use and rehabilitation into a single family house and after further permission in 1994 all work was completed in 1997.



10. Current OS map  
Outline of Thomas' enlarged garden in yellow; Glenton's enlargement in red and Tithe in green, 1855-1951  
Lease in Dark Blue; current Pagoda site in Cyan Blue; Pagoda Gardens Estate in Purple

# The Listed Building and Its Setting

## Historical Setting

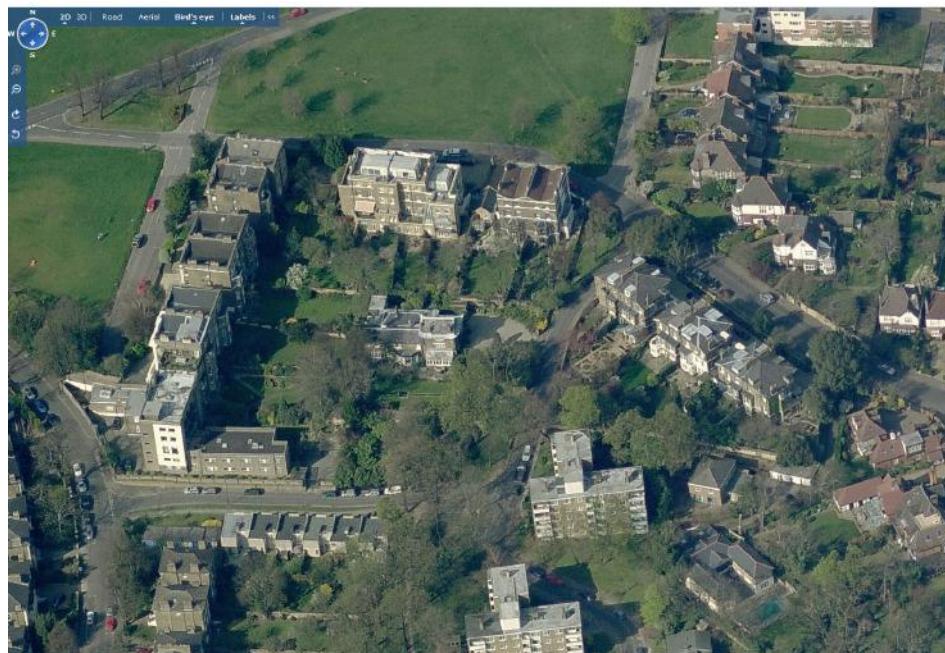
As set out in the chapter above the setting of the Pagoda has changed and evolved with the physical and social context through time. The building was originally conceived, built and used as a small pavilion for taking tea, enjoying the views from the top of the hill and entertaining within part of a private walled garden that sat on the edge of Blackheath common. Then attached to a seat of the aristocracy it was a remote outbuilding in a remote plot of land.

Later as the suburbs of London grew and Blackheath became part of the wider urban context of the city the Pagoda was enlarged and converted into a house and the gardens that it was part of were developed for housing. The grounds and outbuildings that had become part of the Pagoda house were adapted and extended and later developed further. This layering is evident in the building and parts of the garden and the local urban grain around it.

The period of neglect that followed the post war development by the London County Council left the building and gardens around it in serious disrepair with the entire garden overgrown. However, the mature trees and the layout of the gardens remained.

The core plot of the Pagoda as leased in 1855 remained the same until the LCC bought it in 1951. Adjacent land was acquired and used as extended gardens but never attached to the lease or deed.

The one consistency through time is that the Pagoda has remained as a building set within a garden surrounded by walled gardens and buildings in various forms and layouts.



13. Bird's eye image from south

## Current Setting

The current setting remains that of a building set within the middle of a garden. The walls of the Victorian cottages on the east side of the garden remain and are now the back wall of the garages for the estate. To the east high walls at the ends of the gardens of Aberdeen Terrace form the boundary. Private views from the neighbouring houses and flats are enjoyed down on to and into the site.

The immediate setting around the site is the legacy of Glenton's Aberdeen Terrace and of the late London County Council's Pagoda Gardens Estate, which is set in the mature trees of what was once Granville Park, and once the Pagoda's gardens. The road, Pagoda Gardens, forms the southern and part of eastern boundary. The eastern boundary is made up of part of the old wall of the demolished cottages which now back on to the garages.

The wider setting of the Blackheath Conservation Area is one of varied character with houses from all ages mostly with gardens. Lewisham's website also notes that: *The character of the area is also enhanced by a number of well designed modern buildings*

The main public view of the house, which is enjoyed by all who pass it, is of the east elevation across the drive. Other views can be glimpsed from the heath between the buildings of Aberdeen Terrace on the north and west sides. Views from the south side are almost completely screened by the trees and shrubs along the boundary.

The existing garden is the result of careful restoration of what was uncovered of the 1920s landscaping when the current owners and applicants moved in, and sensitive planting and building of garden structures to enhance the historic garden. The terracing and the drystone walls presumed to have been part of the 1920s work have been restored. The southern area of the garden beyond the terracing falls with the natural slope of the hill and is now an exotic garden of bamboo and other plants cultivated by the current owners.

The southern area of the garden, which forms the proposal site, shows no evidence of historic landscaping apart from the remains of a marble bench and the brick pergola of the 1920s. The area falls outside the original Cardigan boundary and the plot boundary of the 1855-1951 lease. This area was essentially land left over after planning of the Pagoda Gardens Estate which was given over as amenity space for the children's home.

## Conservation Area Context

The wider setting of the Blackheath Conservation Area is one of varied character with houses from all ages mostly with gardens. This variation of character is due to differences in size, age and location. There are distinct pockets and areas which take their character from the grouping of houses built at the same time by the same builder in a particular style or that have evolved from a similar period with similar uses such as the Victorian townhouses of Aberdeen Terrace and Granville Park or the Arts and Crafts style houses of Eliot Vale and the Georgian fabric of Blackheath Village.

Lewisham Council's document Blackheath Conservation Area Character Appraisal (CACA) is a useful guide to assessing the different characteristics within the area. In the forward, local historian Neil Rhind says the following:

*'...it is not just the architectural set-pieces, listed buildings or formal uniform terraces that set Blackheath's overall character. It is the juxtaposition of these with a rich and varied mixture of buildings of different periods; unexpected corners, strange historic survivals, and stylish new additions – all these give Blackheath its distinctive and pleasing character.'*

The application site lies within the Blackheath Conservation Area. The Blackheath Conservation Area Character Appraisal (CACA) was produced by the Council and adopted in March 2007. This divides the Conservation Area into 29 areas of distinct character.

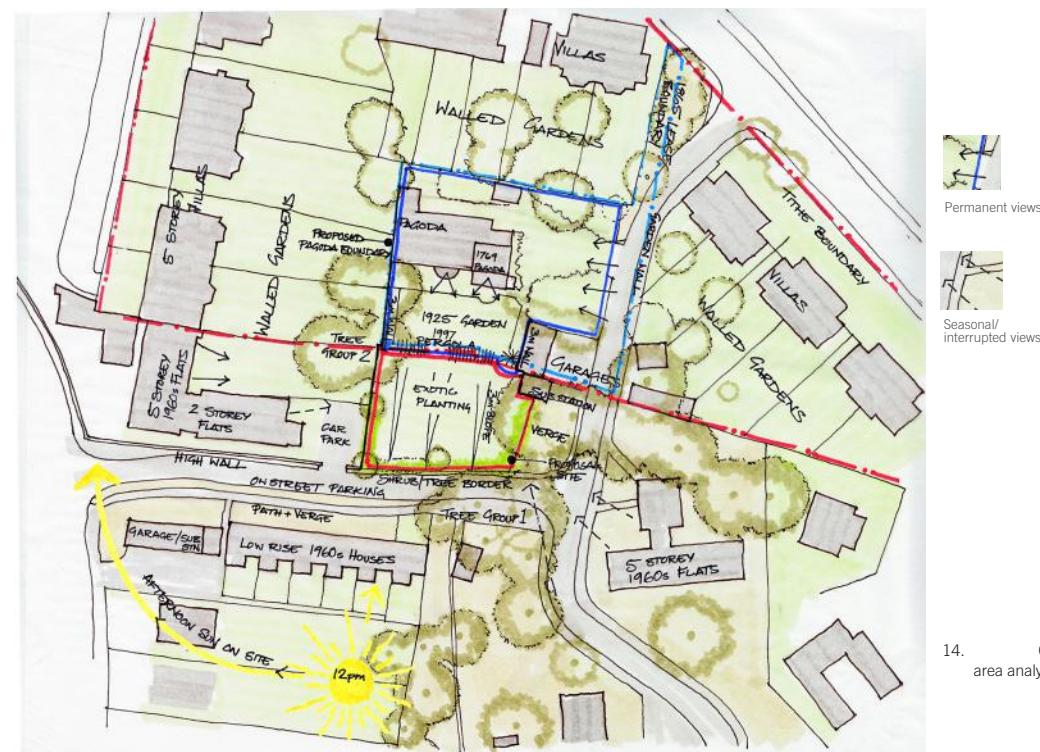
On the map of the whole Conservation Area where the areas of distinct character are separately identified the application site is shown as being within Character Area 1d (16). In spite of being illustrated in Character Area 1d, the application site together with The Pagoda are clearly described as being in distinctive character Area 7:

*"This area is notable for its eclectic mix of architectural styles and periods; from the Pagoda (1763 by William Chambers with extensions of 1840 to the west end and to the east corner and north elevation in 18573) a garden Pavilion (from the lost Montague House which stood near Rangers House) through the nineteenth century villas and grand houses of the Edwardian period to various modern houses from the 1960's and 70's. These are set low into their wooded sites and provide tantalising glimpses of large areas of glazing and private courtyards. A key element of all the built form in this character area is its heavily treed setting forming glimpsed views of chimneys, gables and framing and enclosing lanes and roads alike."*

Alongside the application site to the west and set on the north side of the road Pagoda Gardens before it joins with Granville Park is what is now a large block of flats on higher ground retained by a high brick wall at the back of the pavement to the side of Pagoda Gardens in what was until recently a 1960's Goldsmiths hall of residence (35,36). When converted, a large part of the gardens to the hall of residence immediately adjacent to the application site was excavated to the level of the road and covered with hard surfacing to provide parking for the flats which is now accessed from Pagoda Gardens via tall metal gates and covered by wooden pergolas (33). This hard frontage to the road and architectural form is quite atypical of any of the distinct character areas referred to above.

The last piece of land abutting the application site lies immediately to the west as is the walled garden of 1 Aberdeen Terrace which was converted into flats at the same time as the rest of the Goldsmiths hall of residence of which it formed part. This is the communal amenity landscaped area for all of the flats in this development and is dominated when viewed from the outside by a protected mature copper beech located in the middle of the garden, which however is virtually screened from the application site being situated behind the mature ash in the grounds of The Pagoda (34).

In conclusion the character of this area of the Conservation Area in which the application site is situated is quite different from any of the distinctive areas listed in the CACA. It is notable for the variation in architectural styles and its mature tree setting.



# 6 Conservation Judgements

The following section is taken from the design and access statement which accompanied the planning application and essentially set out the conservation strategy formulated from the historical analysis in the heritage statement as outlined above.

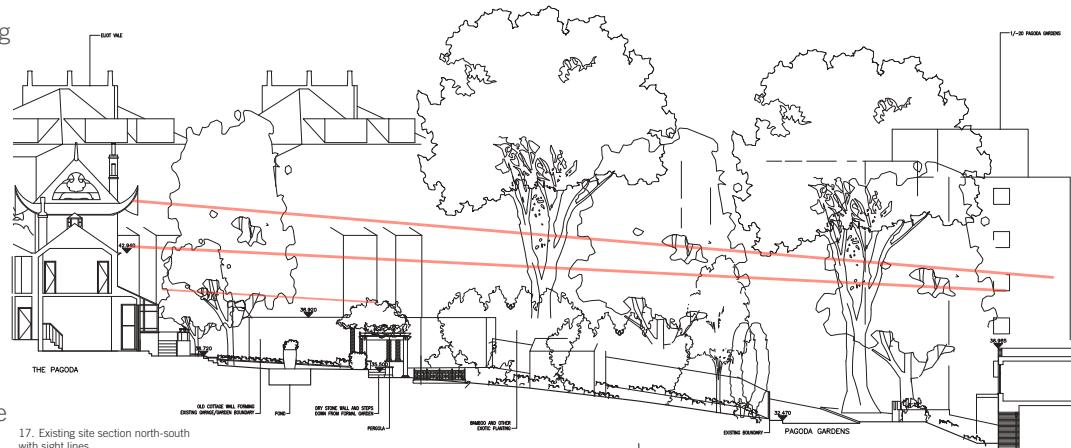
As set out in the historical statement the southern boundary of the existing garden has been in flux since its enclosure. The plot that was originally leased to the Cardigans in the 18th Century had its southern boundary wall near the line of what is the existing terrace to the rear of the main house. Later the Tithe boundary was further south on the line of the upper posts what is now the wooden pergola. The 19th Century lease boundary was also on this line for almost one hundred years. The owners in the 19th century purchased land to the south, that was part of Granville Park, and around the Pagoda to build on and extend the garden. This land was later purchased by the L.C.C to build Pagoda Gardens Estate. (40)

Therefore, it is considered that the land at the southern end of the garden is not an integral part of the historical setting of the listed building and that there is an opportunity to partition this part of the land for development of a sensitively designed new house for the current owners to build and live in.

The opportunity for separate access to the application site from the western section of Pagoda Gardens exists and has been checked with Lewisham Highways for accessibility (see Appendix - Consultation Highways). This will open up new permanent glimpsed views of the southern elevation of the Pagoda from the public highway, improving the setting of the listed building and the conservation area.



15. Current OS map with historical boundaries and application site.



17. Existing site section north-south with sight lines

The sight lines from the windows at each floor level of The Pagoda are shown above. The long distant views from the top 'Pagoda Room' and the first floor bedrooms are the most valuable to the listed building and will be protected by the design of the new building. The views from the ground floor are short and into the garden only and the canopy of the trees above.



A new wall at the height of the existing garden walls to the east and west side to be built across the garden. The existing wooden pergola will be supported on this wall. The wall will wrap around the rear of the existing brick pergola. This leaves the garden structures intact and on The Pagoda site providing visual interest and screening to the wall as well as maintaining the circular route on the paths around the lawn.

5 of the existing low-value cypress trees will be felled to allow a new site entrance from the west of Pagoda Gardens at the south of the application site. This will require the relocation of two on street car parking spaces, which has been agreed in principle with the Highways Department.

16. Existing site plan with new boundary and site entrance plotted

## Proposed Setting of the Listed Building

The setting of the listed building has been the main driver in determining the siting and levels of the proposed building. By working with the slope of the site and the existing built context of the garden walls it has been possible to design a building that is all but invisible from the existing Pagoda and maintains the views that the original second floor Pagoda room was built to enjoy.

The application site lies on the edge of the Tithe boundary outside the original 18th century walled gardens of the Countess of Cardigan beyond the line of the terracing installed by Edwin Thomas after 1925 (44). This creates a plot outline for The Pagoda that is almost identical to that of the original lease plan minus the drive from Eliot Vale which is now Pagoda Gardens.

The proposed site boundary will be formed by a wall built to the same height as the existing garden walls on the east and west boundaries. This will be constructed from reclaimed London stock bricks to match the existing walls using lime mortar to avoid the need for expansion joints. This leaves the garden structures and formal lawn terracing, dry stone walls and paths intact and on the site of The Pagoda.

As a result the setting of the listed building will remain one of a building within walled gardens. The formal lawn and terracing give a 16m deep by 28m wide walled garden with a southerly aspect in addition to the extensive rockery and gardens around the drive to the east and the informal planted garden to the north.

The appearance from the street and conservation area will be glimpses of a building set within a mature garden whose form will be broken by the screening of the overhanging trees and the shrubs and trees growing in the semi-wooded boundary gardens.

The appearance from the private views above will be of a semi-subterranean building set under a heavily planted roof which will change with the seasons.

Given the varied character of the conservation area it is considered that a high quality modern building would not be out of character and could be an enhancement.



18. Sketch site section north-south  
of the proposal



19. The Pagoda formal garden as existing.



20. Photomontage view of The Pagoda formal garden as proposed.



21. Photomontage view from southwest showing new opened public view of The Pagoda and preserved mature planting to the perimeter of the site to maintain character of the conservation area.

## Consultation

Given the sensitivity of the site a full pre-application consultation strategy was recommended and that this was carried out with a fully resolved and well presented design and reasoning. Pre-application consultation was carried out with local and national interest groups including: neighbours; Lewisham Planning; Lewisham Highways; The Blackheath Society; English Heritage and The Georgian Group.

The plan consulted on differed from this final application plan in that the mutual boundary was 1.5m to the north. The site access and overall design strategies were as set out in this application. Two documents were used in the consultation: 1016-Design Statement P01 and 1016-History Statement P01. A full set of drawings describing the proposals were also presented and were all those included with this application, all revision P01. The consultation period began in January 2009 and continued until December 2009.

### English Heritage Consultation

Malcolm Woods of English Heritage was consulted. Mr Woods is the Historic Buildings & Area Adviser for the London Region and advised the applicants on alterations made to The Pagoda in 1992.

Mr Woods made a site visit 24th June 2009 to discuss the proposals and view the scheme as presented in the P01 revision of drawings (see drawing issue sheet in appendix), and the site model of the proposal. Also presented was the historical Cardigan Plan of 1762 and other historical evidence.

Mr Woods was of the opinion that the immediate setting of the Pagoda was not as significant as the wider setting of its position on top of the hill and the views that were enjoyed from the upper floors of the original Pagoda pavilion being that it was built with no formal relationship to its immediate setting.

On Mr Woods' request the History Statement was produced which consolidated the historical evidence. Also a photomontage of the garden of The Pagoda post development. Mr Woods also recommended that The Georgian Group be consulted at this stage.

Mr Woods concluded he was minded to raise no objection to the proposal.

### Consultation with The Georgian Group

Stuart Taylor of The Georgian Group made a site visit and viewed the same information presented to English Heritage.

The group's point regarding the continued viability of The Pagoda as a single dwelling has been addressed in sections 2.4- Economic Context, and 2.6.1- Planning Policy Guidance 15. Therefore, the viability for the continuation of the Pagoda as a single family dwelling will not be compromised by this application. As set out in section - Proposed Setting of the Listed Building, the garden left with The Pagoda remains of a substantial size.

The Pagoda house and garden are not on the London Parks and Garden Trust's Inventory of Historic Green Spaces and therefore have not been consulted on this application.

### The Blackheath Society Consultation

Two groups of architect members of the Blackheath Society were invited to site to view the proposals and issued with the historical analysis. A copy of their response is below. Their main concern was the setting of the listed building. Their recommendation to move the proposed mutual boundary wall slightly south and retain the two pergola structures on the site of The Pagoda has been implemented and is a welcome improvement to the scheme and the setting of the listed building.

### Consultation with Lewisham Planning Department

The full pre-application submission was presented to the Lewisham Planning Department on 16.06.09 at their offices. Present at the meeting were Mr Philip Ashford, Head of Conservation; Ms. Regina Jaszinski, Conservation Officer and Ms. Louise Holland, Development Control. It was agreed that to establish the principle of developing in the grounds of the listed building the full historical context needed to be understood and the opinion of English Heritage sought. Therefore the applicants prepared and presented the History Analysis - P01 02.07.09.

A second meeting was held on site on 09.09.09 with Mr Ashford, Ms Jaszinski and Ms Lamb to view the proposals in context. Ms Jaszinski requested further images of the proposal as viewed from the street.

Images were sent to Lewisham on 01.10.09.

The council's response to the site meeting and subsequent photomontages was in an email dated 05.11.09.

A third meeting was held at Lewisham's offices on 11.11.09 to address the points raised in the email. The minutes from that meeting are below.

Subsequent email with revised site plan and photomontage of the garden was sent on 26.11.09.

A further sketch was prepared to demonstrate the affects of moving the boundary by 3 metres from the proposal in revision P01. For the reasons set out below this has not been put forward in the final application as it constrains the amenity and solar design available on site for a minimal gain over that already provided by the 1.5 metre move

Despite having received positive responses from all the significant statutory and amenity groups it was not possible to gain the same from Lewisham planning department. We therefore advised the client to submit the application with a view to appeal for non-determination .

## Appeal

An appeal was submitted for non-determination with the assistance of a planning consultant. The appeal inspector considered all aspects of the application and agreed with the conservation strategy and concluded that the proposals and issued approval with minimal conditions.

*In assessing the effect of the development proposed on the setting of the listed building I have had regard to the considerable care that has been taken in designing a house of a height and with a profile that would limit its prominence in views from The Pagoda and from Pagoda Gardens, and from other dwellings in the vicinity of the appeal site. Taking this and all other matters into account, I conclude on the first main issue that the development proposed would not harm, but would preserve, an appropriate setting for The Pagoda.*

*There are precedents for modern buildings in the conservation area. Matters relating to design invariably raise subjective issues but in my opinion the development proposed represents good architecture of a kind capable of making a positive contribution to the special interest of the conservation area. I therefore conclude on the second main issue that the development proposed would at least preserve, and would almost certainly enhance, the character and appearance of the Blackheath Conservation Area.*



## 7 Summary Assessment

This project remains one of the most challenging conservation briefs I have worked on and was one of the first for my practice. It was approached with a high degree of caution and I advised clients of a high risk that planning may not be granted. I also advised them that to have any chance of a positive outcome the investment in design and strategy would need to be all up front prior to pre-application consultation, otherwise it would be rejected out of hand without proper consideration.

On first viewing of the Cardigan plan it was clear that the southern part of the plot may not have significant historic value and so this was the focus of the strategy to assess and justify the appropriate sub-division of the plot. It was a significant investment in time and fee to go through the client's research papers and it did give us certainty about the history of the evolution of development and the setting.

Our assessment was correct in that no historic architectural or archeological items were uncovered during the construction of the new house.

On reflection the 23 page historic analysis was a little verbose for a heritage statement but it served as an opportunity for us to illustrate on the client's behalf their compassion for the listed building and allay concerns about motivation for harm. Having completed the RIBA CA course I believe we should now consider submitting information for the listing to be updated to more accurately reflect the dates and architects involved.

There were other elements of the project's constraints and brief that were not relevant to the conservation per se but which made the overall design even more challenging and therefore placed even further pressure on designing to the conservation brief. These included tree preservation orders and an agreed project target to get Level 5 on the Code for Sustainable Homes, which was achieved.

The outcome was a high quality new home in the tradition of outstanding homes for which Blackheath is renowned for. The project has won our practice recognition and awards and continues to be a manifesto project, demonstrating how thorough analysis can lead to project success and that sensitive modernism can often be the best solution for development in a heritage setting.



## Dossier 02

### Saint Martin's Lane

Planning and Listed Building Consent Applications  
for change of use and alterations to a group of buildings in the conservation area including a grade II listed Georgian town house  
Extracts taken from appeal statement, author Sam Cooper

Project dates 01.08.2010 - 08.07.2014

ICOMOS Education Guidelines Covered: A, B, C, D, E, F, G, H, I, J, L, M, N,



Application for accreditation as Conservation Architect

Samuel Cooper

RIBA Member No: 12058040



# 1 Status and Importance

This project involved three buildings numbers 50, 51, and 53 Saint Martin's Lane, Covent Garden, City of Westminster. Saint Martin's Lane appears on the earliest known maps of the area prior to the development of the City of Westminster and it follows the same route today. The old field patterns can be traced in the urban grain today and it is an inherent and intrinsic part of London demonstrating the organic development of the city through time. There are buildings from most significant periods of the development of this area still standing including town houses, mansion blocks, shops, workshops, courts, pubs, theatres, hotels and churches. Therefore the conservation area is important for its representation of the history of development in society, economy, culture and architecture through time and today; for the city and globally making it very significant and important. Many of the buildings on the lane are listed.

No 53 is Grade II listed. It is late Georgian c1774-1810 and is an important example of a terraced traders house, a typology which emerged with the expanding middle classes in the 17th and 18th centuries. It has a shop on the ground floor next to a coach way which would have lead to a stable yard behind that was later developed as a print works and is now Friends Meeting House. It is a well proportioned three bay eight metre wide and three storeys over basement. It is therefore significant and important building representing a significant element of the conservation area's development and character from a cultural, historical and architectural perspective. Much of the original detailing to the front facade remains above ground floor. To the rear the elevation has been altered. The original roof has been replaced with a flat roof. The original plan form exists and most of the original joinery and partition walls and stairs exist in reasonable condition.

No 50 and 51 are good examples of mid Victorian town houses and important in the contribution their front elevations make to the character of the conservation area. They have been significantly altered internally and at the rear to the detriment, with original stairs and partitions and many windows removed. At ground and basement they have been combined to make a large restaurant unit. On the upper floor they are offices and restaurant back of house. Original roofs have been removed. Therefore, internally and to the rear they are not important.

01. No.s 53,51,50 Saint Martin's Lane



## 2 Project Brief

All three buildings were in need of deep refurbishment to fix problems of deteriorating building fabric and services, and problematic layouts that were the consequence of years of ill considered alterations and extensions. Our client was looking to make this viable by adding value to the building group so that they could continue to hold them as landlord as a long term asset.

The current use of 53 was hairdresser at ground, office combined with 51 at first and residential on second and third with a roof terrace. 51 was restaurant on ground with offices on upper floors which were very deep and narrow. 50 was restaurant back of house on the upper floors which were cramped and unhygienic.

We were initially appointed to carry out feasibility studies into the options for changing the use and adding floor area. Given the status of the listed building and conservation area I advised the client that this would have to be a conservation led approach to establishing an appropriate use and in the design of any alterations. Given the amount of poor alterations carried out in the post war era and the apparent number of use changes through history there should be scope for adding value at the same time as enhancing the buildings and their contribution to the conservation area.

I set the conservation brief for the changes to the listed building to be to remove unsympathetic additions and alterations and return it as much as possible to the original plan form and use as a single town house.

No.s 50 and 51 had more flexibility as the interior and rear of the building were poorly altered and extended. I developed a brief that these could be combined as one building and the rear additions demolished and consolidated to give a coherent elevation onto the alley way and conservation area. There was also the potential to extend at roof level. A number of sketch plans were investigated including a boutique hotel and various mixes of residential units above restaurant. We settled on a residential scheme on upper floors and retaining existing commercial on ground.

We were appointed on a full architect service to carry out designs and make applications for alterations and change of use including planning permission and listed building consent and through all stages to completion.

I advised the client to go through the pre-application service with the conservation and development officers. The principles of use were established and mansard extension to 50 & 51. An application was made on this basis which followed the WCC guidance for roof extension in conservation areas which asked for double pitched mansards. This was refused on ground of height and scale adjacent to the listed building and presentation of a flank elevation at the corner. I negotiated with the conservation officer that we revise a flat roof mansard which returned around the corner for which we gained approval. I felt that this was not right and so advised the client there was a good chance of arguing for the first scheme at appeal.

## 3 My Role

E2 were appointed as lead designer. Sam Cooper is founding director of E2 Architecture+Interiors and was the lead on this project for heritage analysis, conservation brief and architectural design and specification.

## 4 Project Team

Architect/Lead designer: Sam Cooper director E2 Architecture+Interiors, technician Dan Fisher, architect Chris Pinchin

Client: Algebra Properties

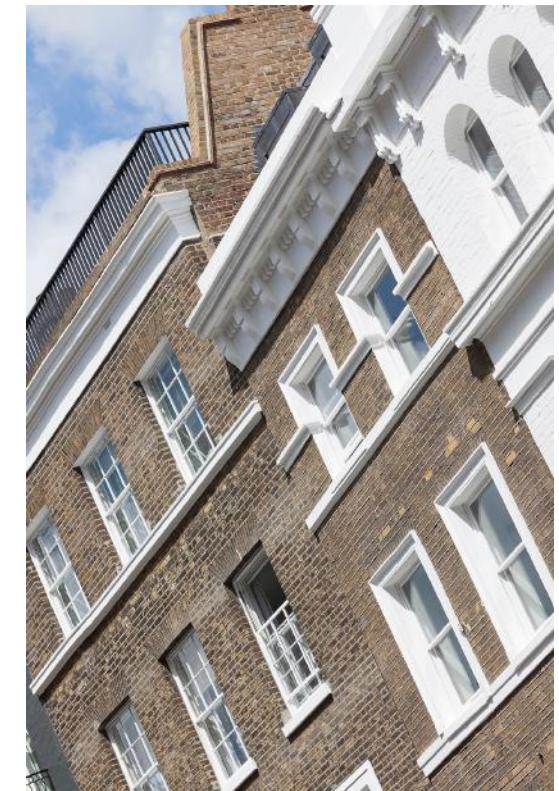
PM: Bryan Lamden

Structural Engineer: RWA

Planning Consultant (Appeal only) Rolf Judd



02. Nos 53 51 and 50 first survey,



03. Nos 53 51 and 50 complete

## 5 Critical Analysis

To justify substantial demolition and alteration to no. 50 and 51 as significant character buildings in the conservation area and part of the setting of the listed building I had to understand and set out the history of its cultural, architectural and urban design development and evolution. I also had to understand the architecture and fabric of the buildings and identify the original forms and the altered state and what was significant within these. This would then inform how to design a sympathetic scheme that would gain listed building consent and planning approval.

On first viewing it was obvious that these buildings were not built with flat roofs below the main parapet height. Therefore it became the focus of the conservation analysis if there was any justification for designing a sympathetic roof extension to nos 50 and 51. I also looked at the wider conservation area for clues as to what would be appropriate. This would also be informed by the supplementary planning guidance of Westminster City Council (WCC).

This dossier focuses on the planning stage of the project and the conservation architecture of extending the nos 50 and 51 at the roof as this became the most contentious issue in the pre-application process with the local planners and conservation. An initial application included for a dual pitched mansard extension to nos 50 and 51 and a small glass box on the roof of 53 to afford an extension of the main stair to the terrace was submitted and rejected. The reasons given were scale, bulk and height in relation to the conservation area and the listed building. A second application with a flat roofed mansard and reduced stair enclosure was approved. An appeal for the first scheme was then prepared but never submitted as the brief changed and the project became an office scheme with lateral conversion within the existing structure and roof as approved. The extracts in this dossier are taken from the design and access statement as revised for the appeal.

Information for the conservation analysis came from my own site surveys, archive research of WCC planning and building control, reference to The Survey of London, WCC library archive of prints and photographs, archive of WWII RAF photographs.



04. Rear of 53 first survey



05. Rear of 50, 51 and 53 survey

## Introduction

This application is a resubmission of the original scheme submitted with the first application with minor amendments. The reason being for this application is that on balance we believe this scheme is more in keeping with the historic character of the buildings, St Martin's Lane and the conservation area. Therefore, this application represents an enhancement of the approved scheme to the local built environment. The approved scheme, as a consequence of its evolution and design development through the pre-application and determination periods is not as coherent and does not enhance the buildings and setting of the conservation area and listed building to the same degree as this application.

This design and access statement includes the relevant sections of the previous design and access statement with additional evidence in support of our case and a more detailed analysis of the context and conservation area. Further sections which have been added compare the two schemes. We present a clear and thorough analysis of the historic evolution of St Martins Lane and the context of the built form and townscape along with a comprehensive discussion of the design issues and reasoning behind the decision process in proposing this scheme over the other options explored.

The approved scheme is for mansard roof extensions to numbers 50 and 51, with mansard with dormers rising from back of parapet to the street elevations with a flat roof. There are roof terraces to the rear with inset dormers beside the extract duct from the restaurant kitchen. The side elevation to Hop Gardens opposite the hotel has a mansard returning the corner with dormers.

The scheme submitted here has the roof terraces to the front with lead clad cheek walls to eaves and then a double pitched lateral mansard and roof. The side elevation is extended up to form a gable wall with traditional sash windows. The gable and party walls follow the pitch of the roof and mansards to the front elevation parapet to provide screening.

One of the key discourses surrounding the proposals for 50 and 51 comes down to how the corner is addressed at number 50 and whether or not this building, which was not designed as a corner building, is given equal treatment to the front and side elevations at roof level. Another discourse is whether or not the terraces are at the front or rear.

The difference in the proposal for the listed building is that the glazed stair enclosure is enlarged marginally in this scheme to include a landing at the top of the stair which will be safer and provides a proper termination to what is a grand stair noted in the listing.

# Surrounding Buildings

## Context & Massing

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As is explored below historic evolution of development has left traces in the urban grain on the east side of Saint Martin's Lane that is characterised by a primary frontage with secondary streets and tertiary lane ways and alleys leading off it. Between these were courtyards, which were later in filled to form small industrial units and print works. Hop Gardens is a tertiary pedestrian alley that was originally entered through an archway under a building. To the rear of the application site this infill is now occupied by the two and three storey Friends Meeting House.



06. Birds eye view looking west at the rear of the proposal site & surrounding buildings



07. Birds eye view looking east at the front of the proposal site and surrounding buildings

# History

## Early History

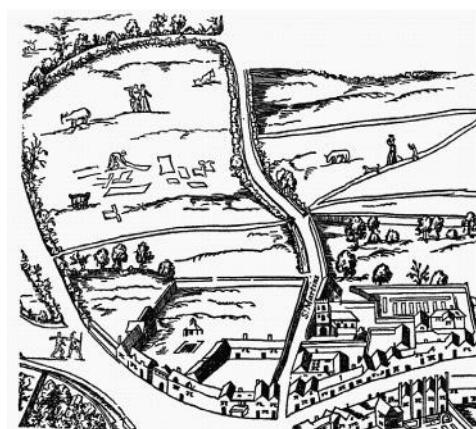
Until the time of James I, St. Martin's Lane was a country lane linking the churches of St. Martin-in-the-Fields and St. Giles-in-the-Fields; as such it was probably in existence at the beginning of the 13th century, and there may have been a field path there even earlier. Except in the immediate vicinity of the church, the Agas view (circa 1560–70) shows no buildings in the lane, and its rural character is shown.

## Landowners and Built Beginnings

In 1608–9 the Earl of Salisbury bought four acres of ground on the west side of the lane, which included the whole of the frontage from the parish boundary, i.e Newport Street, down to what is now the south-west corner of St. Martin's Lane. He proceeded almost immediately to build and lease houses there. The frontage to the new churchyard, on the site of the National Portrait Gallery and St. Martin's Place, was built up between 1615 and 1624. At the same time the Earl of Bedford was building on the east side.

## Society Developments

During the 17th century the lane was inhabited by a number of famous people, who lived, almost without exception, on the west side, where there were large houses with stables and coach houses annexed to them. The east side seems to have been occupied mainly by traders and artisans. In the late 17th and first half of the 18th century the residential part of the lane seems to have become a fashionable situation for doctors and artists. Old Slaughter's Coffee House at Nos. 74 and 75, on the west side of St. Martin's Lane was founded in 1692 by Thomas Slaughter and became a favourite resort for artists living locally.



08. Drawn view of St Martins Lane taken from the 'Agas view' circa 1560-70



09. Handmade oil painting reproduction of Colourmans Shop, St Martins Lane, 1829, a painting by George the Elder Scharf

# Building Leases & the Rise of Mixed use Buildings

All sources are taken from: St. Martin's Lane, Survey of London: volume 20: St Martin-in-the-Fields, pt III: Trafalgar Square & Neighbourhood (1940), pp. 115-122.

The east side of St Martins Lane has for a long time had a mixed use character with buildings of domestic and commercial use existing side by side and within the same demise.

Thomas May obtained in 1738 an Act of Parliament authorising him to grant building leases for property in St. Martin's Lane and Feather's Court. Leases were granted to Thomas Parton, bricklayer, who proceeded to erect May's Buildings in 1739. The following extracts from the 'Survey of London' typify some of the characteristics of some of the earlier examples of residential and mixed use dwellings on the street.

*'No. 31, St. Martin's Lane. (On the South side of the Coliseum) The exterior is in stock brickwork with stone dressings and carved panel enrichments. The ground floor which is now a shop was formerly utilised as bank premises. The front room on the first floor has panelling walls with arched recesses, and a panelling ceiling finished with a deep modillion cornice.'*

*'Nos. 42, 43 and 44, St. Martin's Lane (now demolished but previously existed on the site of the present St Martins Lane Hotel). These premises consist of four floors and basement. Shop fronts have been inserted. The exteriors are in red brick. Nos. 42 and 44 have a moulded brick band at second floor level and a brick modillion cornice to the floor above. The window openings have brick dressings and segmental heads with the frames slightly recessed. These properties were built by Thomas Parton in 1739.'*

*'Nos. 55 and 56, St. Martin's Lane.—No. 55 is entered from Goodwin's Court and is similar in plan and wall finishing to No. 56. The basement, however, still retains some old brick baker's ovens continuing under the roadway. Also built by Thomas*



10. Map dating from 1874 showing works behind between Hop Gardens and Goodwins Court

# Urban Grain and Built Form

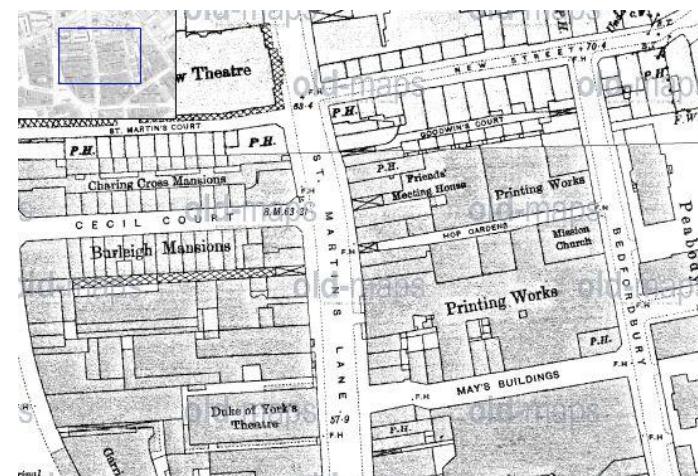
## Courtyards

In the 17th & 18th centuries the areas behind St Martins Lane became defined by stables & courtyards sited behind the high street buildings. These courtyards were often bounded by laneways and alleyways such as Hop Gardens and Goodwins Court. Often these courtyards were developed and enclosed with roofs and walls and turned into small scale commercial premises. In this area these often developed into back street print works. One such print works previously occupied the space currently inhabited by the Friends Meeting house. The truncated chimneys from the print works are still visible above the current meeting room roof.

The site of the current St Martins Lane Hotel was previously occupied by Nos. 45, 46 & 47, St. Martin's Lane. The Survey of London described these houses as dating from the early 19th century, and said they had been 'much altered internally'.

*'The continuous treatment of the shop front is an interesting feature. The connection of Harrison & Sons, the printers, with these premises began in 1840, when T. R. Harrison went into partnership with J. W. Parker at No. 45. The entrance to Kynaston's (later Chemist's) Alley lay formerly between Nos. 46 and 47. The alley originally extended to Bedfordbury, but in 1855 part of it was roofed over with glass to form a machine room'.*

This gave Saint Martin's Lane a distinct characteristic common to many streets of London that have evolved in a similar manner through this period, of ornate and ordered frontages and utilitarian backs.



11. Map dating from 1910 showing a printing works predating the St Martins Lane Hotel and the Friends Meeting House to the North of Hop Gardens and Goodwins Court

## Alleys and Lanes

As can be seen from the two maps opposite there were many small alleys and lanes leading from Saint Martin's Lane to serve the courtyards and development to the rear. These were more often than not entered through the frontage of buildings on Saint Martin's Lane.

The following is again an extract from the 'Survey of London'.

*'The Hop Gardens is a small court between Nos. 49 and 50, St.Martin's Lane, extending backward to Bedfordbury. Prior to 1649 it was known as Jenefer's Alley from the occupant of a house at the western end, Roland Jenefer. The rate books from 1652 to 1655 give the alley as Fendalls Alley, but from 1656 onward it appears as The Flemish Hop Garden (later the Hop Gardens). It was probably named from an inn with that sign.'*

The photograph opposite of an alleyway from Saint Martin's Lane was taken by John Gray in 1960. The original entrance to Hop Gardens would have been almost identical. It shows the archway entrance beneath a building above and the tightly opposed flank walls of the buildings abutting the alleyway and chimneys of the works behind.



12. A view of Goodwins Court over the roof of the Friends meeting house and capped chimney assumed to be from a previous print works



13. A photograph by John Gay c.1960 showing entrance to Goodwins Court

## Street Scape

The watercolour image by J.P Elmslie to the right hand side shows a Victorian view of the eastern side of St Martins Lane in 1882. The image is looking south at the St Martin-In-The-Fields Church in the distance. The buildings here are largely Georgian stock with Georgian & Victorian shop fronts.

This image clearly shows the street scape that developed as a direct result of the evolution of the area, which is that of ornate frontage with cornices, parapets and shop windows. Above the parapets the party walls rising up to support the tradition 'M' roof forms and chimneys can be clearly seen on the sky line. The four buildings that are on the open corners of alleyways have blank flank walls, some with gables, onto the alleys with only the shop fronts addressing the corner.

It is evident in this image again that Saint Martin's Lane has traditionally been very much about front, with the sides and rear given little consideration fenestration or detail other than structural function.



14. Watercolour of St Martins Lane east side looking south (1882) by J.P Emslie showing parapets, flank walls & chimneys

## Flank Walls

More examples of flank walls being taken up past the parapet line are shown in the images from various sources to the right hand side. Of particular note is the corner of May's Buildings which is one of the alleys that has had an open frontage with buildings on each corner for some time through history.

Image 14 is a from a photograph taken in 1929 and illustrates the properties 42-49 for sale in an upcoming auction, which was later developed into the now Saint Martin's Lane Hotel. The building on the right is the corner of May's Buildings and shows the shop front which turns the corner and the flank wall with plain windows above. The enlarged image below shows further detail in the distance the flank wall of number 50 St Martins Lane rising above the now demolished property at 49 St Martins Lane. Large chimneys are also visible on the party wall line with no 51.

Geoffrey S. Fisher sketch of 1965 and Sherwood's watercolour of 1965 show properties 42-50 prior to their demolition. The flank walls of No.s 43 & 45 as they return above their shorter neighbours are clearly visible as is the high gable and chimneys of the flank wall onto May's Buildings.

Image 10 shows Cecil Court in 1892 with no53 in the background with its high party wall and chimneys. Also evident opposite is the flank wall of the building on the corner of Saint Martin's Lane with its flank wall a storey higher than the eaves height on the Court.



15. An extract from a water colour of Cecil Court by F. Calvert (1892) showing no.53 in the background and a blank flank wall on the corner of Cecil Court



16. Pen drawing by Geoffrey S. Fisher (1965) showing Mays Buildings about to be demolished showing clean parapet

## Historic Roof Typologies

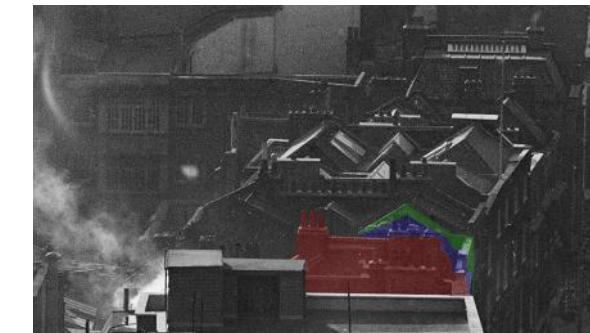
The overhead photograph opposite was taken by an RAF reconnaissance plane on 27th August 1945.

The image gives a good picture of the general roof forms on the Lane. Many of these would be in an original and unconverted condition. The majority are the traditional 'M' form with multiple pitched lateral roofs with ridges from side to side. Also visible are traditional valley roof with central gutters from front to back.

There are many later roof types including hipped, mansard types, gable fronted and flat. All the original roofs in the section of Saint Martin's Lane the application site is within are lateral M roofs with the exception of the building on the corner of New Row which is a later addition and is on the corner of a secondary street in town scape terms.



17. Overhead photograph taken by an RAF reconnaissance plane on 27th August 1945



18. A detailed view showing the roof form of the 3 buildings in question from circa 1960.

# Existing Buildings

All three buildings follow the urban grain described above with the shops at ground with ornamented facades above with a filled yard to the rear and alley way to the south. Their styling and detail differ as do their ages. The front facades are very symmetrical with a clear hierarchy to the levels and fenestration and are generally as they would have been originally with remodelled shop fronts from various times. All have various additions and extensions to the rear which will be removed and consolidated as permitted under the previous permission.

All three properties have lost their original pitched roofs, which have been replaced with flat asphalt. The party walls and chimneys have been significantly reduced in height. Number 53 has a stair enclosure to access the roof terrace and glass roof over the stair below. A new timber and glass enclosure to a more generous stair that is a continuation of the stair noted in the listing has been permitted.

The flank wall to number 50 has large buttress supports and plain render where the building over the entrance to Hop Gardens was removed. To the rear of this the top level has been rebuilt in flint brickwork with casement windows which is out of character with the building and has been permitted for rebuilding in the previous permission.

The principle of roof extensions with terraces and the raising of the party walls to all three buildings has been established in the previous permissions.



19. Photograph of front elevation of Nos. 50-53 St Martins Lane

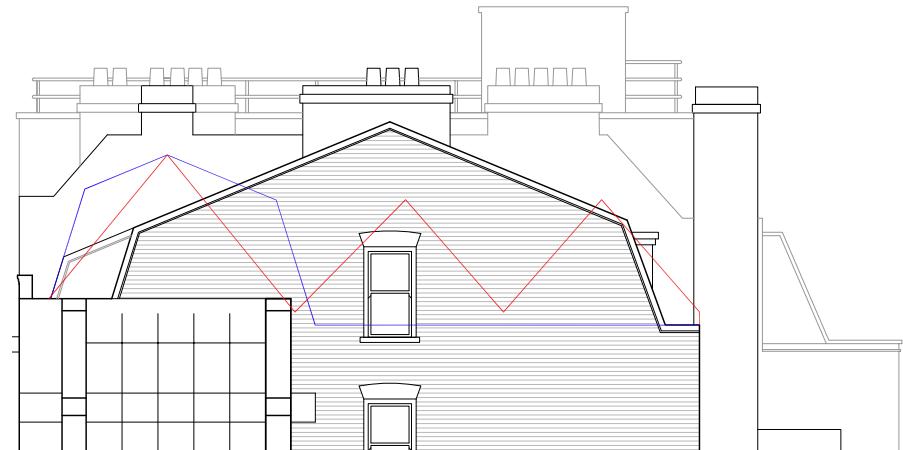
## Historic Roofs of 50

Numbers 50 and 51 had the lateral 'M' type roofs with ridges running side to side. The roof on 51 had 4 pitches evident in the weathering on the brickwork of the party wall with 53. 50 originally had 3 pitches with a larger to the front and later a mansard to a small room at the front with a flat roof behind, evident from John Gray's photograph in image 18 page 15 and the planning drawing from Westminster archive. The parapet walls to the front elevations were approximately 1300mm above the gutter level.

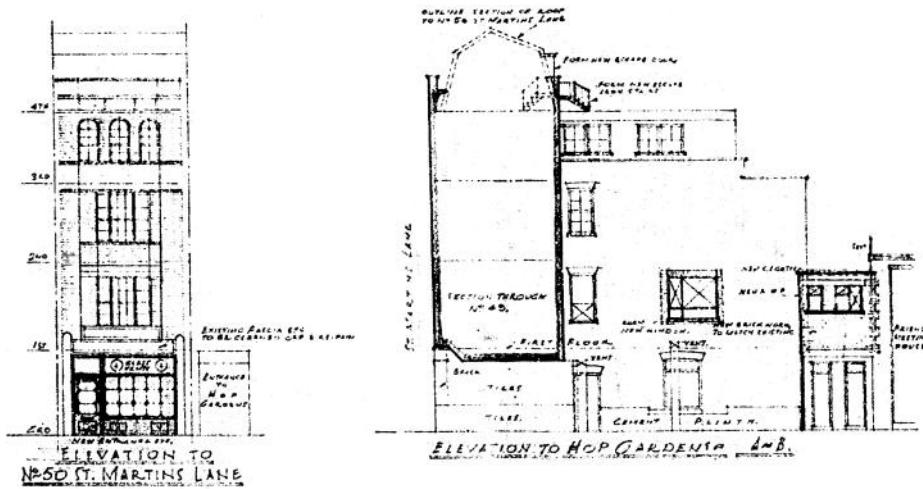
As is evident in the various historic images presented in this report the roofs would have been well hidden by the parapets with the party walls and chimneys visible on the skyline. The flank wall of number 50 would have presented the gables of the rear pitches at high level to the alleyway once out of the archway under 49.



20. A photograph taken in 2011 showing the assumed historic party parapet in purple and 51's historic roofs which followed the lines of light and dark coloured brickwork



21. Proposed flank elevation of 50 St Martins Lane with estimated historic roof profiles



22. Westminster archive drawing of number 50 with section through 49 and outline of mansard to 50 dashed.  
1964.

## Existing Precedent Buildings

There are many other existing buildings on Saint Martin's Lane and in the local area developed in different periods up to the present, which have similar features to that which we propose. They continue the tradition of large flank walls, gables and roof terraces behind parapets.



23. 1 Upper Saint Martin's Lane



24. View of large gable to 60 Saint Martin's Lane with application site in the foreground



25. 101 Saint Martin's Lane and Duke of York, space between historically an alleyway



26. 1 Corner of Brydges Place and Saint Martin's Lane

# Proposals

## 50 & 51 Saint Martin's Lane

The proposal of this application for planning permission is to alter the roof extensions to numbers 50 and 51 permitted previously. The key alterations are :

### Roof Terraces

To put the roof terraces to the front behind the parapet with vertical lead clad walls and glass doors. By doing this the new roof is set well back from the high parapets and largely hidden by them. This gives the development the benefit of west facing terraces with high level long views of Saint Martin's in the Fields and Trafalgar Square and the afternoon sun. This gives the conservation area the benefit of the sky line being dominated by the parapet line and the corner of the parapet to the listed building remaining visible.

The materials on the roof terrace are consistent with the conservation area and the vertical walls give a better presentation than the inset dormer permitted.

The design of the roof terraces and roof form follow the same principles, setting out and detailing as that of a roof extension scheme E2 recently completed in the borough in the Pimlico conservation area at 42 and 44 Moreton Street (08/02620/FULL). These buildings are of a very similar age and style. They are one storey lower meaning that the screening effect of the existing parapet walls will be more in this proposal. The images on the right show how the terrace is set well down behind the parapet and the roof extension is not visible over the front elevations.



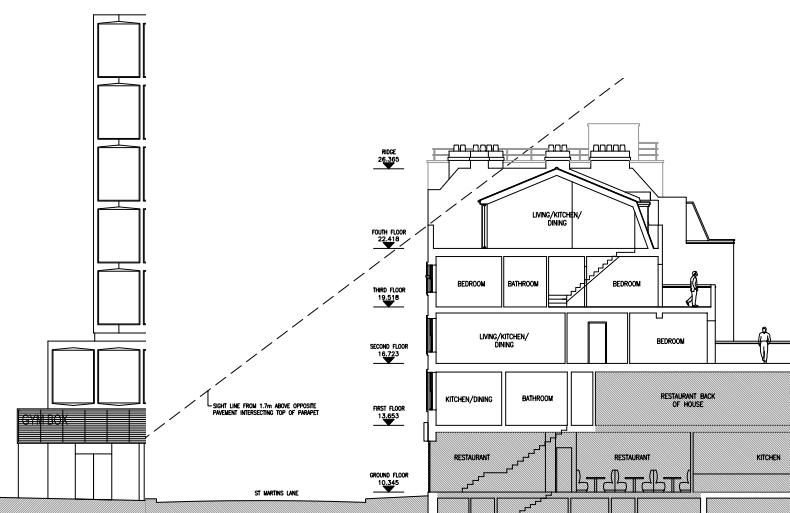
30. Images of new roof extensions and roof terraces at 42 & 44 Moreton Street, Westminster



28. West elevation, permitted



29. West elevation, proposed



27. Section AA cutting through building 51 showing site lines from the pavement opposite

## Gable Wall and Double Hip Mansard

The second key proposal is to raise the flank wall to Hop Gardens to form a gable in the profile of a double hip mansard. This gives the development the benefit of more usable internal space. The party walls and gable wall extend to meet the front wall to provide screening between the terraces and present a more traditional profile to the street.

This presents a gable wall to the alley as is consistent with the character of the conservation area. It also presents a fully pitched slate roof with traditional lead detailing which will enhance the character of the conservation area, particularly when viewed from the higher buildings that surround the site including the hotel adjacent.

This additional height onto the alley is nominal when viewed from street level and in the context of the seven storey hotel opposite, and is marginal over the bulk of the historic profiles. The height of the ridge is at the height of the party wall with the listed building, which in elevation is higher than the permitted scheme however, when viewed from the street this presents a lower in profile and is therefore more subservient to the dominant form of the listed building.

The gable arrangement means the roofs are fully pitched and lateral and the primary elevation remains symmetrical in line with the original design intention and the traditional townscape of the terraced street. The rear elevation also benefits from this symmetry with both 50 and 51 having balanced slate mansards with lead clad dormers.

NOTE:

The effect of the lower eaves height and set back of the proposed scheme significantly reduces the visible presence of the roof extensions and maintains the balanced symmetry of the historic facade.



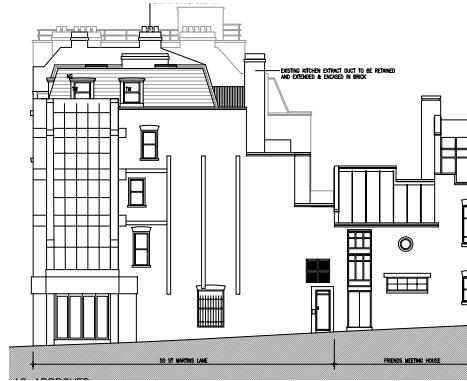
35. View from Cecil Court



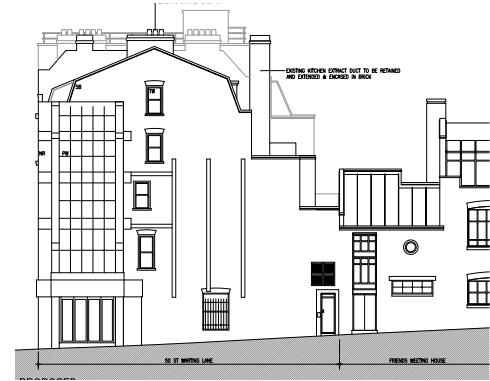
36. View from Cecil Court, permitted scheme



37. View from Cecil Court, proposed scheme



31. Permitted south elevation



32. Proposed south elevation



33. Permitted rear elevation



34. Proposed rear elevation

# Conclusion

As has been demonstrated there is clear evidence in the local conservation area of a tradition of buildings to the corner of tertiary lanes and twittens which do not ‘turn the corner’ at roof level. For this reason we have considered a similar treatment for number 50 Saint Martin’s Lane. The building was not a corner building when originally designed a built and is very much a ‘front and back’ building, which has had a side exposed that does not address the corner. By designing a lateral roof with a gable wall this means the front and rear elevations at roof level are symmetrical and balanced about the axis of the original elevation below.

By designing a duel pitch lateral mansard with a set back from the parapet the eaves of the new roof can be set lower than the flat roof permitted. This significantly reduces the visibility of the roof from the street views and therefore reduces the impact on the historical setting of the conservation area and the listed building.

The proposed gable wall is significantly lower than Saint Martin’s Lane Hotel and the wall to 20 Bedfordbury on Hop Gardens. Therefore the proposal will not add to any sense of over bearing to the alley and is consistent with the local character.

The roof terrace to the front is set down behind the high parapet wall and therefore requires no extra guarding or screening. Locating the terraces to the front significantly increases the amenity value of the terraces by offering them westerly sunshine and views to Trafalgar Square. As demonstrated in E2’s scheme at Pimlico this arrangement can be successfully detailed to present a subservient form with traditional materials, which complements the host building.

The proposed roof forms, with duel pitch lateral mansards with full natural slate and lead detailing are much more complementary to the surrounding roof scape than the permitted scheme. Therefore the roofs enhance the character of the conservation area with the addition of traditional forms and materials rather than flat roofs with membrane finishes and up stand roof lights.

The extension of the permitted stair enclosure to number 53 is a marginal increase which improves the accessibility of the roof without materially changing the scale or impact of it.

These proposals are almost identical to the scheme which went to public consultation. That scheme received no objections including from the local amenity group.

Therefore, in light of the evidence presented, this application is for a proposal that preserves and enhances the character of the conservation area, respects and enhances the design and proportions of the host buildings and is in line with approvals given for comparable developments in the borough and for this reason should be approved.

Sam Cooper, BAArch, PGDipArch, RIBA  
Director,  
E2 Architecture + Interiors Ltd.

38. Left: interior of mansard with exposed reclaimed joists

39. Middle, view from roof terrace of 53 during construction

40. Right, uncovered fireplace in listed building

# 6 Summary Assessment

Unfortunately the client’s brief changed again just before we submitted the appeal scheme. Economics had changed and a new restaurant tenant in the ground floor meant that the feasibility of alterations to the upper floors were compromised. The project was developed out as offices as an adaptation of the approved scheme. So I never got to test my assessment with a planning inspector.

This was a fascinating project to be involved in and it was a real pleasure studying the development history of this part of London. Given the length of history and the variation of development through that time - in all aspects of architecture, design and society which could be deemed to have an affect on the critical analysis and decision making of the conservation brief - the process of distilling this evidence and formulating a case was a big challenge. I don’t think that we had refined it enough or gathered and presented enough evidence at the first pass in the pre-app and first application. Had we managed to then we may have had a success in convincing the conservation officer that our design did not need his input, which he was keen to give. Our planning consultant was convinced of our argument and had little to add to the brief or case.

This project broadened my knowledge of information sources and where to look in archives and in the built environment for evidence and cues for decision making. It also sharpened my skills at formulating a case and constructing a presentation which can be read and understood by others.

There were many interesting aspects of conservation in the repair and refurbishment of these buildings, particularly the listed building, including how to gain fire rating in listed constructions; repairing the cut string stair; repairing sash windows, improving acoustics and many more you would expect in a building of this age, which I do not have space for here in this report.

The outcome of this project is a group of buildings which have had their contribution to the history and evolution of London preserved and enhanced for another generation.



# Dossier 03

## Morden College Garden Wall

Listed Building Consent Application and full architectural services  
Repair of Georgian garden wall c.1765 Grade II listed, attached to grade I listed Morden College

Extracts taken from Listed Building Consent statement and project correspondence, author Sam Cooper

ICOMOS Education Guidelines Covered: A, B, C, D, E, F, G, H, I, J, K, L, M, N

Project date: 02.02.2016 - 20.09.2018



Application for accreditation as Conservation Architect

Samuel Cooper

RIBA Member No: 12058040



# 1 Status and Importance

The garden wall is listed under its own Grade II listing. It is attached to Morden College which is a Grade I listed alms house. Both date from 1695-1702. The application Grade II listed Garden Wall is located on St Germans Place and forms part of the Grade I listed Morden College building.

The walls enclose a garden to the south of Morden College, adjacent to the Chief Executive's house.

*"Wren may have been the architect; at any rate the domestic brick and stone style which here reaches happy maturity shares features with Hampton Court. (...) The Mason was Edward Strong, one of Wren's favourite builders. Sir John Morden was on the Greenwich Hospital Commission with Wren, so it is more than likely that Wren designed the building, although there is no proof. It is indeed one of the best dozen or so of examples of his style in domestic as against representational architecture."*

*The Buildings of England, London 2: South  
Bridget Cherry and Nikolaus Pevsner*

Morden College quadrangle provides housing and assisted living for older people and is directly linked to the walled garden to the south.

The garden serves the western most section of the south wing to the Quadrangle building and is walled in red brick to the east, south and west. A large lawn occupies the centre of the garden with planting bordering its edges. A large Morus Nigra Black Mulberry tree established since 1700, dominates the southern end of the garden.

Historically, the garden has always served the Chief Executive's house, which it still does. As such it has, and continues to play an integral role in the administration of Morden College.

The Garden Wall to the South of Morden College was built by Morden College. Founded by Sir John Morden in 1695 as an almshouse for the support of merchants who had fallen on hard times.

## External Significance

The significance in the appearance of the Garden Wall relates to its position within proximity of the Grade I listed quadrangle building of Morden College.

To the exterior of the garden, the western section of the Garden Wall is visible upon the approach to the quadrangle building of Morden College from St German's Place.

The exterior face of the southern section of the Garden Wall is visible within the memorial garden to the south.

## Summary of Significance

Having regard to English Heritage's Conservation Principles (2008), the significance of the building can be summarised as follows:

**Evidential:** The Garden Wall to the south of Morden College has some evidential value as part of the development of this part of Greenwich, and as an example of garden wall building by Wren's favoured mason, Edward Strong. Thus its value is both illustrative and associative.

**Historical:** The Garden Wall to the south of Morden College has historic value as an example of the development of this kind in Greenwich. It has a historic association with Sir John Morden, Sir Christopher Wren and his mason Edward Strong and the developments carried out by Morden College within the area.

**Aesthetic:** The Garden Wall to the south of Morden College includes some attractive detail. However, it has been subject to some alteration and associated damage from its lack of suitable maintenance. Therefore there is potential to enhance the functional and aesthetic value of the wall.

**Communal:** This category is normally used for buildings with cultural significance such as religious buildings. However, the Garden Wall to the south of Morden College constitutes a significant component to the structure and layout of Morden College. The communal value of the wall as such is therefore commensurate to the communal value of Morden College itself. Given the current charitable function of Morden College within the borough of Greenwich, helping older people by offering either a home for independent living, a home for supported living, or 24/7 residential care with nursing, it can be argued that this wall does embody a degree of communal value. Its communal value in a wider sense also relates to its heritage status and its association with Sir John Morden and Sir Christopher Wren.



01. Morden College CEO's house with garden walls showing to left and right of image

## 2 Project Brief

As retained Heritage Architect for the college we advise and assist the head of property in developing the brief for maintenance and improvement projects on the college's main site and with there large portfolio of buildings held in the trust, many of which are listed and were built by the founder Sir John Morden and the trust in and around Royal Borough of Greenwich since the late Georgian period. The college has a conservation plan in place from before our appointment, this was one of the projects highlighted and was one of our first projects on the site.

The wall was relatively recently cleared of vegetation and this has revealed a number of structural issues.

Our involvement began after a structural condition report had been produced which recommended partial demolition and rebuilding of large sections of the garden wall. The college had approached the local conservation officer on an informal pre-application and was advised this would need listed building consent at which point we were consulted. I advised the client that it was very unlikely that LBC would be granted for the demolition and that in my opinion it did not need demolition but that sensitive repair and some localised reinforcement should be enough.

The client and their structural engineer were not willing to agree to this approach. The engineer suggested buttressing at 2m centres with sections of underpinning. The client did not want buttressing in preference for a rebuild. I needed an ally so recommended a pre-application consultation with HE (Historic England). I had developed a strategy in a draft heritage assessment and design statement for presentation to HE which was accepted and this became the detailed brief. See Critical Analysis section below.

## 3 My Role

E2 were appointed as lead consultant. Sam Cooper is founding director of E2 Architecture+Interiors and was the lead on this project for heritage analysis, conservation brief and architectural design and specification.

## 4 Project Team

Architect/Lead Consultant: Sam Cooper director E2 Architecture+Interiors, assistant architect Jim Rooney

Client: Morden College Trustees, FM Lt Col (Retd) Philip Westwood I.Eng MInstRE

Structural Engineer: JML Associates

Historic England: Alasdair Young

Brick and Mortar Analysis: Dr Gerard Lynch

Master Bricklayer: Charlie Stewart of Stewart Truman Ltd



02. Morden College quadrangle, view of clocktower, the clock was fabricated by the same maker of the clock to the Elizabeth Tower, which houses Big Ben

## 5 Critical Analysis

The following section is a combination of the heritage, design and access statement produced for the listed building consent application and subsequent project records through the course of the tender and works.

Previously, (over the last 325 years) the client had undertaken minor repair and refurbishment works to the original walls and a pair of square piers that support a single leaf timber gate in the eastern section of the wall, as well as maintaining one pair of later piers supporting a double leaf timber gate (with wrought iron gates to the exterior) inserted to the northern corner of the western section of the wall nearest the Chief Executive's house and a second pair of piers supporting a double leaf timber gate at the southern corner of the western section of the wall.

The partial falling away of wall copings, cementitious repointing, and a general lack of maintenance has allowed water to penetrate causing buddleia roots to establish deep within the wall's joints.

A small garden store forms part of the wall in the south eastern corner. The brickwork is in similar disrepair and the interlocking clay roof tiles are loose and missing in places.

The south wall has had a gate inserted near the rear store which has destabilised the east end of the wall. A significant lean in the wall here and some delamination of the brickwork requires some structural intervention to prevent collapse.



03. Garden wall to the south of Morden College bird's eye view West



04. East section of wall, internal - viewed from within the garden



05. East section of wall, external - viewed from within the adjacent garden to the east



06. South section of wall, internal - viewed from within the garden



07. South section of wall, external - viewed from within the memorial garden

## Examples of Damage / Disrepair



08. Examples of the extent of the damage including crumbling and missing bricks.

# Proposed Development

This section describes the works that are proposed to the Garden Wall to the south of Morden College. These works can be divided into three main elements, firstly to stabilise the south wall by introducing a buttressing pier on its north side at the wall end, and secondly the replacement of the existing capping with new bricks along the perimeter, with salvaged bricks used for local repairs and thirdly, the careful raking out of the cementitious mortar throughout and reinstating of a lime-based mortar.

The proposed works will require listed building consent.

The works will preserve the architectural significance of the garden wall.

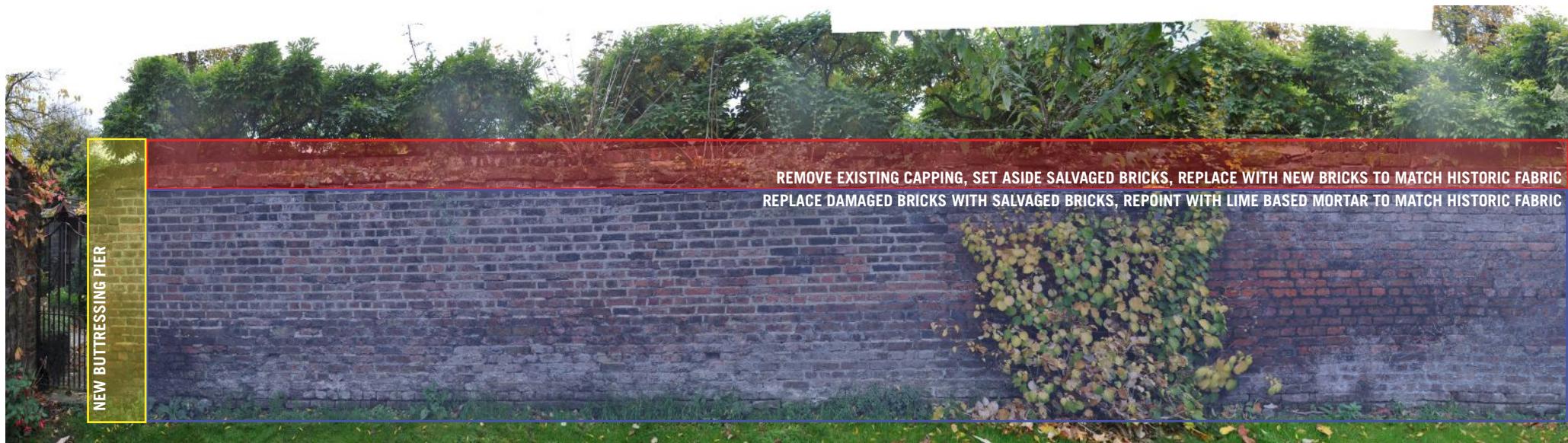
Other than the introduction of the aforementioned buttressing pier and new capping and localised replacement of bricks within the wall, there will be no other alterations.

The application includes the removal of the buddleia roots located on and within the wall.

Works to be carried out:

- The introduction of a buttressing pier to the north side of the south wall. It is noted that the pre-application advice from the Assistant Inspector of Historic Buildings and Areas advises that the most conservative approach would be for a traditionally constructed brick pier, whilst also stating the importance of a “slender and discreet” intervention. A full report including a calculation and recommended construction for the pier has been carried out by a Structural Engineer and is included with this application;
- Removal of the existing capping to the perimeter of the wall. And salvage bricks for reuse;
- Careful removal, where possible, of plant matter and chemical treatment of what remains;
- New capping to the perimeter of the wall with new bricks of a close match to the historic fabric, subject to samples to be inspected on site;
- Replacement of damaged bricks within the wall build up using bricks salvaged during the removal of the existing capping;
- Careful raking out of the cementitious mortar throughout;
- Reinstating of a new lime-based mortar, to be of a close match to the historic fabric, subject to samples to be inspected on site;
- New roof covering to the garden store with handmade plain clay tiles to match the rest of the college buildings.

On the following pages are photos with these principles for the works to the walls overlaid.





11. Proposed works to external face of south wall, eastern half



10. Proposed works to internal face of south wall, eastern half

# Pre-application Advice

## Historic England



LONDON OFFICE

Mr Sam Cooper  
E2 Architecture & Interiors  
The Design Studio  
27 Holywell Row  
London  
EC2A 4JB

Direct Dial: 020 7973 3763  
Our ref: PA00417025  
10 February 2016

Dear Mr Cooper

### Pre-application Advice

#### GARDEN WALLS TO SOUTH OF MORDEN COLLEGE, ST GERMAN'S PLACE, GREENWICH, SE3

Thank you for contacting Historic England about proposed repair work to the Grade II Garden Walls to the South of Morden College. Thank you also for organising the site visit last Thursday which I felt was very productive, and I very much enjoyed our brief tour of the grounds with the Estates Manager and Chief Executive.

As was explained, the listed wall was relatively recently cleared of vegetation and this has revealed a number of structural issues. The partial removal of wall caps, cementitious repointing, and a general lack of maintenance has allowed water to penetrate causing buddleia roots to establish deep within its joints. Also, the south section of wall is leaning into the garden at its east end, which is probably a result of a relatively recent opening between the walled garden and memorial garden.

It was initially advised that extensive rebuilding of the wall should be undertaken out to rectify these issues, as set out in the Structural Report carried out by JM Loades & Associates. The wall is largely contemporary with the almshouse complex and relatively intact. Whilst we understand salvaged and traditional materials would be used in the rebuilding, the loss of authenticity and historic patina would cause great harm to the significance of the wall in our opinion and would essentially constitute demolition of a listed building. Therefore this approach should be avoided unless all other options have been fully explored.

Your alternative approach as explained on site proposes to stabilise the south wall by introducing a buttressing pier on its north side at the wall end. The existing capping would be replaced with new bricks along the perimeter with the salvaged brick used for local repairs. We would strongly recommend the careful raking out of the cementitious mortar throughout and reinstating of a lime-based mortar. The specification of the



LONDON OFFICE

mortar and new bricks should be a good match to the historic fabric and subject to samples to be inspected on site. Whilst a traditionally constructed brick pier would be the most conservative approach for the structural support, it is important the intervention is as slender and discrete as possible to minimise the extent of visual impact on the walled garden and Grade I listed almshouses beyond. Therefore a modern metal / concrete core is acceptable providing that the pier is faced in brick to match the historic fabric (and bonding if possible).

Regarding the treatment of the buddleia roots, we acknowledge that non-intrusive methods are unlikely to be effective, and so we can accept the use of glyphosate based biocides on the wall. Should this treatment prove ineffective (which is possible given that such biocides work best when plants have a leafy growth), more aggressive solutions such as root stump treatments may need to be considered. As the roots disintegrate, there is the potential for voids to remain within the wall and so it is very important that any treatment is followed by routine monitoring. Further information can be found in our guidance note "Vegetation on Walls" which can be accessed via <https://content.historicengland.org.uk/images-books/publications/lan-vegetation-on-walls/lan-vegetation-on-walls.pdf>. Additional advice can be found via the Building Conservation website at <http://www.buildingconservation.com/articles/bio/bio.htm>.

Providing these comments are addressed, we consider this to be a sound, conservation-led approach which should resolve the various structural issues. The Royal Borough of Greenwich will likely require a listed building consent application for the work but as the wall is Grade II listed, it is unlikely to require our statutory involvement. However, we would informally say at this stage that these proposals have our support in principle, and we would be happy to advise further, or clarify any of the points made in this letter, prior to the submission of an application.

Please note that we are currently offering 15 hours of free Initial Pre-application advice, and our time on site last week and subsequent advice have been included in this time allocation. We are still several hours from the 15 hour cut-off, but if further advice is required beyond this point, we can offer our Extended Pre-application service, which is charged on a cost-recovery basis. Charging will only commence after the first 15 hours and if the service is formally commissioned from us. Further information on our Extended Pre-application service can be found on our website at [www.HistoricEngland.org.uk/EAS](http://www.HistoricEngland.org.uk/EAS).

Yours sincerely

A handwritten signature in black ink, appearing to read "Alasdair Young". Above the signature, there is a series of small, overlapping rectangular boxes containing the word "electronic" repeated multiple times.

Alasdair Young  
Assistant Inspector of Historic Buildings and Areas  
E-mail: [alasdair.young@HistoricEngland.org.uk](mailto:alasdair.young@HistoricEngland.org.uk)

cc: Lt Col Philip Westwood, Morden College

# JMLA - Structural Engineer

Included with this application is a structural assessment of the works undertaken by J M Loades and Associates.

Since the pre-application advice from Historic England J M Loades have reassessed their appraisal of the works. This is confirmed in the addendum letter, which is included on this page.

1 April 2016



Mr Sam Cooper  
E2 Architecture+Interiors  
The Design Studio  
27 Holywell Row  
London EC2A 4JB

our ref: tw/1506269/bg

your ref:

Dear Sam,

## Proposed Remedial Works to Garden Wall – Morden College, London SE3 0PW

Further to the issue of our Limited and Visual Structural Inspection Report, dated May 2015, please find enclosed a copy of our proposed structural repair details (Drawing No. tw/1506269/100 Rev P2) in relation to the above. This information should be sufficient to assist with your listed building planning application.

Upon reviewing the findings of our report, dated May 2015, we understand the overall restoration strategy has developed further, following pre-application advice sought from Historic England.

The agreed structural repair strategy for the south elevation wall is to maintain the height of the wall and construct a new solid brick pier at the end of the wall where the garden gate exists. The introduction of this pier, along with the general maintenance repairs proposed, will improve the structural integrity of this wall and preserve its historical fabric.

I trust that the enclosed information is suitable for the project requirements at the present time but, if you should have any queries, wish to discuss any matter in more detail, or require further assistance, then please do not hesitate to contact me.

Yours sincerely,

**Ben Godden** BEng (Hons)  
*Project Engineer*

Direct email [ben.godden@jmla.co.uk](mailto:ben.godden@jmla.co.uk)

Cc By Email.

## Assessment of Application Proposals

As set out above, the primary significance of the garden wall lies in its location and position in proximity to the Grade I listed Morden College quadrangle building.

The proposed introduction of a buttressing pier to stabilise the southern section, which will preserve the wall, will be constructed in line with Historic England's advice for a "slender and discreet intervention".

Other works and interventions on the wall will enhance its appearance whilst preserving its historic structure and fabric. These alterations will serve to preserve and secure the future use of the garden wall.

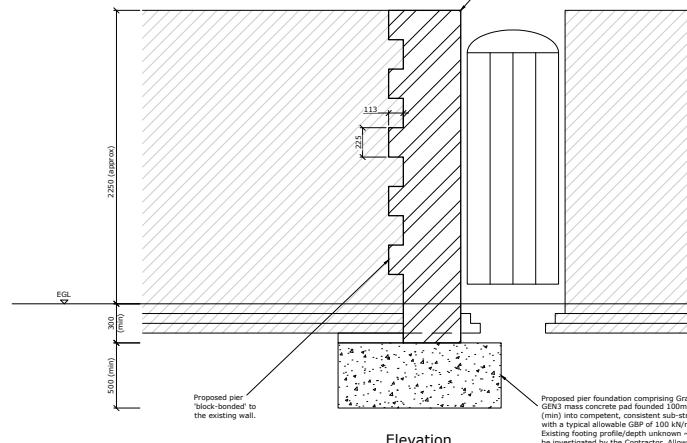
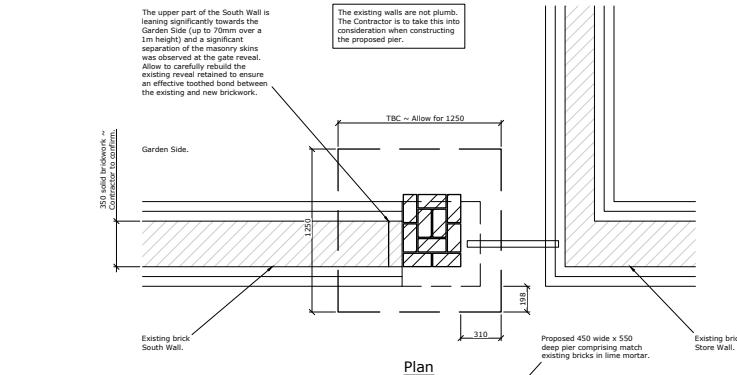
### Conclusion and Summary

In general terms, the application proposals secure the long term preservation of the garden wall by way of the general refurbishment and maintenance carried out. The refurbishment will be carried out to keep traditional features in place.

Overall, the application proposals represent an enhancement to the existing state of repair of the wall, preserving it and securing its future use.

# Structural design

Following our brief the engineers produced the following including a strategy for pinning the wall in case large areas required to be removed to remove roots or repair debonded areas. The pinning was not required in the end due to the skill of the chosen contractor.



Proposed Pier Details to Existing South Wall Gate (1:20)

## Remedial Works Generally:

This drawing is to be read in conjunction with the JMLA Limited and Visual Structural Inspection Report, dated May 2015, and subsequent JMLA addendum letter, dated April 2016.

This drawing indicates the structural details concerning the proposed pier to the South Wall gate and removal of the well established embedded roots to all of the garden walls. The Design Team and the Client, with advice sought from Historic England, have agreed an overall restoration strategy for the garden walls, which involves other works concerning the existing cappings and mortar joints. Please refer to the Architect's specification/drawings for further detail on these items.

## Proposed Brickwork:

All new bricks are to be 20 N/mm<sup>2</sup> (min) and frost resistant. The appearance and unit size of the bricks are to match the existing bricks. Removed existing bricks are to be reused where possible, providing they are in a reasonable condition, free from vegetation, fractures, spalls etc. All new mortar is to be a lime rich mix according to the Architect's specification. The joint colour, thickness and profile of the mortar is to match the existing joints. The proposed capping, capping DPC and capping joints are to be in accordance with the Architect's specification/details. Allow to prepare a test panel of the replacement bricks and mortar for approval by the Architect, Client and any other interested parties.

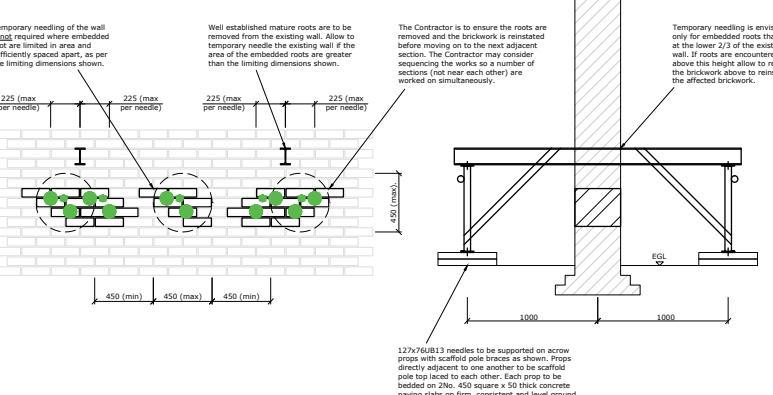
## Proposed South Wall Pier Suggested Construction Sequence:

1. Carefully remove the metal gate.
2. Carefully remove the existing brick reveal and its footing.
3. Cast the proposed pier foundation and allow to locally underpin the existing wall reveal.
4. Prepare the existing wall reveal.
5. Lay the proposed brick pier and 'block-bond' to the existing wall.
6. Make good the external ground finishes and reinstate the metal gate.

## Existing Wall Root Removal & Suggested Construction Sequence:

The extent of root removal required is unknown. Allow to survey the existing wall to establish the proposed extent of root removal and indicate on elevation drawings for JMLA's review. The extent of temporary needling is to be agreed between all parties, including JMLA, prior to construction.

1. Establish the extent of root removal and agree the sequence of root removal/brickwork reinstatement.
2. Carefully needle the existing wall as necessary.
3. Carefully remove the embedded roots and destabilised/fractured bricks.
4. Lay the new match existing bricks.
5. Carefully remove the needle and dismantle the props.
6. Make good the existing wall and external ground finishes.



Proposed Typical Temporary Support Details for Root Removal to Existing Walls (1:20)

**General Notes**  
All dimensions are in millimetres unless otherwise stated.  
They should not be scaled from the drawings and must be checked and verified by the Contractor, from the actual work whenever possible.

These notes shall be read directly in conjunction with JMLA's other relevant drawings and the Architect's details, together with any subsequent revisions and amendments.

The Contractor shall be responsible for all temporary and permanent support works necessary.

Foundations shall be taken to the depths shown on the plans or deeper as necessary to suit site conditions.

Wherever new or existing services pass through foundations or walls, these shall be protected using suitable sized concrete lintels or sleeved using PVC pipes of a diameter at least 50mm larger than the service passing through it.

Mass concrete to foundations shall be a minimum grade C20 to BS EN 206-1, containing 10% maximum aggregate size of 20mm, graded to BS882. A GEN3 designed mix to BS5900 or BS EN 206-1 would suffice.

Steelwork shall be grade 500 to BS EN 10 025 and shall be given two coats of zinc phosphate primer (or hot dip zinc galvanised) to BS729 where specifically indicated.

All masonry shall be in accordance with BS EN 771 and BS EN 1996. Paving slabs shall be in accordance with BS EN 1346. For blockwork density or type shall be as indicated by the Architect, but subject to the following minimum structural requirements:-

**Masonry below DPC**

- Bricks shall be rated F1.52 and bonded in mortar designation (ii)M6 compressive strength class.
- Blockwork shall be designated by the chosen manufacturer as being able to withstand the compressive strength and thickness indicated upon the drawings. It shall be bonded in mortar designation (ii)M6 compressive strength class (or greater as may be indicated upon the drawings).

**Masonry above DPC**

- Brickwork shall be rated F1.52 and bonded in mortar designation (ii)M6 compressive strength class. Increase in mortar designation (ii)M6 compressive strength class for areas with severe exposure to rain (typically Eastbourne).
- Blockwork shall be of the compressive strength and thickness indicated upon the drawings, bonded in mortar designation (ii)M6 compressive strength class (or greater as may be indicated upon the drawings). Dense concrete blocks shall not be used above ground unless specifically stated in drawings or approved by the Engineer.

**Architect & Client Specification**  
Refer to the Architect's and Client's relevant drawings and schedules for information such as setting out dimensions; wall coverings and finishes, DPCs and all other general finishes.

Preliminary

P2 01.04.16 Box note amended,  
P1 04.03.16 PRELIMINARY ISSUE:  
as shown

j m loaders & associates limited  
consulting structural & civil engineers - instructed project managers  
and building surveyors - construction management & principal designers  
head office: 100a westgate, westgate, east sussex, BN2 2JG  
tel: 01273 824212 fax: 01273 824213 e-mail: info@jmla.co.uk  
east sussex: 100a westgate, westgate, east sussex, BN2 2JG  
e-mail: sussex@jmla.co.uk

Morden College  
engineering degree  
E2 Architecture  
programme  
Morden College, 19 St German's Place  
Blackheath  
London SE3 0PW

Drawing ref: Proposed Remedial Works To Garden Wall:  
Structural Repair Details

as shown @ A1 mar 2016 abg  
drawn by: abg  
checked by: abg  
date: abg

tw/1506269/ 100 P2

# Tender process

I recommended to the client that finding the right contractor with the required specialist skills to carry out the work was the priority for the tender process so that the necessary quality would be achieved. I recommended that, time not critical, if we could get the wall protected for the on setting winter this would leave us more flexibility to get the right contractor. Therefore we went out to tender with an invitation for expressions of interest to an E2 selected list of specialist conservation bricklayers using the listed building consent documentation. This strategy enabled us to meet with the tenders and benefit from their expert knowledge and in the process assess their suitability. It also gave us time to have the mortar and bricks analysed prior to obtaining samples to match.

This process proved very useful and two of the contractors had apprenticed with the same master brick layer Dr Gerard Lynch AKA 'The Red Mason'. Both recommended that he would be the best expert to assist with the analysis of the mortar and bricks and advise on the most appropriate specifications and kilns. Gerard's input was very useful and gave all the confidence that the best strategy had been adopted and comfort that the correct specification was agreed. See appendix Completion Report



12. Trial pit reveals 8 courses of brick foundation to the south wall



13. The south wall's top four brick courses are removed



14. The new pier is constructed, toothed into the south wall



15. The top course of brick, chamfer detail and brick on edge, all in new brick, consolidate the south wall prior to repointing of the existing

E2

27 September 2018

Appeal Inspector  
Planning Inspectorate  
Temple Quay House,  
2 The Square, Avon,  
Bristol BS1 6PN

**E2 Architecture+Interiors Ltd.**  
The Design Studio  
27 Holwell Row  
London EC2A 4JB  
+44 (0)20 7183 2285  
[sam@e2architecture.com](mailto:sam@e2architecture.com)

To Whom it may Concern

**RE: application ref: 16/1071/L granted Listed Building Consent 09/07/2016 for the Refurbishment of Listed Garden Walls to the south of Morden College.**

- 1.0 E2 Architecture+Interiors are the retained heritage architect acting on behalf of our client Morden College.
- 1.1 The following is a brief outline for the information of prospective tenders, relating to how E2 anticipate the works to the garden walls at Morden College should be undertaken.

## Contract

- 2.0 E2 anticipate that this project will be run under a JCT Minor Works contract with Contractor Design.
- 2.1 Contractor Design will include:
  - Hoarding protection of walls and working areas – inside and outside faces.

There is a concern that the works be undertaken with the utmost sensitivity to the Morden College CEO whose quarters overlook the garden, and externally to the beneficiaries of the College.

Therefore there is a requirement for minimum disruption on this project. As such it is assumed that the walls and associated working areas will be hoarded off, in order that full use of the remaining landscape/gardens can be enjoyed by both the CEO and the College beneficiaries.

As can be noted from structural engineers JMLA's report and their proposed method statement within, the works will involve temporary needling props in order to facilitate the replacement of the areas of shot brickwork located within the main body of the walls – it is recommended that the needling should be supported at a 1m distance either side from the centre of the wall. Therefore the hoarded area will require sufficient working area margins over and above this distance from the wall.

- Protection from Weather

As a result of the timing of this tender request E2 envisages that preliminary and preparatory works will commence as an initial phase to the project, during the winter months. There will follow a second phase to include the works, starting in the Spring of 2018. These phases are to follow an agreed contractor designed program, to be submitted to accompany the tenders.

# Construction

Stewart Truman were selected and were extremely diligent and knowledgeable. Through a process of regular site meetings we would agree quantities of brick types to get the right mix of purple and browns to create the multi match for the coping; mortar joint profiles; and every individual brick in the retained structure to be replaced with a reclaimed from the original coping.

The project engineer who dealt with the LBC design had left JLMA and a new one was assigned. At the first site inspection she once again condemned the wall and we had to go through the whole process of convincing her of the conservation approach. This entailed the client having to sign off their liability, which was not helpful.

The foundation of the wall was found to be surprisingly deep when digging for the foundation of the new pier. The contractor suggested that therefore underpinning the wall was not required. The engineer would not agree so I agreed with the contractor a strategy for tying the brick and concrete foundations together and obtained agreement from the client.

On closer inspection of the gardener's shed roof it was clear that the pantiles on it were very historic and research on SPAB resources confirmed that this type of roof covering was introduced in the mid 1700's from the Netherlands. Therefore we have taken this element of work out of the contract whilst we select samples for replacing damaged and lost tiles.



16. Initial repointing mortar joint profile sample panel



17. Agreed mortar joint profile sample panel, with mortar taken back a further 2mm from face

18. Potential pantile replacement for damaged tiles and modern concrete tiles seen here far left of roof



19. Left: bricks raked out to 25mm depth

20. Middle, new pointing to east wall in progress

21. Right, east wall featuring rebuilt courses with salvaged bricks and new brick to top courses

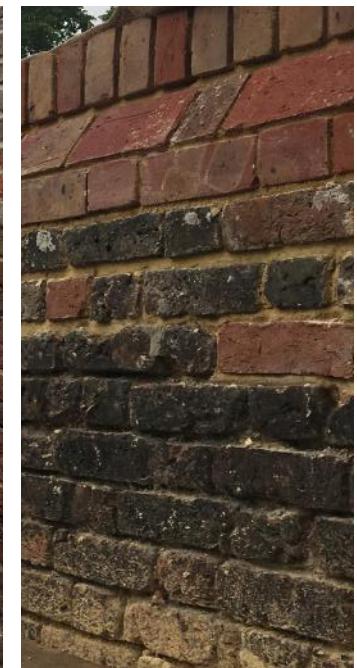
# 6 Summary Assessment

This was the first purely conservation repair project for the practice. It has gone very well and was completed last week. The client is delighted and many of the residents have stopped to compliment the work through out the construction programme.

The wall and brick units within it were in a very fragile state and so I promoted caution to the client in how the project should be approached. The structural opinion recommending partial demolition, which was on the table when we arrived was a difficult hurdle to overcome. The facilities manager is from an engineering background so took this assessment at face value and believed it would give the best result. He was coming from a point of view that if we want it to stand for another 325 years the best thing is to build it new. I found it helpful to share the philosophy behind the reasoning for my recommendations. This helped the client to take an understanding and to accept the engineers' dismissal of liability.

Finding and appointing a safe pair of hands to be the contractor was key to the success of the project, with whom we now have a trusted partner and will be working on many future projects with the college and E2. Being able to communicate the works from a common ground of understanding of the principles and philosophy of conservation along with respect for each others disciplines and expertise was a pleasure. The care and attention to the detail have resulted in an outstanding piece of work. Every brick below the line we drew on the initial strategy on the original top coarse was an original reclaimed for the wall.

Charlie Stewart has even produced a Restoration Completion Report for the college's archive to compliment the file for their records. See appendix.



# 7 Appendix

Restoration completion report supplied by contractor for inclusion in the college's record file for archive.



Morden College

Walled Garden Restoration Completion Report

## Introduction

The garden walls of Grade II listed status built in predominantly Flemish bond but also containing smaller areas of English and Broke bond using a multi purple/red brick with smaller quantities of yellow stock bricks where assessed and surveyed which identified the need for refurbishment.

## Description of Works

The works to the CEO's garden include the repointing of all elevations to the Grade II listed walls with the top four courses, reducing sloped course and brick on edge being rebuilt, 1 course, the reducing sloped course and brick on edge all being in new HG Mathews hand made imperial dark multi bricks. There have been numerous bricks cut out & turned and replaced with bricks saved from the top courses.

The mortar used for the project as per Dr Gerard Lynch's analysis and report was a traditional hot mix using 2 parts sharp sand and 1 part soft sand from the Sussex area which we found best suited the work from our sample taken from site. The process included slaking the quicklime with a ring of the well graded and mixed sands and adding water until sufficiently covered and then drawing the sand from around the quicklime over it to cover and let slake traditionally. This was then turned over and left to bank for 24-48hrs prior to being delivered to site where it was appropriate reworked ready for using.

### - South Wall

The south wall, having been assessed was in the worst condition and the works included a new stabilising pier with new foundation to the internal garden end, taking down of again the top courses this wall being a mix of English bond & Broke bond and further courses in areas to identify and remove the roots from vegetation. Various bricks replaced to both elevations and completely repointed.



### - East Wall

The east wall, of approx 24m in length had little movement in terms of level and plumb but showed various areas of bulging in the top courses from plant growth and other vegetation. The top courses were again taken off and rebuilt this time in a much more uniform Flemish bond. The existing wall being built in a more yellow/dark stock brick. Both elevations being completely repointed with various damaged and spalled bricks being replaced. At the far end connecting to the south side of the garden shed it has been tied back into the structure with further reinforcement from helical bars fixed within the bed joints.

### - West Wall

The west wall, of again approx 24m had more movement in level than the east wall and had a lot more vegetation overall, there has been approximately 320 individual bricks replaced, due to the softer red brick being used on this wall. The top courses were again removed and rebuilt in Flemish bond being properly bonded together replacing the broken half bricks with full interlocking headers overlapping the course below which ultimately strengthens the overall wall. Both elevations being fully repointed and all vegetation appropriately removed prior to all the works being undertaken.

### - Additional work West Wall

We also fully raked out and repointed the furthest part of the west wall to the south and removed the large root sitting almost central to the wall. Overall 8 courses were taken down around the root to a V shape to enable the successful removal, this was then rebuilt and all repointed.

### - West Wall Piers

The large brick piers in red brickwork to the quoins and yellow within were fully raked out to a depth of 20mm making sure the joint size wasn't compromised as these had around a 7mm joint on both perpends and bed joints. With the tightness of the joints we matched the mortar being different to the rest of the walls due to the



aggregate size being smaller. This was finished in a flush and cut joint profile to match the existing.

- Garden Shed

These works involved fully repointing the structure and taking down the parapet courses where they had bellied over onto the roof line. The walls were taken down below the roof rafters where we relayed in between and over to help re support the roof. All the collar joints around the reveals have been repointed to prevent further water ingress into the timber window and door frames.

[Examples of the finished works](#)

# Dossier 04

## The George & Dragon Pub

Listed Building Consent Application and full architectural services  
Refurbishment and structural remedial works with addition of new stair to basement and new WC provision.

Extracts taken from Listed Building Consent statement and project correspondence, author Sam Cooper

ICOMOS Education Guidelines Covered: A, B, C, D, E, F, G, H, I, J, K, L, M, N

Project dates: 01.02.2018 ongoing



Application for accreditation as Conservation Architect

Samuel Cooper

RIBA Member No: 12058040



# 1 Status and Importance

The George & Dragon occupies a prominent corner plot at no.151 Cleveland Street. Records indicate that a public house named 'The George' was first built on the site in 1792 and renamed the 'George and Dragon' in 1811.

The public house and landlord's residence above is arranged over four floors and basement and is finished in an elaborate Italianate style. Rebuilt or recast in the 1850's, the building consists of three storeys plus an attic as well as a two storey extension to the rear of the building.

The building's stucco is in stark contrast to the simpler neighbouring buildings. At ground floor, the shop front is a timber panelled frame, Corinthian pilasters support a large fascia with dentil cornicing that follows the curves of the angled entrance.

The front elevation is framed by pilasters and the windows are surrounded by architraves. A slate mansard roof is concealed by a bottled balustrade and is intersected by an elaborate central dormer, a pattern which is also repeated at the rear.

The building's elaborate architecture adds emphasis to the terrace end and junction of Cleveland Street and Greenwell Street whilst connecting the site to the surrounding buildings.

The building has been subject to alterations throughout its history most notably a full rebuild or recasting c.1850. The footprint of the property agrees with the 1872 OS map suggesting that the two storey Greenwell Street side extension has been there for some time albeit perhaps not originally part of the main building forming the public house. The basement vaults extend beyond the elevation to Greenwell Street under the footpath and road.

It is clear that the building has been altered over time – notably by the insertion (and, probably, subsequent replacement) of toilets at ground floor level at some point in the 20th century. The external wall to the WCs is obviously a later insertion.

## Summary of Significance

Having regard to English Heritage's Conservation Principles (2008), the significance of the building can be summarised as follows:

**Evidential:** The George & Dragon has some evidential value as part of the development of this part of Cleveland Street. Thus its value is both illustrative and associative.

**Historical:** The George & Dragon has some historic value as an example of the development of this kind in the Cleveland Street Conservation Area. It also has a historical association with development of the Southampton Estate with Fitzroy Square at its centre, undertaken by Charles Fitzroy (1737-1797), built out from the 1790s.

**Aesthetic:** The George & Dragon is an attractively detailed property. However, it has been subject to some alteration internally, and there is potential to enhance the functional and aesthetic value of the building. The structural changes in particular have been harmful to the character and aesthetic of the building and represent an obvious opportunity for the enhancement and safeguarding of this heritage asset. Indeed, if the structural defects are not addressed there is significant existing evidence within

the building itself that further deterioration is inevitable.

**Communal:** This category is normally used for buildings with cultural significance such as religious buildings. However, as a public house in a wider area of commercial and residential development The George & Dragon has communal value and will continue to do so.



01. Temporary support frame put in place during the determination period of the LBC. I notified the conservation officer that this was been inacted and that it did not require LBC.

## 2 Project Brief

We were approached by the new building owner following a structural report they had commissioned confirmed that the buildings structural integrity was severely compromised and that the building was listing by 70mm to the north and that remedial works were required. Our brief from the client was to incorporate the structural scheme proposed into an application for listed building consent.

The structural deformation in the building was clear and undeniable. The cause was quite apparent in the lack of lateral support at ground level. The remedy proposed was for two steel portal frames from basement to underside of first floor on the line of the spine wall and gable wall which had been removed. This seemed drastic so I briefed the engineer to investigate if there was any other way to achieve the desired stability. They could not justify any other method which would meet the client's brief for no risk of coming back. So a LBC application was submitted on that basis.

Westminster expressed concern that the steel frame within the masonry and timber structure was inappropriate and needed to be justified. I briefed the engineer to provide more justification, which was all based on assumptions. This was not accepted.

The application was withdrawn and we revisited the brief. I suggested to the client that we reduce the zero-risk element of the brief and the engineer that we don't design to modern static-engineering principles. I set the brief for the engineer to look at a repair that would be designed for a 15 year life span rather than 60. I briefed the client that we should appoint a second engineer with conservation experience to assist with the justification and design of the repairs. I went to the Conservation Accredited Register of Engineers (CARE) and appointed Stewart Tappin of Stand engineers.

We agreed a strategy for opening up and exposing the structure for which we confirmed with Westminster could be done without LBC.



02. The George & Dragon Pub bird's eye view east

## 3 My Role

E2 were appointed as lead consultant. Sam Cooper is founding director of E2 Architecture+Interiors and was the lead on this project for heritage analysis, conservation brief and architectural design and specification.

## 4 Project Team

Architect/Lead Consultant: Sam Cooper director E2 Architecture+Interiors, assistant architect Jim Rooney

Heritage Consultant: KM Heritage (produced a heritage statement for a previous application on the site, this was used as a basis for statement of status and importance.)

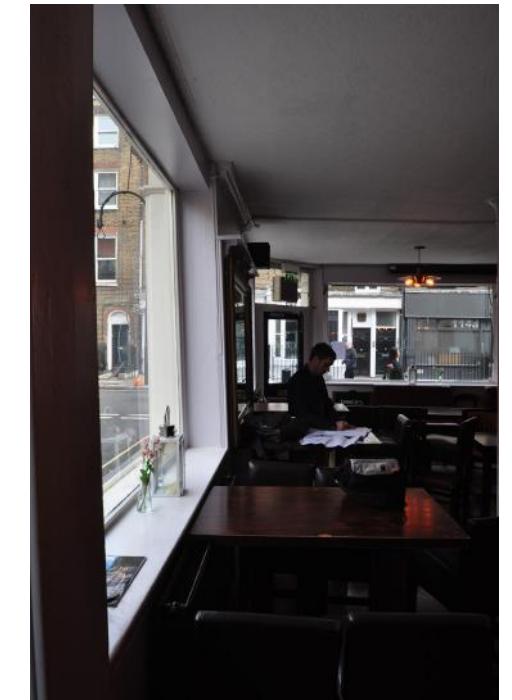
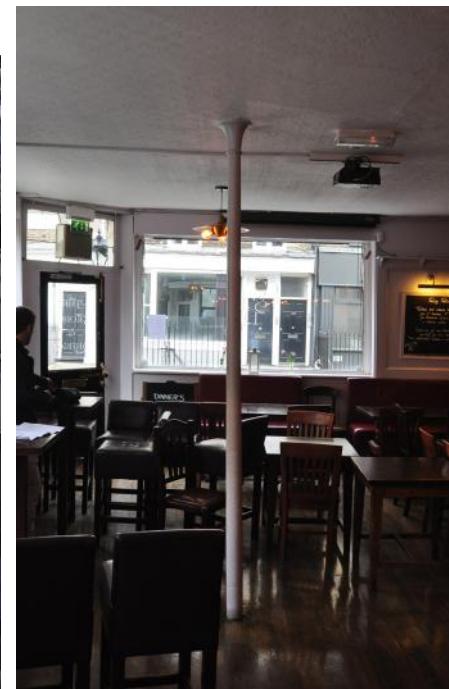
Client: Max Barney Ltd

Structural Engineer: Morrish and Partners,

Conservation Engineer: Stand Engineers

Contractor: Bourne Construction Ltd

03. Interior shots



## 5 Critical Analysis

The following is taken from the heritage and design statement accompanying the second listed building consent application.

Due to the nature of the works the application proposals primarily affect the Grade II listed application property itself. Secondly, the proposals do not affect the setting of the Grade II listed building. Thirdly, the application proposals do not affect the Cleveland Street Conservation Area. This section therefore describes the significance of affected heritage assets in line with NPPF guidance.

The building has been subject to alterations throughout its history most notably a full rebuild or recasting c.1850.

The footprint of the property agrees with the 1872 OS map suggesting that the two storey Greenwell Street side extension has been there for some time albeit perhaps not originally part of the main building forming the public house. The basement vaults extend beyond the elevation to Greenwell Street under the footpath and road.

It is clear that the building has been altered over time – notably by the insertion (and, probably, subsequent replacement) of toilets at ground floor level at some point in the 20th century. The external wall to the WCs is obviously a later insertion.

Opening up works have been carried out in order to fully assess the structural condition of the building. The assessment was carried out in consultation with Morrish Consulting Engineers as well as the eminent Stand Consulting Engineers, from the Conservation Accredited Register of Engineers (CARE).

The opening up works have revealed the precarious condition of the existing structure in the building and confirmed that the building is still moving as a result of several structural defects throughout the building.

The existing structure has been revealed as having no connectivity throughout the building, and structural defects at the gable and spine wall locations have compounded this further, which has resulted in the building listing heavily over the pavement of Greenwell Street, as the timber ring beam at first floor level moves away from the rest of the building without restraint.

Structural remedial works are required in order to prevent the further movement, damage and potential collapse of the building as a result of its defective structural condition. The remedial structural works have been proposed following a prescribed conservation approach to ensure the least possible impact on the existing listed structure.

### External Significance

There is considerable significance in the appearance of the George & Dragon, which is reflected in its listing. The building is visible from Cleveland Street, Greenwell Street and on approach to the latter from Bolsover Street. Today, its expanse of fenestration, stucco frontage, Italianate-style decorative scheme and bottle balustrade at roofline level, provide visual interest which stands it in bold contrast to the simpler brick-fronts of the surrounding terraced buildings.

### Internal Significance

The interior of the property has been altered over time. Notably the rebuild, which involved the use of two Victorian era cast iron columns, one to the ground floor structure at spine wall and at the gable wall also at ground. The spine wall column rests precariously on a timber beam within the floor build up and is picking up a timber joist at ceiling level on which sits the spine walls of the first, second and third floors above. The spine wall is not tied into the Grenwell Street elevation, neither are any of the floors, most notably the first floor has noticeably sheered away from the timber ring beam in the Greenwell elevation.

The column to the gable wall, located between the main building and the two storey extension and features a composite Ionic and Corinthian inspired capitol, similarly is resting precariously on the masonry gable wall fragment at basement, which in turn is resting on made ground. Above the column is a Victorian era wrought iron beam which again is resting, with no fixings, on the cast iron column internally, and a cast iron column within the pier, which supports the ring beam to the Greenwell facade. The beam is not tied to the ring beam or the party wall at its opposing end.

The first floor structure clearly predates the riveted steel iron beam at the gable wall, due to the use of significant firings being located within the floor's structure in order that a new floor level could be struck to come in above the beam. As the In fact firings appear to have been installed more than once in order to attempt the correction of the deflection in the first floor structure, due to the inadequate level of support offered by the two columns at ground floor.

The precarious structural condition to the building has resulted in the structural defects that are undermining the integrity of the building as a whole; the net result is the building is shearing away from the Georgian terrace against which it abuts, and is notably listing over the pavement to Greenwell street.

The previous structural changes have also resulted in the removal of some historic features (for example, chimney pieces are absent from the building in places). There is evidence that successive refurbishments have removed or altered original plaster work and timber panelling. flooring and stud partitions have been installed in places with elements of modern skirting replacing original skirting. Within the pub it appears that the dark stained timber panelling to the walls and bar are not original, these are made up of softwood and veneer ply panels. However the white painted timber panelling beneath the windows does appear to be more contemporary with the age of the building.m The historic plan form is largely still discernible despite these alterations.

Overall, the building's interiors make a lesser contribution to the significance of the building, formed primarily by its external appearance.

# Assessment of Structural Defects

The opening up works revealed the condition of the building's structure and provided evidence for the need for the remedial works proposed.

The cast iron column to the gable wall supports a large riveted steel beam estimated age 1850 (images 03&04), which in turn supports the masonry wall above.

The cast iron column to the gable wall is not fixed to the beam, neither is the beam fixed to the



04. The George & Dragon opening to inspect the gable column - location view



05. The George & Dragon opening to inspect the gable column - view of column head & beam resting on top with no connection



06. The George & Dragon opening to inspect the gable pier - view of ceiling void over WC



07. The George & Dragon opening to inspect the gable column - view of wrought iron beam within Greewell pier



08. The George & Dragon opening to inspect connectivity with wrought iron beam and party wall



09. The George & Dragon opening to inspect beam - view of floor joist resting on beam

At the corner to the gable wall and Greenwell elevation the floor joists have lost their connections to the wall structure and are left hanging in the air, which has contributed to the pronounced cracking to the masonry in the gable wall above (images 11&12).

The riveted steel beam is not fixed to the timber ring beam to the Greenwell elevation and a pronounced gap between the two is evidence that the ring beam is travelling away from the riveted steel beam, further evidenced by the fact that the floor joists' mortices have popped out of their tenons in the ring beam (image 13). The gable wall masonry sits directly on top of the riveted steel



10. The George & Dragon opening to inspect wrought iron beam - view showing no connectivity to party wall masonry



11. The George & Dragon opening to inspect connectivity with wrought iron beam at corner of gable and Greenwell elevation



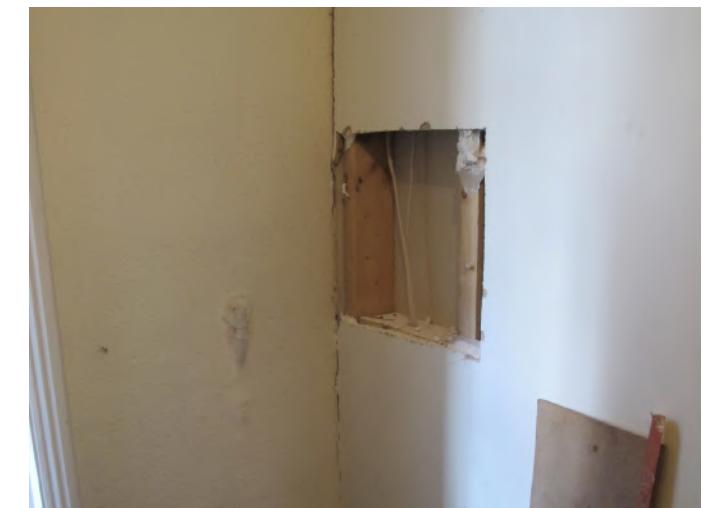
12. The George & Dragon opening to inspect wrought iron beam - view of floor structure unconnected and left hanging



13. The George & Dragon opening to inspect wrought iron beam - view of pronounced cracking to the gable wall masonry



14. The George & Dragon opening to inspect wrought iron beam - view of floor joist mortice having fallen out of its tenon



15. The George & Dragon opening to inspect non original partition at first floor - view showing modern studs and plasterboard

beam, the lack of any packing out between the two is evidence that the gable wall was rebuilt when the beam was installed, most likely during the rebuild of circa 1850.

The floor structure at the spine wall shows evidence of the floor level being raised by nominally 75mm, this would have been undertaken to bring the floor level above the riveted steel beam to the gable wall. A further 30mm firrings has subsequently been used to attempt to level the floor at a later point, evidence of significant deflection in the floor at the spine wall, since the pub was rebuilt and the new gable wall installed.

The spine wall structure is resting on a large timber beam, which is connected to the original floor structure, the later structure to raise the floor is resting on top of this beam (image 17).

The spine wall has no connectivity to the Greenwell elevation, at its base is a large timber beam which is resting on a cast iron hanger connected to the ring beam in the Greenwell elevation, however there is a pronounced gap between the end of the spine wall beam and the hanger, which indicates that the Greenwell elevation is travelling away from the spine wall (image 19). This is further evidenced by the pronounced gap between the wall stud to the spine wall and the masonry of the Greenwell elevation (image 20).

There is evidence that the cantilever over the entrance doorway on the corner of Greenwell street and Cleveland Street has been rebuilt, indication that it has at some point most likely collapsed due to the strain caused in the movement of the building (images 21&22).



16. The George & Dragon opening to inspect floor structure at spine wall - showing several firings installed to raise the floor level



17. The George & Dragon opening to inspect floor structure at spine wall - showing several firrings installed to raise the floor level



18. The George & Dragon opening to inspect floor structure - view showing spine wall stud resting on a timber beam



19. The George & Dragon opening to inspect floor structure at spine wall junction with Greenwell elevation



20. The George & Dragon opening to inspect spine wall - view of cast iron structural hanger to the ring beam



21. The George & Dragon opening to inspect spine wall - view showing original stud and lath and plaster

The gable wall masonry bears pronounced cracking at second floor where the wall is sheering under the moment of movement in the Greenwell elevation (images 23&24).

The cracking seen externally shows evidence of recent repairs, where the cracking has been infilled and painted over, indications are that further cracking has occurred since these repairs were undertaken, the condition of the paint would suggest the movement of the building is ongoing, as the paint cannot be more than 15-20 years old.



22. The George & Dragon opening to inspect floor structure - view showing corner junction of Greenwell & Cleveland elevations



23. The George & Dragon opening to inspect floor structure - view showing corner junction of Greenwell & Cleveland elevations



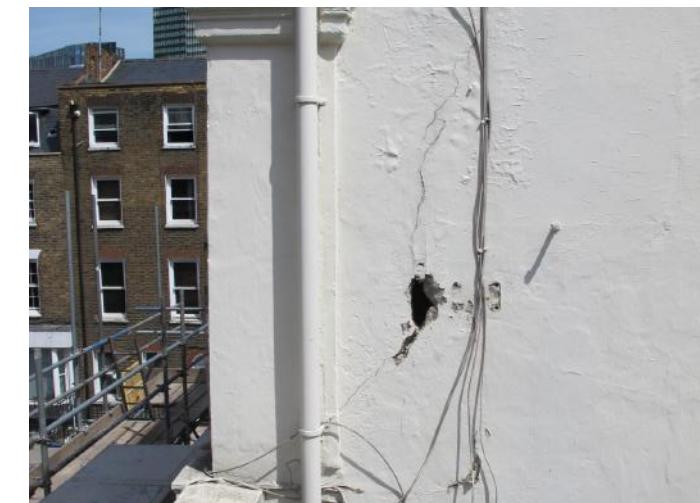
24. The George & Dragon opening to inspect cracking to gable wall at second floor



25. The George & Dragon opening to inspect gable wall - view of pronounced cracking to masonry internally



26. The George & Dragon opening to inspect gable wall - view showing no connectivity at second floor level

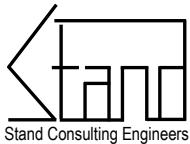


27. The George & Dragon opening to inspect gable wall - view of pronounced cracking to masonry externally

8 June 2018

Jim Rooney  
E2 Architecture + Interiors  
27 Holywell Row  
London  
EC2A 4JB

Dear Jim

**George and Dragon Pub, 151 Cleveland Street, W1**

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52 Foundling Court  
The Brunswick Centre  
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WC1N 1AN

T: 020 7278 6136

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This letter updates our original letter dated 5 March 2018 and follows the structural investigations on 18 May and our meeting at your office with you and Stephen Staines on 29 May.

The investigations involved the local removal of finishes at ground, first and second floor levels to expose areas of the structure. These found that the floor joists at first and second floor levels span front to back, i.e. parallel to the flank wall onto Greenwell Street. There is a riveted beam within the first floor which provides support to the adjacent timber and filler-joist floor structures, and to the west gable wall above. The beam is supported at each end on a metal column which is hidden behind finishes and at mid-span on the circular cast iron column that can be seen within the pub. For a building of this age (circa 1850) the beam is likely to be wrought iron rather than steel. Based on the detail between the top of the beam and the brickwork, photo 1, the beam is part of the original construction.

At first floor level the local removal of floor finishes exposed part of the timber beam that supports the brickwork to the flank wall forming the Greenwell Street elevation. There were no obvious signs of lateral restraint along the length of this beam. The lack of restraint would explain the outward movement of the flank wall which has caused the connection between the beam and a timber trimmer to open up, as photo 2.

There are cracks in the brickwork to the west elevation at first and second floor levels in the area of a flue, photos 3 and 4. The pattern of these cracks is also consistent with outward movement of the Greenwell Street elevation. The findings are summarised on the attached updated drawings SK 1 and SK 2.

The investigations have confirmed our previous assumption that the pub was built with insufficient lateral restraint to the Greenwell Street elevation. Subsequent lateral racking of the structure has occurred and this movement has caused opening-up to the few points of restraint between the Greenwell Street elevation and the rest of the structure. As a result there is now no obvious restraint to the Greenwell Street elevation.

The approach we discussed on site, and at our recent meeting, is to repair where damage has occurred and add a range of conservation-based structural improvements. All of this remedial work will be behind reinstated or replacement finishes so that there is no change to the appearance of the building. The combination of these repairs and improvements will enhance the overall robustness of the structure and help to reduce the risk of movements to the flank wall in the future.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'S. Tappin'.

Stuart Tappin  
cc. Stephen Staines - Morrish Consulting Engineers

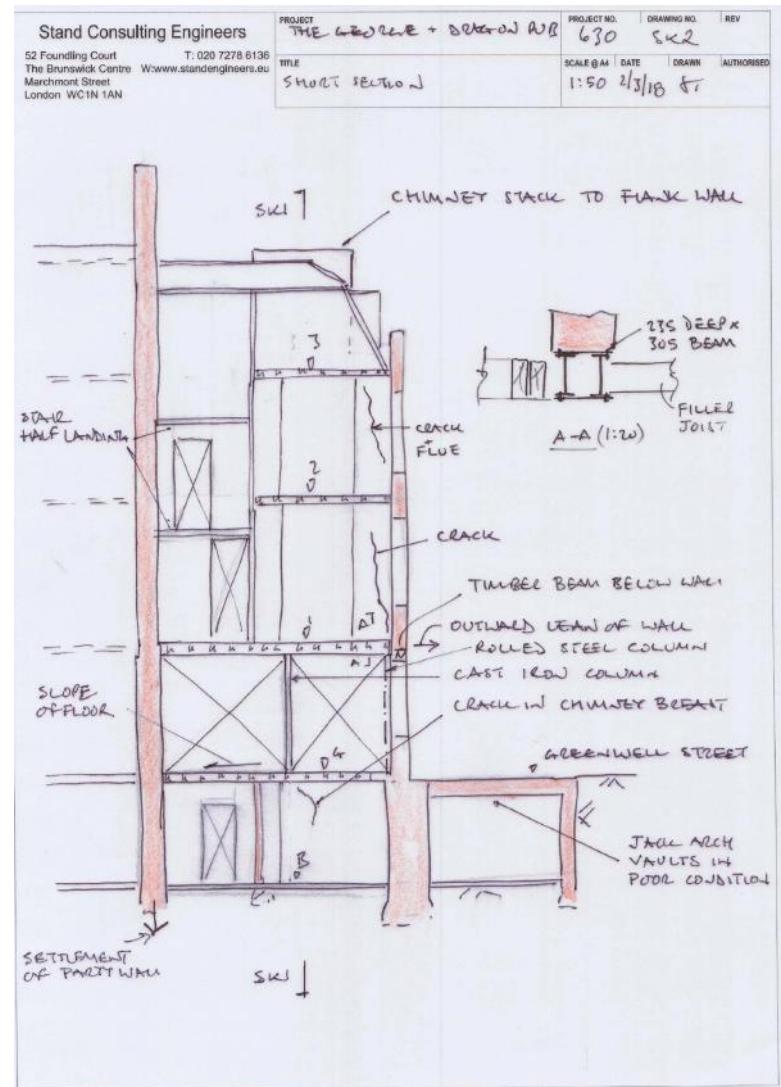
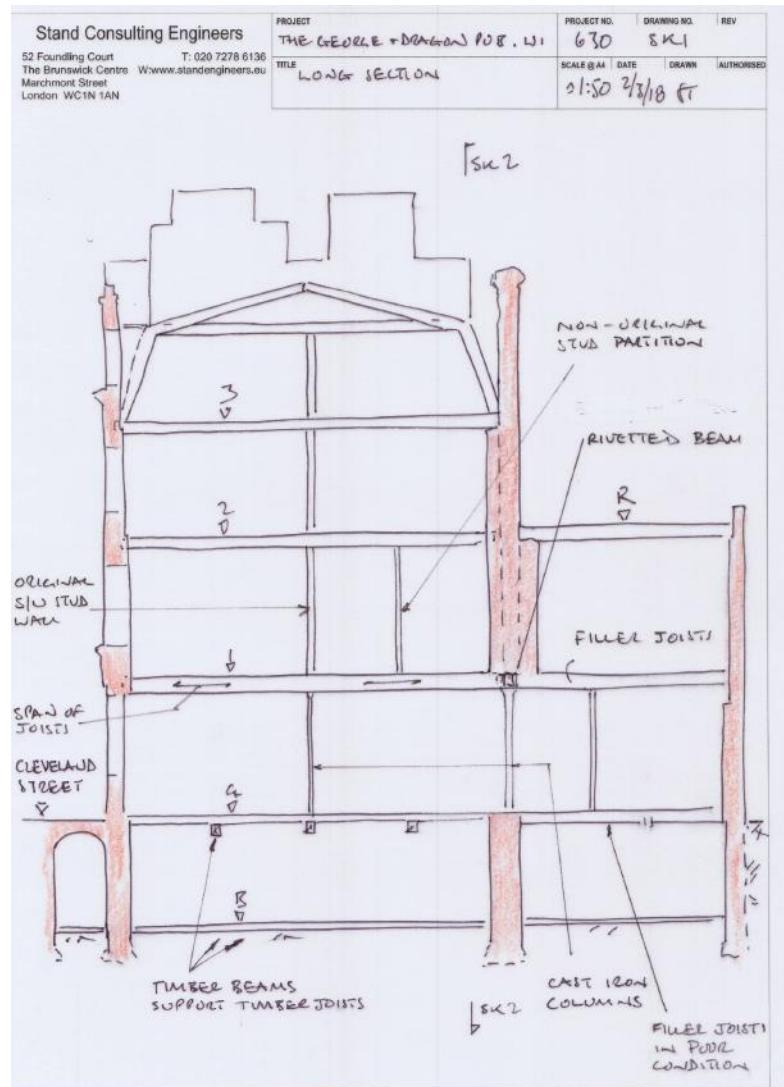


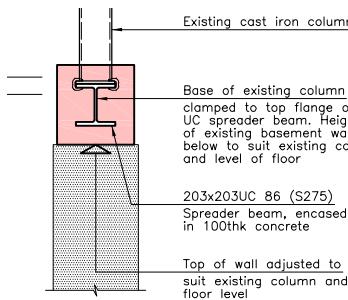
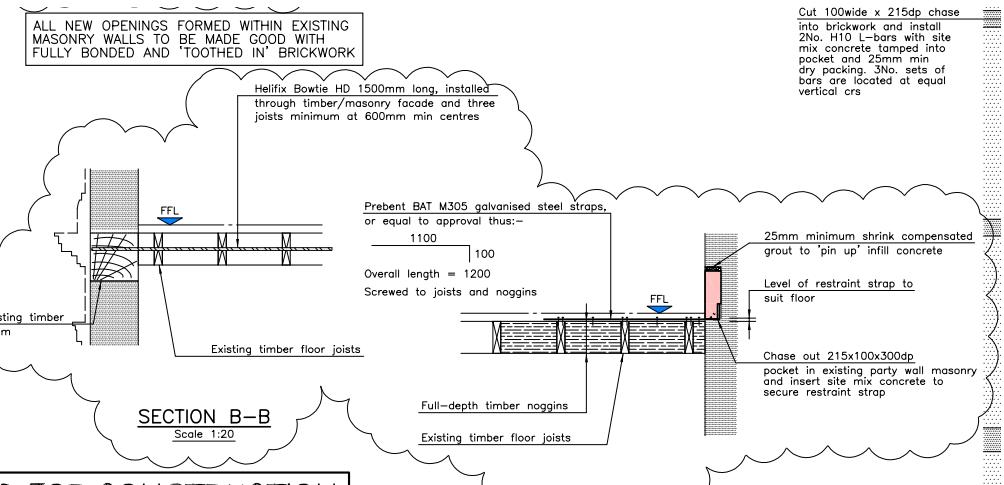
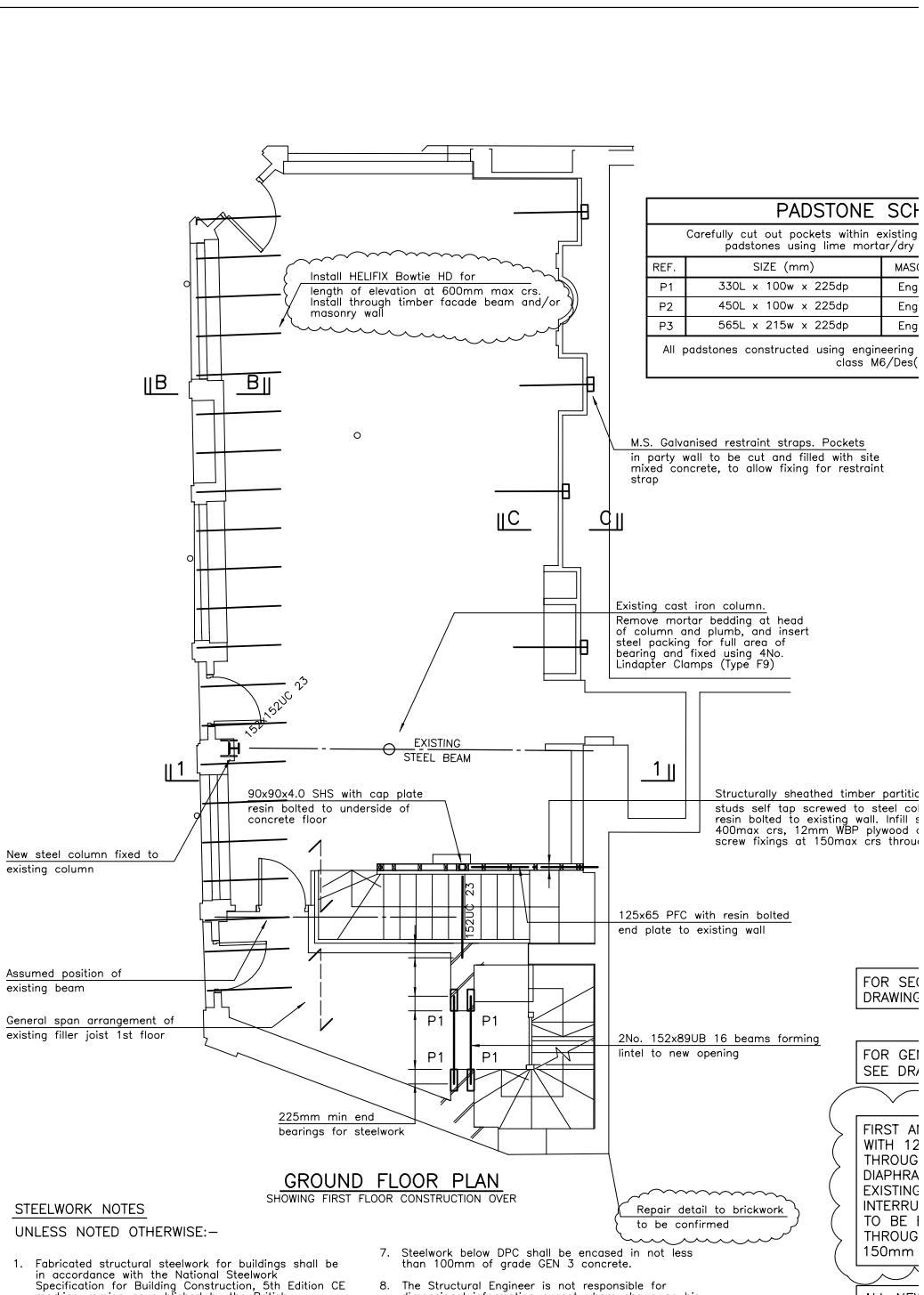
1. First floor, top of beam below west elevation



2. Opening up of timber joint between floor trimmer and beam below flank wall

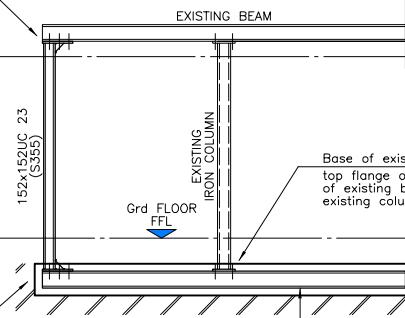
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Registered in England & Wales  
No 6421869





AL SECTION THROUGH  
FLOOR SPREADER BEAM

Scale 1:20



SECTION 1-1

STEELWORK NOTES

UNLESS NOTED OTHERWISE:-

- Fabricated structural steelwork for buildings shall be in accordance with the National Steelwork Specification for Building Construction 5th Edition CE
  - Steelwork below DPC shall be encased in not less than 100mm of grade GEM 3 concrete.
  - The Structural Engineer is not responsible for

Cut 100wide x 215dp chase  
into brickwork and install  
2No. H10 L-bars with site  
mix concrete tamped into  
pocket and 25mm min  
dry packing. 3No. sets of  
bars are located at equal  
vertical crs

# Proposed Development

This section describes the works that are proposed within the property. These works can be divided into seven main elements, these are:

New entrance lobby, new stair to basement & new WC provision;

The internal remedial structural works;

New remedial structure to the vaults & repairs;

Repairs to the vaults;

Cavity drainage;

General repairs and improvements;

Exterior refurbishments.

The proposed works, which are primarily internal, with minor external refurbishments, do not require planning permission.

The works will preserve the architectural significance of the building, there will be no external alterations, only refurbishments of the external fabric.

The refurbishment works will enhance the character of the property.

The application proposes the introduction of localised structural reinforcements throughout the building in order to prevent the further deterioration caused by the structural defects of the building.

The new structure will be added based on a conservation and heritage structural engineering approach to the building. A qualified structural engineer has been appointed to oversee the works, and a conservation & heritage structural engineer has been appointed to offer advice. Works are implemented per the structural engineers' reports and drawings.

The new remedial structural additions will provide the compromised existing structure of the building with the additional support required to consolidate the overall structure of the building.

Internally, unless otherwise indicated, all existing doors, windows, fixtures, fittings, floors, skirting, rainwater goods, finishes and plaster work are to be retained.

## The following works are proposed:

New Entrance Lobby, New Stair to Basement & New WC Provision

As per drawings ( 1151-0111/2 & Structural Engineer's Drawings);

revisions to the previously granted Listed Building Consent ref: 16/11816/LBC have been made in order to comply with building regulations;

removal of non original WCs, partitions, false ceilings and floor structure at ground floor;

removal of stair to basement;

removal of concrete slab at basement floor;

new reinforced raft concrete slab to WC basement, to include new drainage provision sufficient for relocation of male and female WCs as pursuant to the granted Listed Building Consent ref: 16/11816/LBC, as well as the addition of the new cavity drainage system to the Greenwell Street

vaults, and in order to replace existing drainage to the main basement area, if necessary.

new floor & wall finishes to basement WC area;

new building control compliant staircase with associated new structure, to include new steel posts and beams to support new and existing floor and wall structures at ground, first floor and above;

new stud partitions to WC at basement and to new entrance lobby at ground;

new sanitary ware to WCs including new basins, urinal troughs, WC, cubicles and associated plumbing.

## The Internal Remedial Structural Works

As per drawings ( 1151-0111/2/3 & 1151-0120/1 & 1151-0130/1 & Structural Engineer's Drawings & Reports);

temporary propping of existing structure internally at basement, ground, first & second floor levels to facilitate the necessary support of existing structure in the building, in order to mitigate against the further weakening of the existing structure during the works;

- new underpinning reinforced concrete spreader foundations to the gable wall masonry at basement floor level;
- removal of top courses to gable wall masonry at basement with new concrete incased steel spreader beam installed;
- new steel post to be tied to the existing cast iron RSJ within the ground floor pier to the Greenwell elevation, to be connected to the new steel spreader beam below with a moment base connection and clamp tied to the existing wrought iron beam above;
- all new steels to be intumescent coated;
- new structural clamp ties to the foot and head of the existing cast iron gable column to provide positive active connections with the new steel spreader beam below and the existing wrought iron beam above;
- new reinforced concrete corner restraint ties to the full height of the masonry walls at the corner to the gable wall and Greenwell elevation over first and second floors;
- new Helibar reinforcement of the structural cracking in the existing masonry to the gable wall at first and second floor at 225mm vertical centres;
- new 215mm square engineered brick column on new concrete pad foundation at basement level to corner of tap room blockwork to support timber beam to spine wall structure above;
- removal of existing lath and plaster to spine wall at first and second floor, installation of 12mm ply structural sheathing to create diaphragm, with reinstated lath and plaster over;
- insertion of timber packing between existing timber ring beam and cast iron hanger, coach bolted and mechanically fixed to the hanger. Fix new frame brackets to the existing spine wall beam to provide positive active fixing to the ring beam;
- install Helifix bowties to the full length of the Greenwell elevation at minimum 1800mm centres, to provide positive and active connection between the elevation and first and second floor structures;
- install restraint straps fixed to concrete pad stones in the party wall to create positive active connection between the party wall and first and second floor structures;
- first and second floors overlayed with 12mm ply sheathing to create structural diaphragm of both floors, 12mm to be shaved off existing firrings without correcting deflection in the floor.

## 6 Summary Assessment

### New Remedial Structure to the Vaults & Repairs

As per drawings (1151-0111 & Structural Engineer's Drawings);

- new steel beams to take up load from vaults and Greenwell Street above to be placed beneath each existing compromised iron beam;
- new steel beams to be anchored within new pad stones to existing masonry walls, as per structural engineer's specification;
- all new steels to be intumescent coated;
- new ventilation ducts reinstated to reduce further corrosion of iron beams.
- localised replacement of shot or missing brickwork, with repointing;
- new lintel to vault to Cleveland Road.

### Cavity Drainage

As per drawings (1151-0111);

- new Delta Membrane cavity drainage system to vaults under Greenwell Street & new WCs at basement (see appendix);
- new pumps and drainage channel to link with the new drainage provision to main basement area;

### General Repairs and Improvements

As per drawings ( 1151-0111/2/3 & 1151-0120/1 & 1151-0130/1 & Structural Engineer's Drawings);

- localised making good of the internal & external effects of structural cracking to walls to match existing;
- full electrical rewire of the property, whilst preventing any significant damage to the existing ceilings;
- upgrade of heating & plumbing throughout with the inclusion of a new boiler.

### Exterior Refurbishments

As per drawings ( 1151-0111/2/3 & 1151-0120/1 & 1151-0130/1/2 & 1151-0230/1 & 1151-0510/1/2);

- refurbishment of all windows to Historic England guidelines (*Traditional Windows; Their Care, Repair and Upgrading*);
- new roof covering to extension;
- repair cracking to stone balustrade;
- new slates to roof to match existing;
- new felt and lead coverings and flashings to roof dormer windows to match existing;
- making good of stucco local to areas of repair
- repoint flank elevations with NHL 3.5 lime mortar, colour to match existing, brushed recessed profile.

Sometimes our compare our work with listed buildings to surgery and this is definitely one of those projects. I also often say that we have to act like detectives. This building is hiding a lot of secrets about a lot of alterations and interventions which have been carried out throughout its history. This has made reading the buildings history and technology very challenging. It has also proved many of the assumptions to be wrong or not entirely correct.

The first engineer assessment was correct in as much as the assumption that there were inherent structural defects emanating from historic defective work and design were correct. However the opening up carried out to justify this assumption proved that the situation was even worse than presumed with virtually no connectivity between the primary elements of structure. Interestingly with the conservation brief set for the engineer and with the input of the conservation engineer the solution was much less massive.

The conservation solution however has involved a much more extensively intrusive solution which entails work over an extra floor than previously and still involves a lot of concrete and steel, if not significantly reduced. This has added a lot more work to the contract and therefore time and money.

As this was a largely structurally driven design we were beholden to the engineers to lead the design of the scheme. As with our Modern College garden wall project modern engineering principles pose problem when dealing with historic structures and the solutions proposed end up too drastic for the brief. I believe if we had done the opening up with the first engineer earlier, which it should have been, the proposal would not have changed. This demonstrates the importance of having the right experts with the right philosophy.

The construction project has now been let and will require close monitoring to ensure that the many small interventions are carried out correctly and achieve the connectivity. We will also be closely monitoring the methods of work so that harm is not caused to the fabric during the process. I anticipate there will be many on site conversations and sketches to assist with removal and reinstatement of fabric and finishes.

Not much architecture but a lot of conservation. A happy client that there is now a clear way forward for preserving and enhancing their assett.