



Structural Observations on the
Redevelopment of
9 Godge Street.

This report considers implications of the present condition of 9 Goodge Street and proposed facade retention works.



9 Goodge Street

The property was constructed in the 18th Century and utilises load bearing masonry and timber floors. The property has clearly suffered for a great many years from a lack of maintenance and is generally in a very poor condition. No 9 Goodge Street is a 4 Storey building, ground and 3 upper floors or traditional masonry construction.

The facade at ground floor level comprises a large single opening to the ground floor occupier, Jennings Betting shop. There is a large advertising sign directly above the shop front, meaning that the facade below first floor cill level could not be examined.

Above the ground floor level, the facade is a traditional brick faced with 6 inset windows, two at each floor level, located directly above one another.

The windows at First Floor level are substantially larger than at Second and Third floors though all windows are to a similar pattern.

The windows each have a render surround to them with rendered cill, reveals and head, incorporating a keystone feature.

At roof level there is a parapet wall with coping.

Between First and Second and Second and Third floors are feature bands sitting directly below cill level.

The faced brickwork has been subject to a degree of repair and rebuilding in the past, It is particularly noticeable that the masonry to the Western side of the elevation, right hand side when viewed from the street, has been rebuilt from parapet level right down to cill level at third floor. The whole of the parapet above the third floor window has been rebuilt. Various other repairs have been undertaken in isolated other areas.

There are signs internally of cracking between the gable wall and the open sided party walls to both sides. The floors are uneven and it can be seen internally that the door and windows frames have distorted.

There is no access available into the roof space.

Externally there have been some repairs to the brickwork though restraint straps have been installed to combat progressive bowing outwards of the front wall where it can be seen that the joist insertions into the brickwork have become markedly disconnected with relatively little bearing. This is a common feature in buildings of this age though in this case the cause is considered to be also due to bomb blast damage. The chimney stack on the exposed gable wall has a pronounced lean inward towards the property.

All the internal floors will require rebuilding and in a manner that ensures permanent lateral restraint from diaphragm floors.

The full token of repairs to the remaining facade will become apparent as a result of detailed and close up inspection from a scaffold.

Additional temporary works will be in the form of restraint towers and short needles to hold back the retained facade whilst stitching of cracks, replacement of lintels, failed brickwork and extensive joint repairs. Once this is complete the permanent works will be undertaken and safely connected to the retained fabric. All newly formed interfaces will be designed to accommodate differential movement between old and new without future damage to the historic facade.

At this stage we are still concerned that the façade is in a very poor condition and based on the experiences as Engineers for 1-3 Goodge Street also whilst similar measures were proposed the façade did have to be rebuilt due to circumstances beyond control.

Façade Retention/Demolition Proposals

The following pages illustrate the retention proposals for the facades and party walls the design of which will be in accordance with the “Ciria Guide C579 Retention of masonry facades best practice guide”.

With any façade or flank wall retention, health and safety is of paramount concern and the scheme will be fully evaluated by a specialist contractor before commencement and during the period of the works.

The phasing of the works will be critical to ensure the continuing stability.

Outline Phasing of the Works

1. Barrel vaults stabilised
2. Underpinning if required completed
3. All repairs to retained element must be completed, windows framed out
4. Shop front to be stabilised with additional props below the Bressemer beam
5. All main supports element in place before demolition begins
6. Staged demolition to allow party wall restraints to be installed
7. Site inspections and monitoring procedures in place

Summary of Specific Site Proposals

The proposals for this project are as follows and they are based on tried and proven systems used on previous projects.

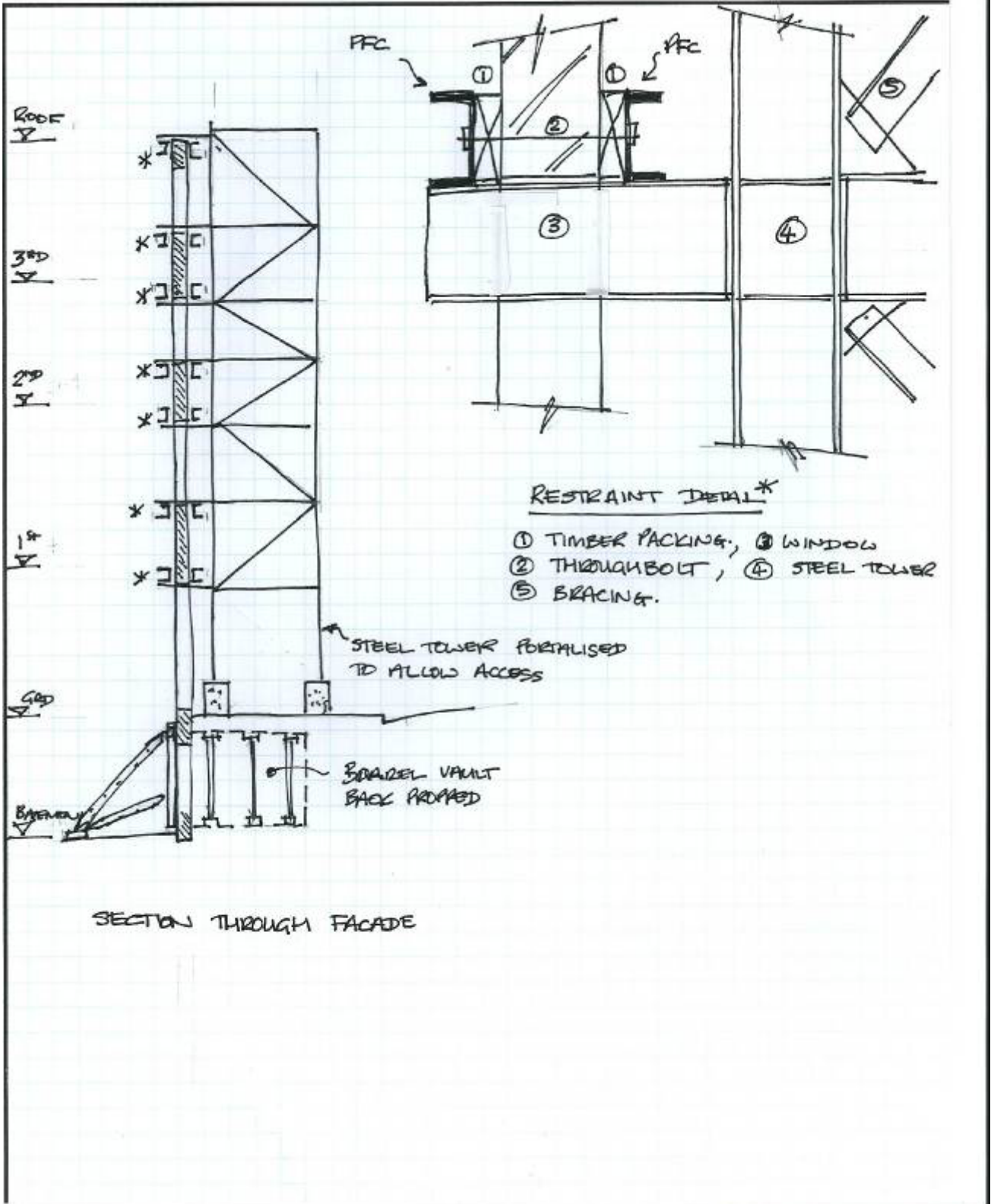
The party walls that will be exposed by the demolition works will be restrained by the installation of steel members that will tie the existing walls back into the fabric of the property. Typical details are attached.

The barrel vaults below Goodge Street will be stabilised by either filling or back propping. The final solution will be dependent on detailed design by the Demolition Contractor.

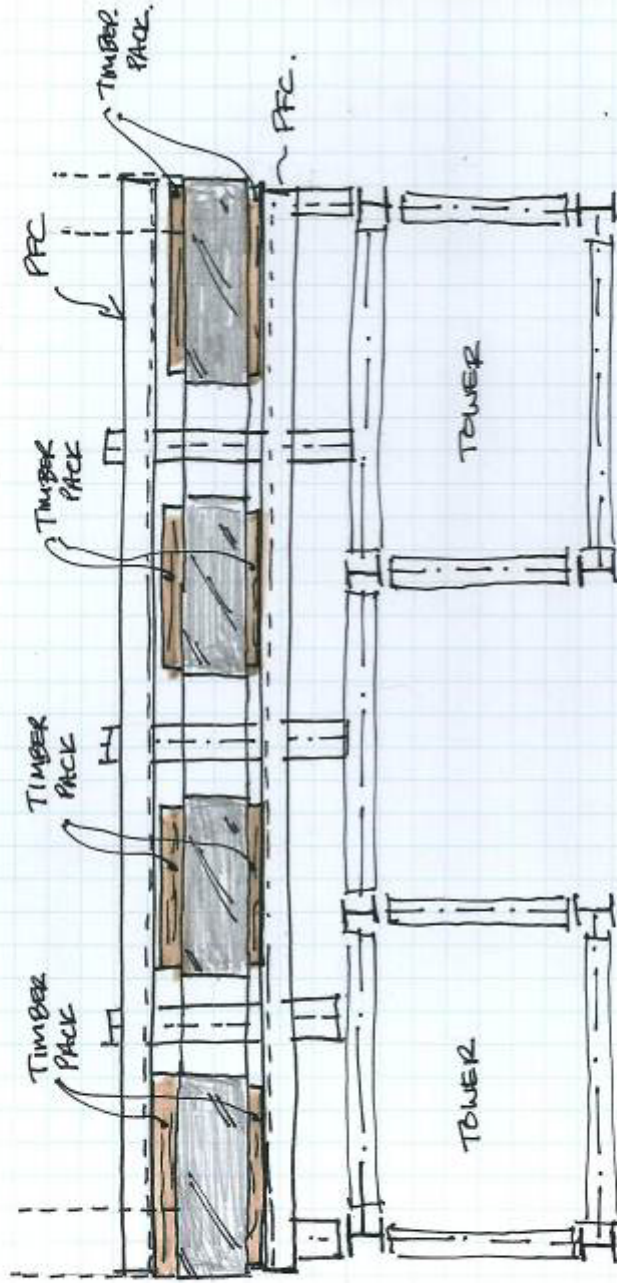
The main façade retention system will be steelwork towers which will be designed to stabilise and carry the lateral loads induced by the retained façade and will provide lateral stability and restraint to the façade of adequate strength and stiffness to prevent significant damage during the construction process.

A tower method has been chosen as it gives a very stable structural form, and will also allow for use by the main contractor for office / welfare space if required.

Additional internal braces may also be required connected to the party walls either side.



PLAN OF RETENTION SCHEME



Previous Retention Schemes Undertaken By Bridges Pound

65 GROSVENOR STREET

Right in the heart of London, a façade retention was carried out as shown which allowed the construction a new office building behind.

The scheme involved the installation of a 8 storey steel frame behind the façade, on new piled foundations.



63 BROOK STREET

Right in the heart of London, a façade retention was carried out as shown which allowed the construction of a modern Mayfair: 24,503 square feet of air-conditioned Grade 'A' office space, set over lower ground, ground and four upper levels.

The scheme involved the installation of a 6 storey steel frame behind the façade, on new piled foundations whilst retaining the shop units which remained operational during the works.



STRATTON HOUSE



Located off Piccadilly this project involves a complete remodelling of the rear, with the installation of two new cores.

Part of the project includes the construction of a new penthouse flat on top of the property. .

As with any project of this size the logistics of the construction is paramount as access is so limited, which is why we chose a steel frame as our preferred solution.

