

Galkoff Extension

Design Options

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1. Introduction

Galkoff Extension - Design Options

This document outlines a number of design options for the extension and development of the site adjacent to Anson House on behalf of Liverpool School of Tropical Medicine. The site to the east of the current Anson House development includes two separate Grade II listed buildings, No. 29 and No. 35 Pembroke Place. As part of this assessment we have considered four alternative options for development. Each has been investigated for its architectural, structural and cost implications. The options investigated are:

Option 01- Retention/restoration of the whole of the existing listed buildings No. 29 & 35, including the existing floors, external and internal walls, roof, window openings and shop front. Demolition of No. 31 & 33 to allow for new building extension. No. 29 & 35 to be integrated with new building construction.

Option 02 - Retention of No. 29 external walls only, including window openings, shop front, and roof, but with new floors to match Anson House floor levels and new internal walls (if required). Demolition of No. 31 & 33 to allow for new building extension. Retention/restoration of the whole existing fabric of No. 35 for integration with new Anson House building extension.

Option 03 - Retention of No. 29 front facade only, with all the rest of the building fabric demolished. Demolition of No. 31 & 33 to allow for new building extension. Retention/restoration of the whole existing fabric of No. 35 for integration with new Anson House building extension.

Option 04 - Demolition of the listed building No. 29, salvaging of the tiled shop front for relocation near to existing site as a free-standing piece of public sculpture. Demolition of No. 31 & 33 to allow for new building extension. Retention/restoration of the whole existing fabric of No. 35 for integration with new Anson House building extension.

Liverpool School of Tropical Medicine

The Liverpool School of Tropical Medicine (LSTM) was the first institution in the world dedicated to tropical disease and has led the field in the fight against infectious, debilitating and disabling diseases ever since. A registered charity, they work in over 60 countries worldwide, often in very difficult circumstances, to fulfil their mission of improving the health of the world's poorest people, helping to bring research innovation and scientific breakthroughs from the lab to those most in need.

Their work in combating diseases such as TB, HIV/AIDS, malaria, dengue and lymphatic filariasis is supported by a research order book of over £200 million. Their worldwide reputation and the calibre of research outputs has secured funding to lead a number of international consortia and product development partnerships aimed at reducing or eliminating the impact of diseases upon the world's poorest people.

As a teaching institution, LSTM attracts more than 500 students from over 50 countries each year, from PhD research and Masters programmes to a range of short courses and they work in partnership with health ministries, universities and research institutions worldwide.

LSTM provide technical assistance to international health projects worldwide through their consultancy arm, Liverpool Associates in Tropical Health (LATH), to make sustainable improvements to health systems in developing countries whilst helping to inform our teaching and research agendas.

They also provide pre and post travel clinical services through their subsidiary Well Travelled Clinics Ltd, with centres in Liverpool and Chester.

Over the years LSTM has invested heavily in their Liverpool base, notably the recently completed Centre for Tropical and Infectious Diseases, a £23 million state of the art facility for developing new drugs, vaccines and pesticides which puts them at the forefront of infectious disease research.

Anson House Development

The Big Idea for the redevelopment of Anson House was to transform the external appearance of the building, changing the poor quality residential façade into a façade that would complement the existing LSTM buildings, through the use of a perforated metal façade. Using a perforated metal façade will give the building a visual depth, that it currently lacks. This will also allow the building to transform at night through the use of carefully located lighting behind the mesh.

Through the integration of dynamic interior spaces, LSTM will begin to attract further world leaders in medical research and communication with Liverpool.

The primary aim for the extensive redevelopment of Anson House and the proposed extension is to provide a superior and flexible office environment that will accommodate a state of the art Maternal and Child Health R &D centre, linking with local SMEs in the area. To achieve this LSTM require large open plan flexible work spaces which promotes collaborative working across departments.

Once completed Anson House, juxtaposed with the CTID facility, will form an obvious gateway to the Knowledge Quarter in Liverpool on a major arterial road from the City Centre.

It is the intention that the redevelopment of this site will further add to the qualities of the street frontage and reinforce the establishment of the knowledge quarter.

2. Site Location

Location

The cluster of terraces are located on Pembroke Place adjacent to the Anson House development. The site provides a future expansion opportunity to extend facilities from the newly developed Anson House scheme creating an extension of the LSTM campus on the opposite side of Pembroke Place to the existing buildings - the Old School, Magrath Wing and CTID (Centre for Tropical and Infectious Diseases).

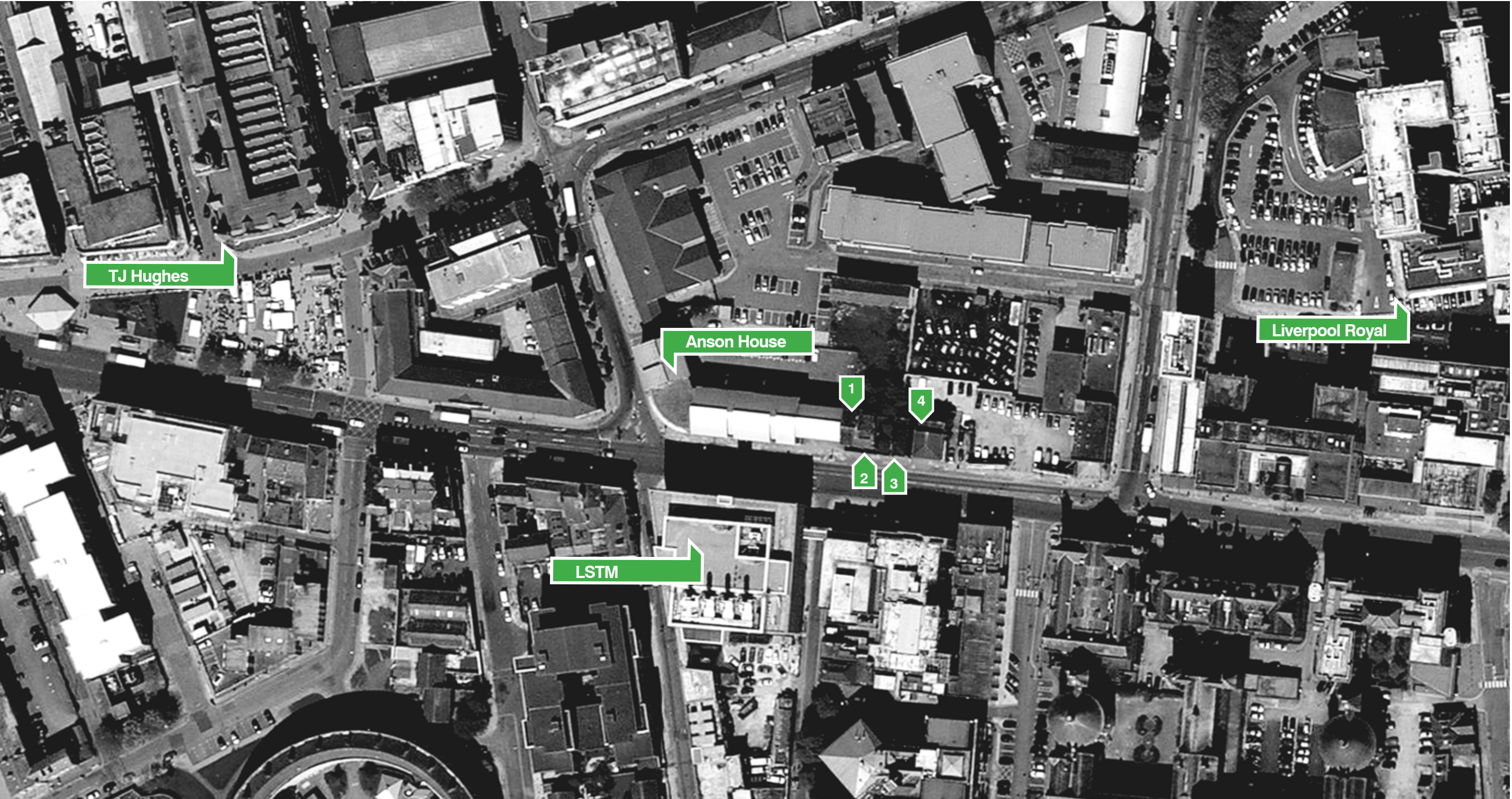
The formalisation of this Gateway will mark the Western entrance into the Knowledge Quarter (Liverpool City Centre Strategic Investment Framework page 60/61) area of the city, with LSTM providing the key marker as a Liverpool brand exporting knowledge on a global scale.

Below: View looking west down Pembroke Place



Key

1.	P. Galkoff Butchers (29 Pembroke Place)
2.	31 Pembroke Place
3.	The Book Shop (35 Pembroke Place)
4.	John. E. Monk (37 & 39 Pembroke Place)



3. Listed Buildings

Pembroke Place



Historic Plan 1850



29 Pembroke Place



35 - 39 Pembroke Place



No. 29 Pembroke Place - Galkoffs

Jewish Butchers - First Listed 04th April 2007

- Listed principally for the survival of a nationally unique Jewish Butcher's shop front set within a late Georgian house.

Listing Notes:

- It was noted that while the internal survivals, particularly the painted decoration and plasterwork to the first floor front are of some interest, the plan form and internal fixtures in general had been compromised and were in poor condition at time of inspection (2007).

No. 35-39 Pembroke Place

'Court Dwellings' - First Listed 23rd September 2009

- Comprising a single house: No 35, and a semi-detached pair: No's 37 and 39, each has an attached building to the rear, originally part of a row of 'court dwellings' but now forming a rear extension to the frontage house.
- While the court formation has largely gone, these are very rare survivals and almost certainly the last remnants in Liverpool. Some 86,000 people were housed in courts by 1840, by far the largest area of purpose-built working-class housing in England.

Listing Notes:

- They were originally part of a symmetrical group of 4 houses comprising Nos 37 and 39 as a semi-detached pair, flanked by single houses: Nos 35 to the West and 41 to the East. Between them were two narrow courts: Watkinson's Terrace and Watkinson's Buildings, each lined with two facing rows of 4 dwellings abutting the frontage buildings in Pembroke Place, those to the rear of the central pair placed back-to-back. Behind No 35 is the sole surviving unit of the W side of Watkinson's Terrace. Of the E side Watkinson's Terrace, the first unit and its back-to back partner on the W side of Watkinson's Buildings remain, behind to No 37 and 39 respectively. No 41 and the E side of Watkinson's Buildings behind have been demolished.
- The listing had a difficult birth. Glynn Marsden, Senior Conservation Officer at the council had pushed for the buildings listing and formally challenged English Heritages advice opposing the listing. English Heritages advice was eventually over ruled and the buildings were listed by the secretary of state.

4. History & Property

Description

Historic photos



Preserving Heritage

The proposal seeks to retain number 35 that forms part of a cluster of three houses that face onto Pembroke Place. The relationship between these buildings is of particular historical interest as numbers 35 and 37 form an entrance originally to two facing rows of dwellings to the rear forming a narrow court which is an example of high density housing that emerged in the late 18th century in the expanding industrial towns of the North and Midlands.



Number 29 Pembroke Place

The exterior tiled facade of No. 29 is specified in the buildings listing. Any proposed demolition of No. 29 and 31 Pembroke Place would include careful removal by a specialist sub-contractor and re-location of the tiled shop front as a piece of public sculpture in close proximity to the original site.

5. Site Photos

External

Site photos - External

No. 29 & 31 Pembroke Place



Front facade of No. 29 & 31

No. 31 Pembroke Place



Front facade of No. 29-33

Hoarding fence in front of Galkoff butchers.



Front facade of No. 35



Site Photos

Internal - No. 29

Interior of No. 29

Marble work top



Ground Floor



Basement



Basement - Vaulted brickwork coal chute



First Floor



Ground Floor - Rear of tiled shop front



First Floor - Paintings



Second Floor - Stair landing / Stair to 3rd Floor



Ground Floor - Damaged structural beam



Site Photos

Internal - No. 35

Internal of No. 35

Ground Floor - Main entrance



Ground Floor - Rear of shop front



Ground Floor - Existing bookshelves



Ground Floor - Existing shop counter



Ground Floor - View to bookshop at front of property



Ground Floor to First Floor Stair - Blocked/Damaged



Ground Floor - View to rear of property



Site Photos

External

External Courtyard

Flying shoring between No. 35 and 37



Outhouse in courtyard between No. 35 and 37



Historic bricked up dwelling entrance into No. 35



Rear of No. 35



Alley between No. 35 and 37



Rear entrance to No. 35



External Rear - No. 29-31

Rear of No. 29



Rear of No. 31 & 33



Rear of No. 31 & 33



6. Structural

Condition Report

Introduction

The proposed extension of the office block, Anson House, Pembroke Place requires consideration of two listed buildings: Galkoff Butchers at No 29 (English Heritage Building ID: 503043) and a book shop at No 35. The historical aspects of these two buildings are considered elsewhere in this report. This section will therefore deal solely with the structural condition of the retained buildings and the effects on the rest of the development.

Details of the buildings are listed below:

Anson House: (No 27 Pembroke Place)

This building was constructed in 1994 and is currently being substantially altered to create a 3 storey office. There is no basement to this building.

Galkoff Butchers at No 29 is a 4 storey building comprising a shop at ground floor level, a store / preparation area in the basement and the upper two storeys appear to have been used as a residence.

Shop units at No 31 and 33 Pembroke place are similar in style to Galkoffs. No 31 is in poor structural condition and No 33 has been partially demolished. Neither building has any historical value. These buildings are to be demolished

The book shop at No 35 is again similar in style to Galkoffs but is one half of a Courts building. It is grade II listed and is to be retained in all options

No. 37-39 Pembroke Place are not part of this feasibility study.

Structural Condition

Structural Condition of Galkoff Butchers

The structure is three storeys above ground and contains a basement that extends for the full plan area and into the yard area at the rear. The building is traditional in that it is understood that originally it was residence that was later converted. The walls are load bearing brickwork and on the front elevation the lintels are of stonework. The shop front contains wrought iron (possibly steel) beams that are supported on the gable / party walls and onto internal cast iron columns. The formation of the shop front and installation of the cast iron columns is likely to have been a later alteration. Typically for this age of building these columns are slender. The green tiles are adhered by mortar directly to the masonry in places and elsewhere appear to stand proud of the brickwork. A ceramics specialist will need to assess how the tiles can be removed without damage. The rear of the building is very overgrown and has not been inspected.

The internal structure comprises timber floors at each level including the ground floor. There is a step across the full width in the middle of the plan. We understand that this property was converted from a residence at some time in the 19th or very early 20th century. We would suspect that the front floor area was lowered at the same time that the shop front was inserted. This would then allow access on the level from the pavement rather than stepping up to the floor. Within the basement this change required modifications to the central pier and a floor beam. The floor joists have been supported on a central beam supported on an isolated brickwork pier which is in poor condition. The central wall if it existed along with the removal of the staircase walls probably occurred at the same time. The current timber staircases into the basement and also to the first floor are not original. A former hatch, now infilled, can be seen from within the basement.

The staircase between the first and second floors is timber and in poor structural condition due to water ingress from the skylight at the roof level. Water has been clearly entering this area for some time causing damage to the finishes and saturating the timber

flight. It is likely that this water has permeated the adjacent areas at 2nd floor levels. A site based risk assessment has been made and it is considered it is too dangerous to access the 2nd floor from this stair. None of the balustrading or newel posts are present.

Towards the rear of the ground floor on the upper area the floor joists are saturated as can be seen on photograph 3. The floor in this area was considered to be too dangerous to access. Above there is a wide opening in the original rear wall leading to a modern outrigger beyond the line of the rear wall.

Steel beams have been installed to trim the opening and also to support the concrete flat roof. The beams are severely corroded on the top and bottom flanges and sections of the web. The beams appear shallow for the span and load that would be applied. We have not undertaken any design checks on these beams but suspect that they would not meet the current British Standard recommendations. Externally further steelwork is visible that helps support the concrete ground floor and outrigger brickwork walls. The steel is corroded and all priming coats have been lost. There is some damage to the concrete which we presume is due to lack of cover and carbonation.

There are areas of poorly bonded brickwork to the gable / party wall at ground floor level. Some of this is due to past alterations and removal of the former staircase walls and chimney stack. This can be seen on photograph 3. These areas will require local rebuilding to repair the damage. Stitch lintels will be required to bridge the crack and prevent shear failure. The stack is apparent at roof where no terracotta pots can be seen. It is possible that the stack has been sealed. At first floor level the fireplace opening within the wall has been infilled and much of the plaster appears intact with minor cracking.

At the first floor there is diagonal cracking that extends in the gable / party wall to Anson House. At high level due to the alteration work currently being undertaken on Anson House it can be seen that there are two walls. A block lining wall to the modern building and an old solid bonded brick wall estimated to be one full brick width. This cracking cuts across

the plasterwork of two of the paintings. Photograph 6 shows one such crack. This form of cracking is likely to be due to one or a combination of the following:

- Outward movement of the façade facing Pembroke Place due to a lack of lateral restraint at the floor / roof level.
- Possible movement associated with the original installation of the shop front beams and columns.

The front wall is constructed in Flemish bond with alternating header stretcher bricks and alternating on adjacent courses. The mortar is probably lime based and there is evidence of some cement repointing to the return gable corner to No 27 (Anson House). Galvanised straps are visible on the external corner adjacent to the shop front beam. There has been some movement of the brickwork around the bearing to the main shop front support beam. If retained the beam will need propping, blast cleaning, treating with priming coats and the brickwork locally rebuilt.

At first floor level there is a gap between the floor boards and the plaster indicating outward movement of the wall with respect to the floor. This will require the boards to be locally removed, noggin timbers inserting, straps fixed between the wall and the floor and the boards replacing. We would recommend that all the other walls are strapped back to the floors in a similar manner. Although some straps are visible at the underside of the 1st floor, these will need alteration / replacement and additional work. If the repairs to the cracked masonry are undertaken internally this will cause significant damage to the painting. If undertaken externally it will be visible.

The first floor and ground floor structure comprises timber joints spanning onto iron / steel beams. The joists and boarding are in reasonable condition where the structure has been dry but areas are very wet particularly towards the rear of the ground floor and these areas will need replacement. Either the

boards or plaster will need to be removed to enable a specialist inspection for rot and infestation. Joist bearings built into external walls are very vulnerable to decay and repairs or treatment should be expected.

The basement is damp although areas of the floor appear dry. The floor is concrete so is not original. No significant cracking was apparent in the walls. On an adjacent site the ground was found to be filled material to 2.8m depth overlying boulder clay. This would suggest that the basement and we presume the main load-bearing walls are built directly off the boulder clay.

There is a vaulted brickwork coal chute that extends well under the pavement to Pembroke Place and along the front wall below the pavement. The walls appeared to be very damp and there was slight movement of the vaults. A pavement light was present and open allowing water to ingress the area. One section of this void below the pavement is full of old construction materials with remnant of screed on the upper surface. Careful removal in stages and testing will be necessary to insure the health and safety of the operatives and controlled disposal.

The slate clad roof has not been inspected from inside. Externally we noted that the slates were generally intact but vegetation is growing above the roof line from within the building. Damage to the flashing / waterproofing is to be expected due to root damage. The gable wall extends above Anson House. There are gaps between the slates and the wall through which rainwater may enter.

Although we have not seen the inside of the building we would expect the roof to comprise slates on loose rafters on canted timber purlins spanning between the gable / party walls. It is clear that there has been water ingress at lower levels and we suspect that this has entered the building from roof level. The rear roof has a slight hollow indicative of long term deflection of supporting purlins. The roof is likely to require replacement.

Structural condition of Nos 31 and 33 Pembroke Place.

These buildings are in poor condition and No 33 is partially demolished. No 31 has a large area of open roof on the Pembroke Place side where the slate coverings have been lost allowing water to enter the building over many years. The walls to No 31 are solid bonded brickwork in variable condition. As with Galkoffs the shop front is not original. The beam that supports the masonry above the shop front is exposed and showing signs of heavy corrosion. As neither building / site is listed, both buildings are intended to be demolished.

Structural condition of No 35 Pembroke Place.

This building is now effectively isolated although it originally it was part of a terrace of properties. The front wall has a render applied from first floor upwards. The shop front window and door would not have been original and a close inspection of the brickwork confirms this change. Forming this opening will have reduced the lateral stability of the structure. The rear high level section of the wall that fronts onto No 33 has also been modified and the eaves level section of brickwork is leaning out. This section of brickwork will probably need rebuilding but can only be confirmed when the wall can be inspected from the inside

The gable wall fronts onto the alley that would have led to the rear court. Flying shores have been erected between No 35 and No 37 (Male clothing store) at 1st and 2nd floor levels. Photographs 1 and 2 shows the details. A visual inspection of both walls showed that the masonry was out of plumb. A detailed assessment of the lateral stability of this building will be needed. The shores are old and will need repair. They will also need to be retained irrespective of any strengthening as No 37 will rely on them being in place. We would recommend that LSTM seek further legal advice regarding these shores. The gable wall has been altered over the years although the original

entrance and arch over is intact and the doorway infilled. Two stone sills are evident.

Access for inspection on this occasion has been limited to the ground floor area only. There are still remnants of book shelving that obscure the walls but the ground floor was dry. The structure appears to have been reasonably well maintained. A small staircase leads up to the 1st and 2nd floors and down to the basement. This stair was partially closed, had obstructed access and therefore was deemed unsafe to use. The other floors therefore could not be inspected.

The roof level is only partially visible from the road and via the street behind the property. We noted that it was dual pitch, slate clad and that there was a chimney stack on the No 33 gable wall. Some but not all terracotta pots have survived. The slates on this roof have been covered with a bitumen material so it must be assumed that water has been entering the property. The ground floor however appeared dry. The roof to this building remains a medium risk for requiring repair or replacement until such time that the structure can be properly inspected.



Photograph 1
View looking along the alley between the Bookshop and No 39. Note the flying shores are timber and are relatively simple in form. The walls on both sides appear to be out of plumb.



Photograph 2
View looking onto the side wall of the Bookshop showing the original entrance doorway (now infilled), the flying shores, areas where brickwork appear to have been modified, vegetation at roof level and replacement guttering.



Photograph 3
View on the inside of the upper level of Galkoffs showing saturated floors, corroded steel beams, concrete roof slab to outrigger extension; replacement staircase, modified chimney breast and water staining on the first floor.



Photograph 4

View looking onto party wall of Galkoffs and No 29 Pembroke Place. Note the isolated cast iron column, removal scars of old brickwork cross walls, the bearing of the flitched beam; attempts to stabilise vertical movement in the wall by the installation of galvanised mild steel straps and other areas of poor brickwork.



Photograph 5

View of basement showing water ingress from the flat roof at first floor on the extension outrigger.



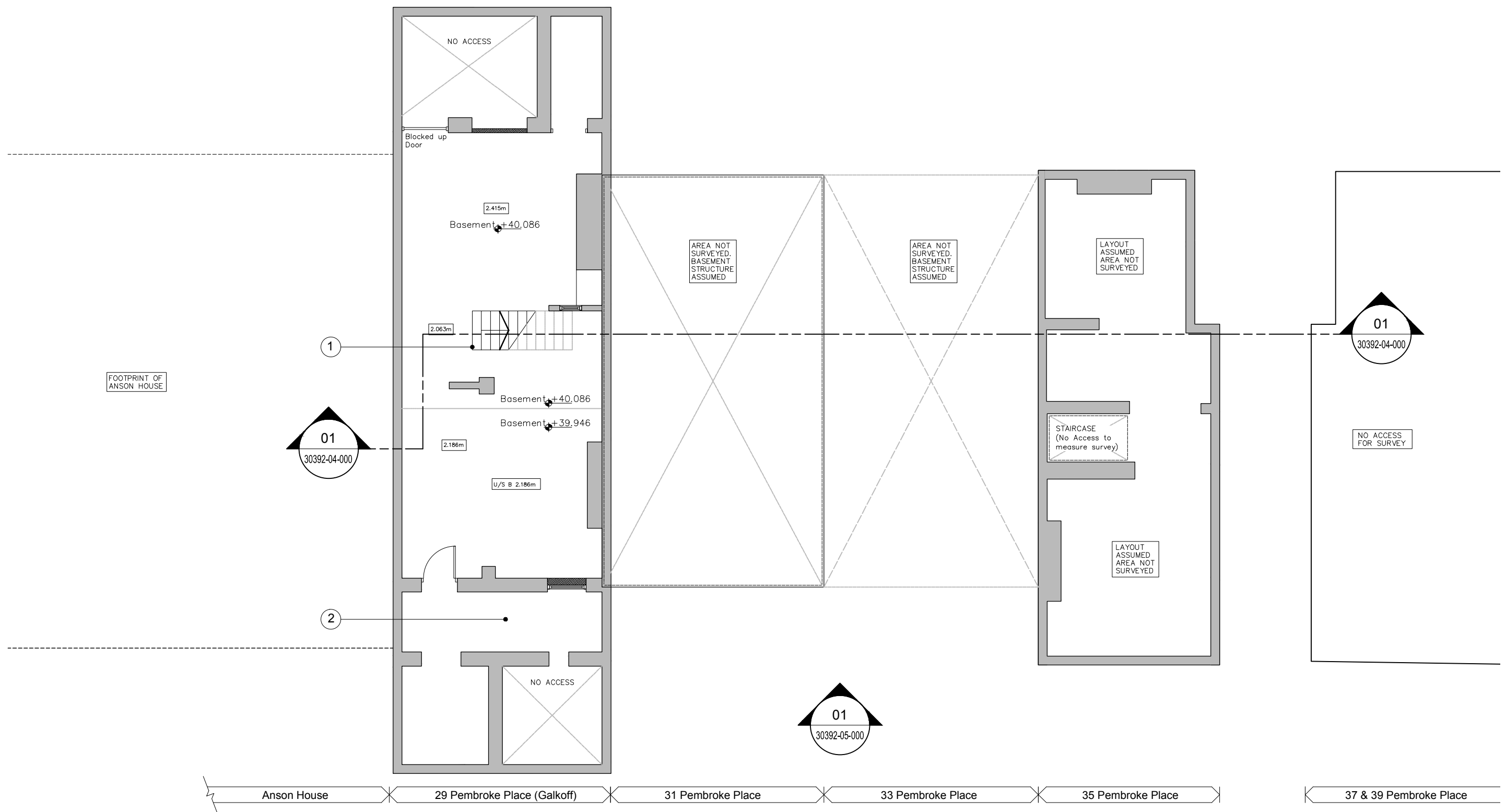
Photograph 6
View at 1st floor showing cracking across the painting which is a result of outward movement of the gable front elevation with respect to the flank wall.



Photograph 7
View showing the condition of the brickwork behind the tile finish.

7. Existing

Overview

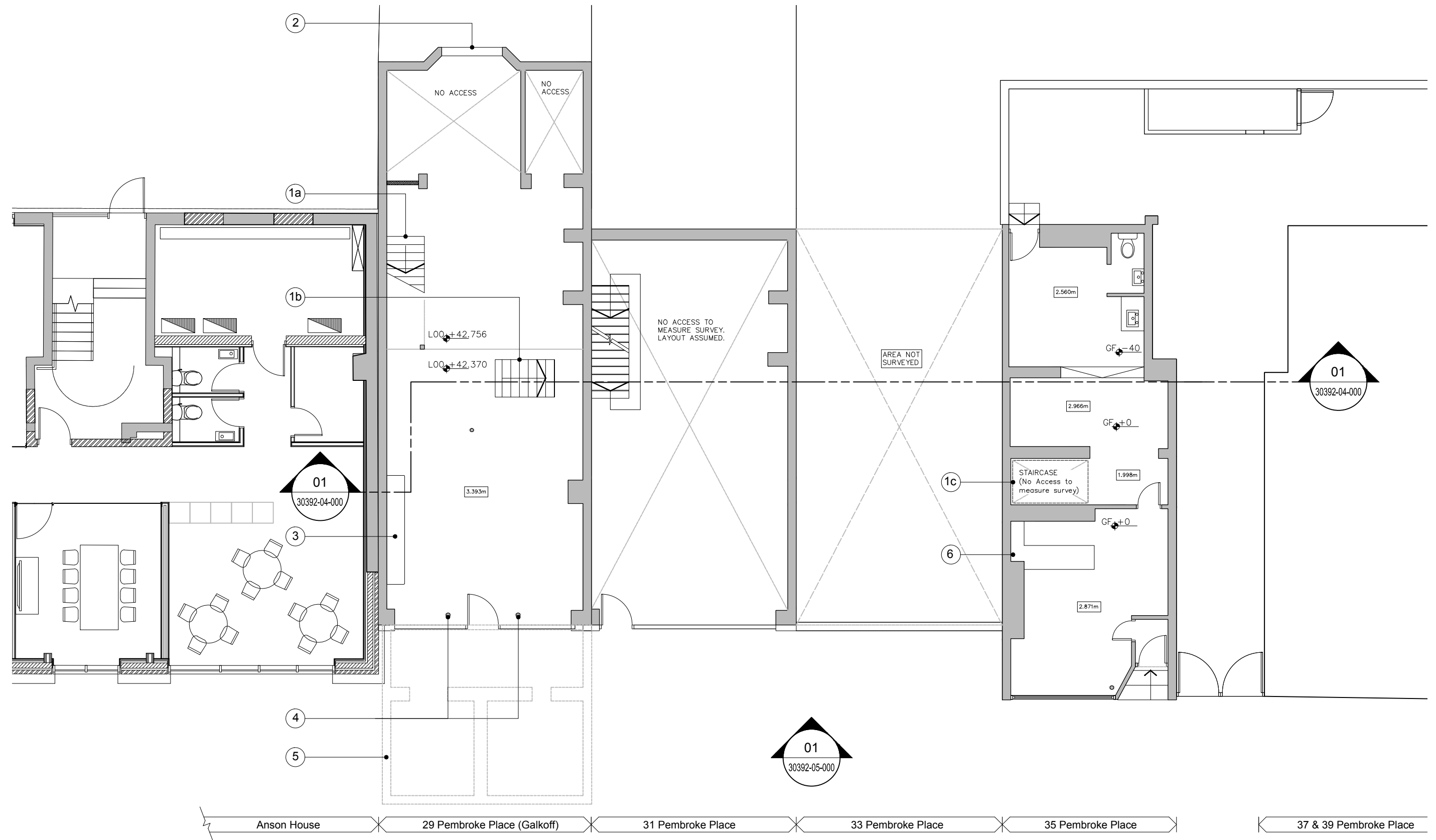


1. Staircase - Not original. Non DDA compliant.
2. Vaulted coal chute

Existing Basement Floor Plan 1:100

Galkoff Extension Design Options





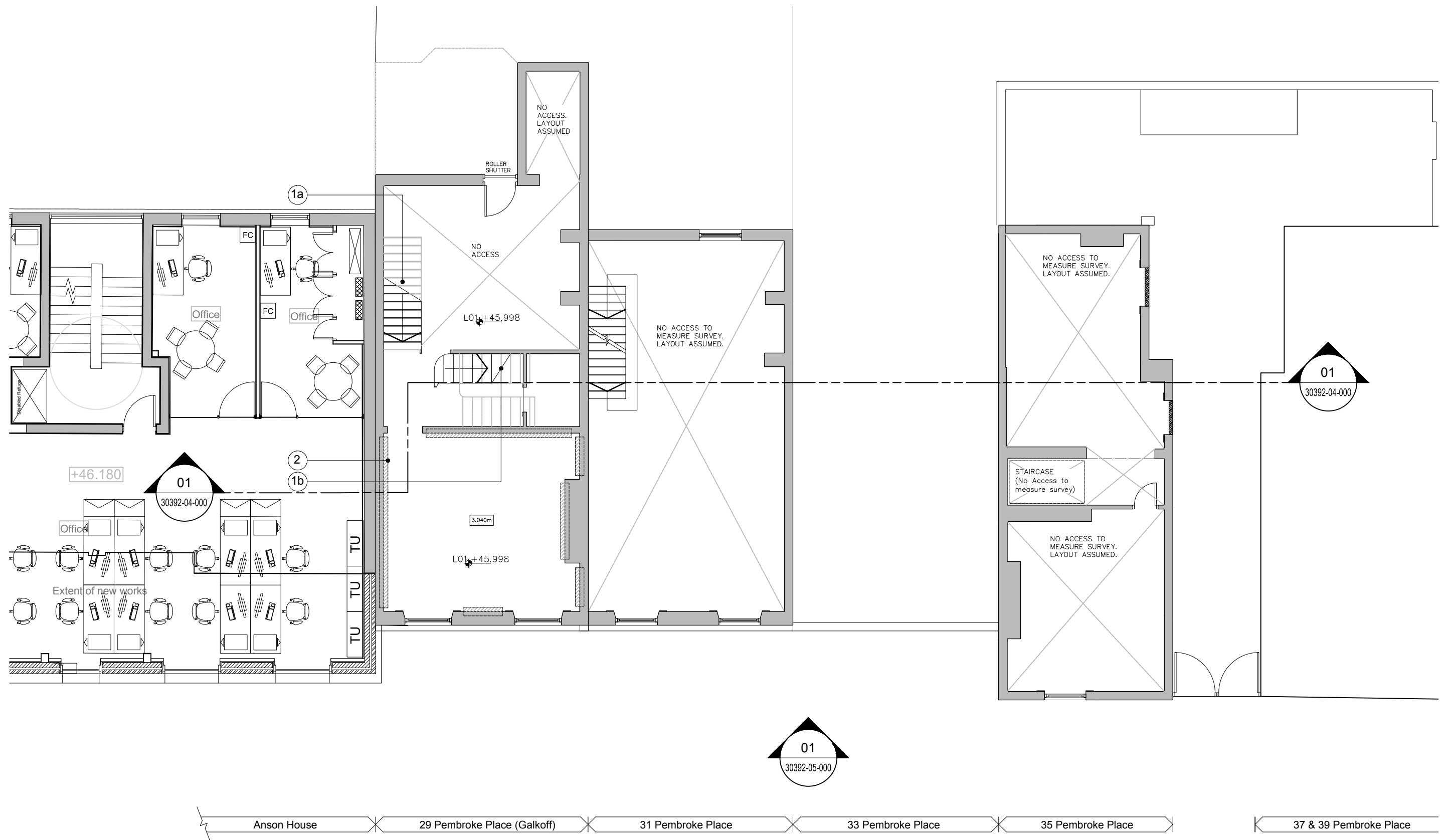
1. Staircase
 - a - Not original. Non DDA compliant.
 - b - Not original. Non DDA compliant.
 - c - Damaged. No access.
2. Rear opening boarded
3. Marble work top - grade II listed significance
4. Slender columns supporting shop front - listed significance

5. Outline of basement below
6. Shop counter

Existing Ground Floor Plan 1:100

Galkoff Extension Design Options

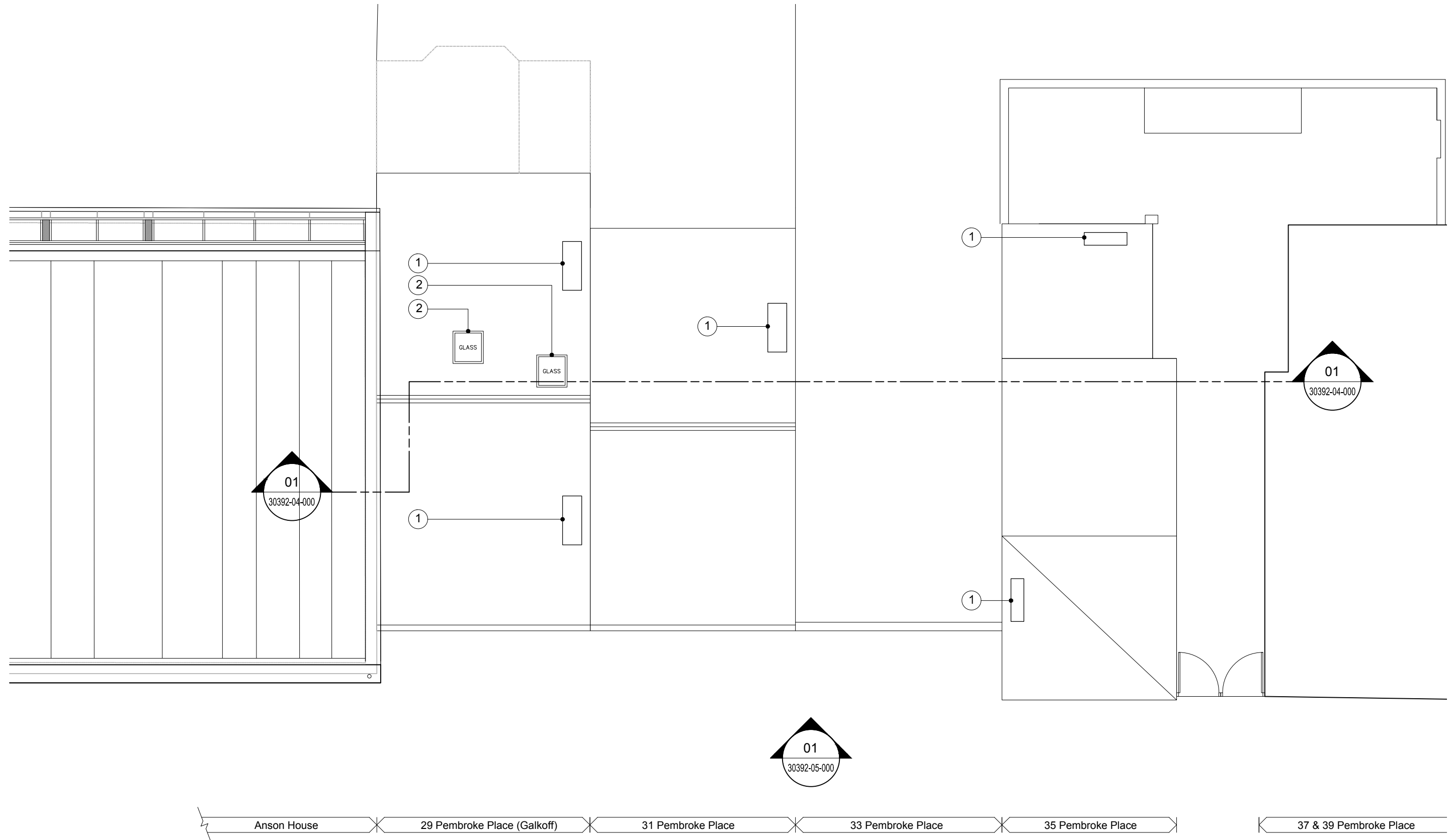




1. Staircase
 - a - Not original. Non DDA compliant.
 - b - Original. Damaged. No access. Non DDA compliant.
2. Hatched areas denotes paintings of listing significance

Existing First Floor Plan 1:100

Galkoff Extension Design Options

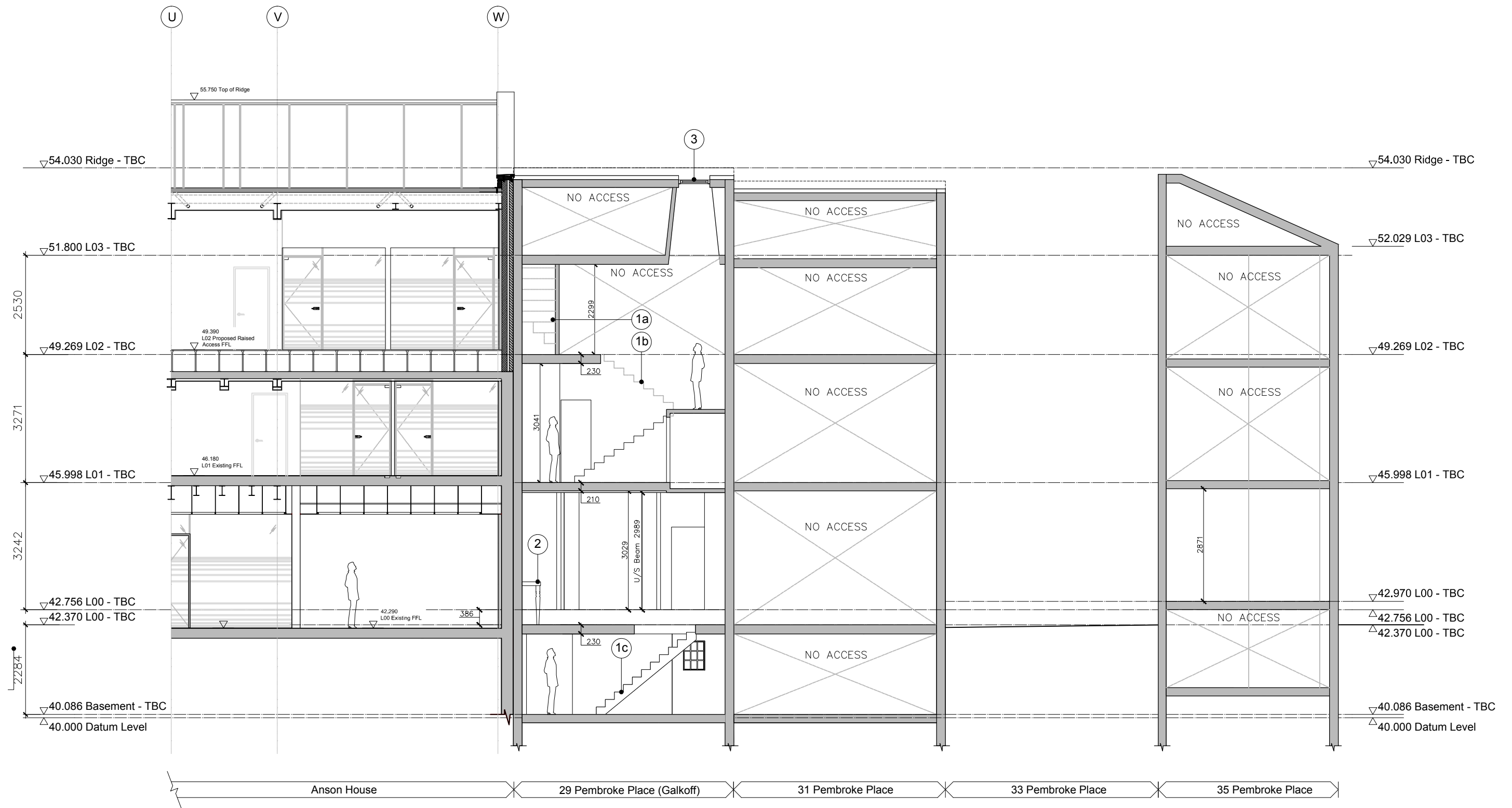


- 1. Existing chimney breast
- 2. Sky light

Existing Roof Plan 1:100

Galkoff Extension Design Options





1. Staircase
 - a - Original. No access to assess condition
 - b - Original. Damaged. No access
2. Marble work top - noted in the listing summary
3. Roof light

Existing Section 1:100

Galkoff Extension Design Options





Existing South Elevation 1:100