

3.1 SITE ANALYSIS THE Q (Q13)

Q13 built circa 1939 Use: chemical lab

The following paragraphs have been extracted from the Built Heritage Statement (site wide) prepared by CGMS.

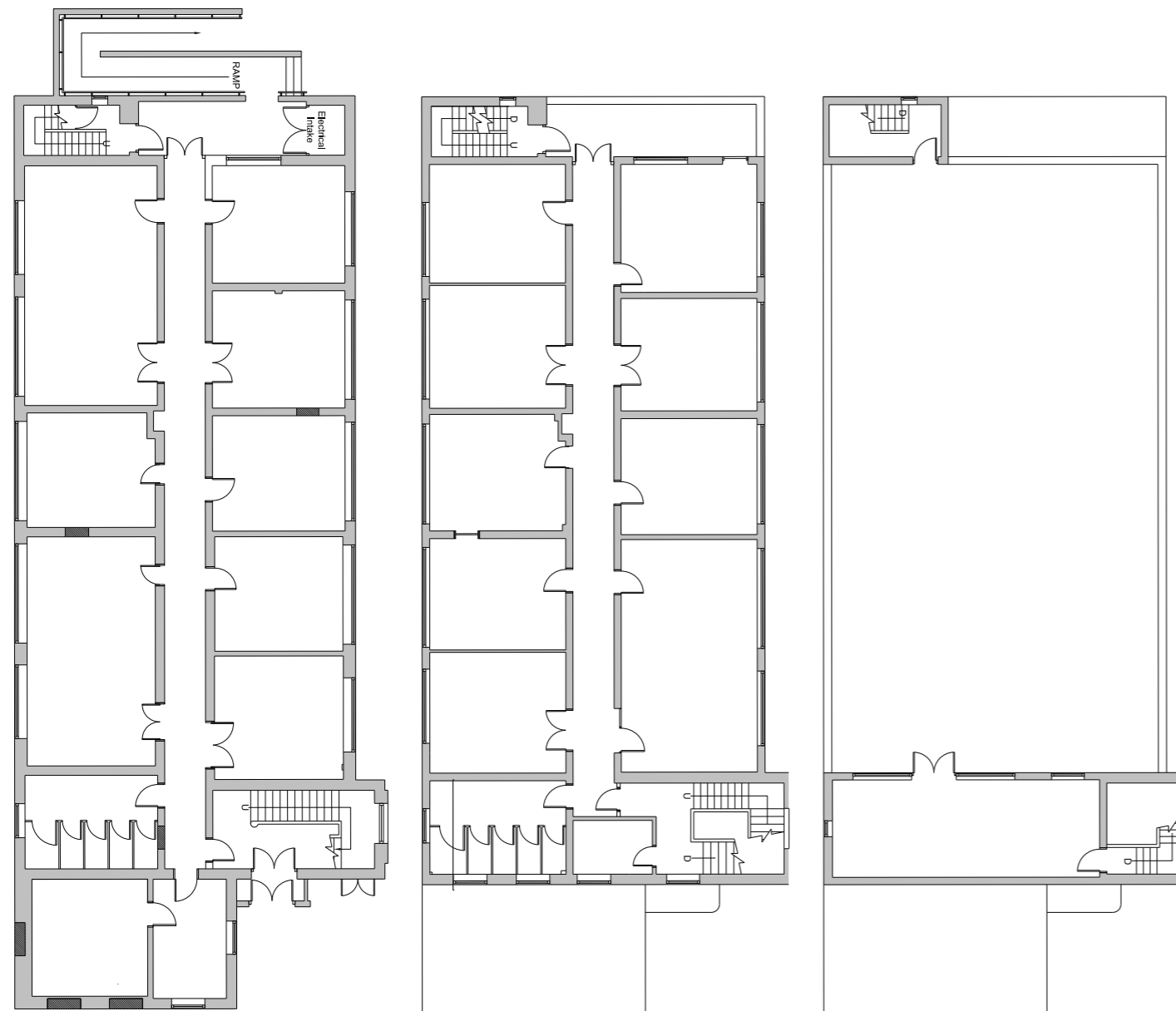
DESCRIPTION

Q13 was built circa 1939 and was originally designed as a chemical laboratory, serving the original phase of the Armaments Research Department (ARD) and was later used as the headquarters stores. It is a two-storey building with 1930s detailing and horizontal glazing bands. The building has additional massing to the southernmost bay which contains an impressive stairwell and is lit by a full height window. The building is entered from this southern bay via a porch and well finished oak doors, above these the first-floor window surround is emphasised by horizontally projecting bricks. Behind this massing the main body of the building has a flat roof with metal railings around it, giving the impression of a ship's deck.

The building is located within the Fort Halstead complex, surrounded by hundreds of other buildings and structures related to its function as a military research site; these structures have a predominantly utilitarian character and range from subterranean to three storeys in height, with the tallest building reaching 22 metres above ground level. The building's immediate setting is formed by the Q Area, which incorporates closely packed buildings ranging from the 1930s to the late twentieth century in date, and was surrounded by a security fence during the High

Explosive Research (HER) phase. Crow Road runs to the south of this area and separates it from the Fort. Areas of hard standing surround the building on all sides but are interspersed with grassed areas planted with mature trees. Intervisibility with the wider surroundings is restricted by the density of surrounding built form.

Q13 is a prominent building within the Q area, and has architectural value derived from its 1930s design and detailing, though this has been slightly reduced due to the recent replacement of the original Crittall style windows with PVCu. The building holds historic value as a relatively well-preserved example of the buildings constructed for the ARD and its association with the work they undertook into the research and development of armaments.



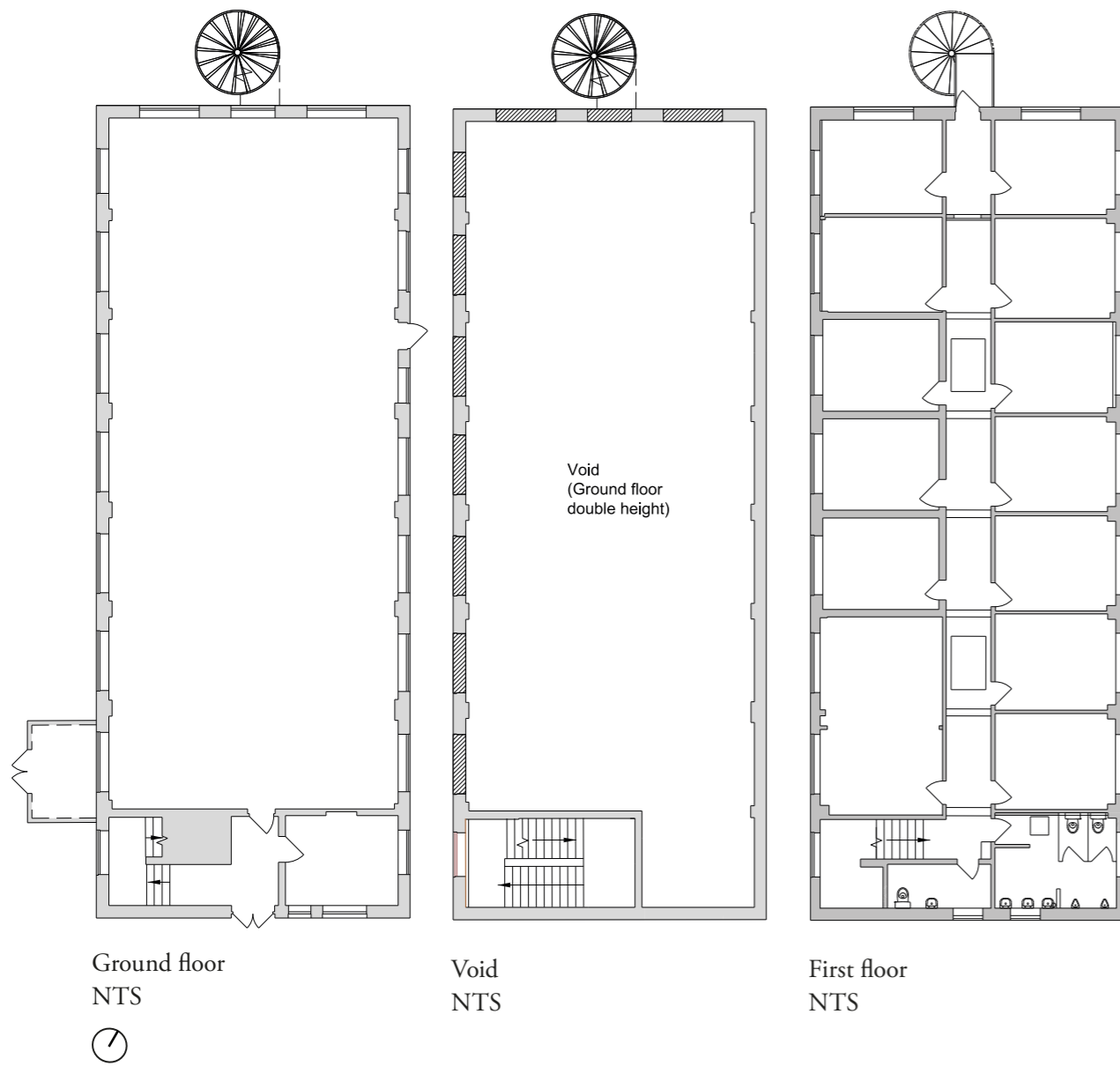
Ground floor
NTS

First floor
NTS

Second floor
NTS



3.1 SITE ANALYSIS THE PENNEY (Q14)



First floor room overlooking Q13



Ground floor / suspended ceiling / blocked window openings



Ground floor / suspended ceiling / blocked window openings
on west elevation

Q14 designed in 1949 and built by 1952 Use: workshop and offices

INTRODUCTION

Building Q14 is Grade II listed (List Entry Number: 1396578). The following paragraphs have been extracted from the Q14 Built Heritage Statement prepared by CGMS.

DESCRIPTION

Q14 is a two-storey, flat concrete roofed building with a rectangular platform. It is built in red brick laid in stretcher bond encasing a steel frame structure. The main entrance to the building was originally to the south elevation through glazed double doors. A further pedestrian entrance is located on the east elevation, and there is evidence of a former doorway at the north east end of the building which has now been blocked (neither of these doorways are original). A former, large equipment entrance to the south west has been blocked but retains its original exterior wall light. This door head is suggestive of the former presence of a roller shutter door, now partly obscured by a later plant room. The form of the original fenestration to the west and north elevations remains legible as double-height windows to the ground floor to light the former workshop inside. These large openings are now bricked up with smaller ground-floor windows inserted. Ground floor windows on the east elevation are later insertions. All first-floor windows are PVCu replacements although re-use original window openings. There is a late twentieth-century fire escape staircase to the north elevation.

The ground floor comprises a double-height workshop space which has a later inserted ceiling. A small kitchen area and the principal, dog-leg staircase occupy the southern-most bay of the building. An English Heritage internal inspection in May 2008 confirmed steel framing in the ceiling void of the workshop area although it is unknown whether this was structural or a gantry for the travelling crane which is known to have been here originally. Steel pillars are located between each window bay but are covered by boxing out. The walls are painted brick with a simple skirting. The floor is in a poor state of repair and has been partially covered with carpet tiles.

The first floor has a central spine corridor lit by two roof lights. Regularly sized rooms are located to the east and west sides. Dividing walls between offices are built of solid painted brick some with boxing out in front. Two door architraves have evidence of former strong room type doors.

The building is located within the Fort Halstead complex, surrounded by hundreds of other buildings and structures related to its function as a former mobilisation centre and military research site. The listed building's immediate setting is formed by the Q enclave, incorporating several other brick built structures. Crow Drive runs to the south of this enclave and separates the area from the Fort Halstead Scheduled Monument. Areas of hard standing surround the building on all sides but are interspersed with grassed areas planted with mature trees.

HISTORIC INTEREST

Q14 was designed in 1949 and had been built by 1952. It was originally known as Building 27 and was used to assemble of the atomic bomb prototype. It has undergone a series of alterations during the late twentieth century, including additional entrances, an external fire escape staircase, additional ground floor windows to the east elevation, alteration of internal partitions and insertion of a suspended ceiling.

Q14 is of considerable, national historic interest through its association with William Penney Chief Superintendent of Armaments Research and a collection of scientists who worked on Britain's atomic bomb development programme. The association is celebrated by a memorial plaque.

It also holds historic interest as the only building nationally where the prototype atomic bomb was put together and was thus instrumental in the detonation of Britain's first atomic bomb in 1952.

ARCHITECTURAL INTEREST

The building's unique architectural interest is derived from how its form and design reflect its function as a purpose-built workshop for Britain's atomic bomb development programme. This value is principally manifest in the double height ground floor workshop with gantry for a travelling crane, as well as evidence of former strong rooms on the first floor.

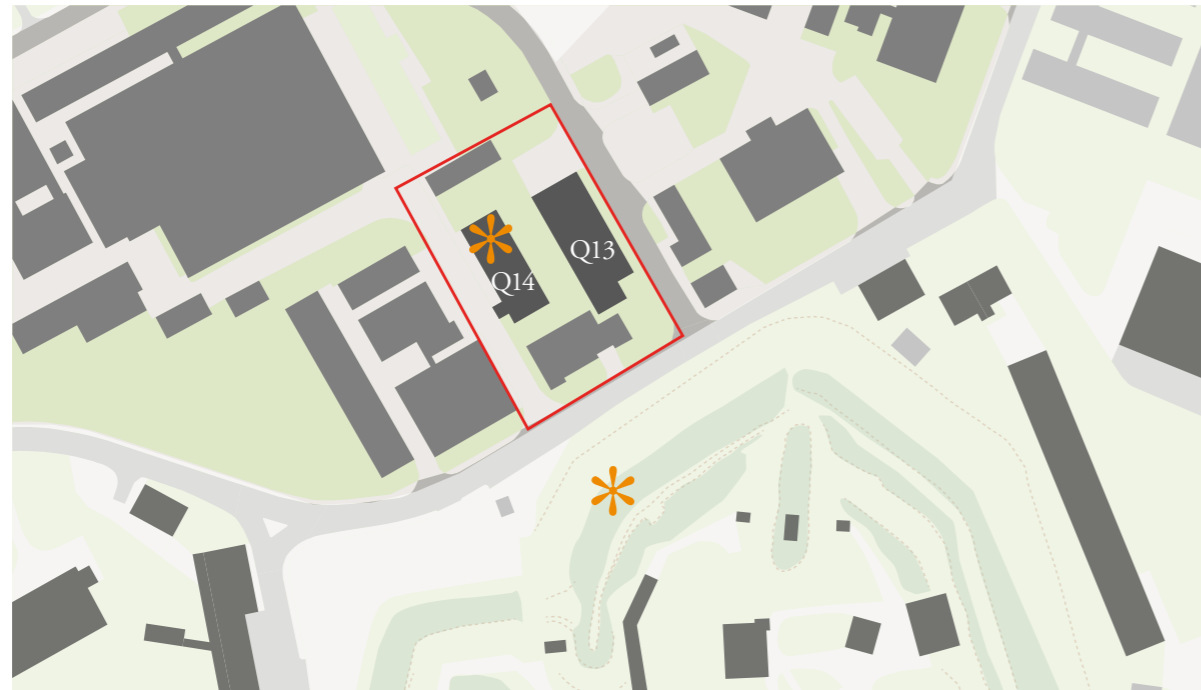
The building's form and design also express the secrecy surrounding the High Explosive Research (HER) programme and the work that was being carried out inside. The HER secure boundary was drawn to the east of Q14 and therefore the building's east elevation at ground floor level was blind on the public-facing side. Double height windows were placed on the north and west sides probably to maximise daylight for the work being carried out inside, though these were glazed with obscured glass to the lower half and had internal metal grilles.

The building's functional architecture reflects both the urgency with which the HER needed the new purpose-built buildings, and the rise of modernism, which championed the idea that form should follow function. The building's rectangular shape, lack of ornamentation, use of metal frame and concrete flat roof are illustrative of this period of military architecture.

SUMMARY

In terms of a significance hierarchy, those elements of the building and its setting that date to the HER phase are of the highest significance relative to the building. Most of the more recent alterations and additions, such as blocking of original windows and doors, insertion of new windows on the east elevation, installation of suspended ceilings, PVCu windows and fire escape staircase are not of special interest and are considered to have had a detrimental impact on the significance of the asset.

3.2 CONSTRAINTS & OPPORTUNITIES



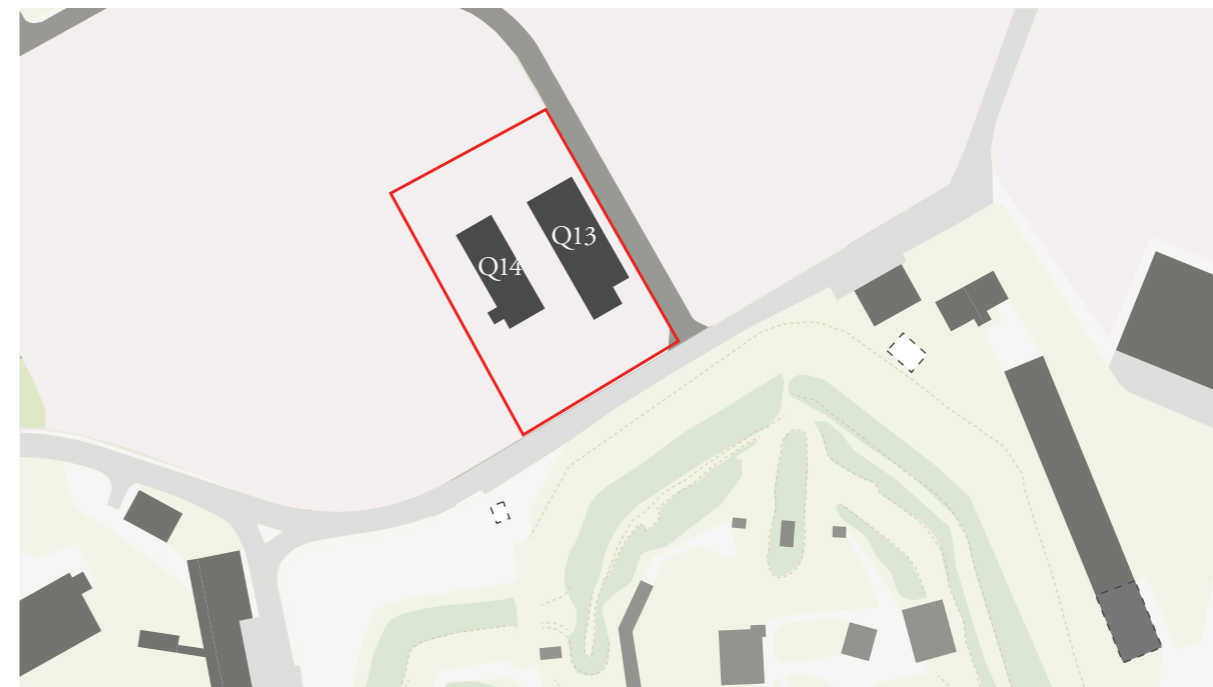
- Existing site: Industrial buildings and sheds/hard standing.
- ✱ Designated assets: The Fort (Scheduled Monument) and Grade II Listed Penney (Q14).



- Removal of existing buildings including Q12. The removal of Q12 reveals the original entrance of Q14. It also reveals the façades of Q13-14 viewed from the Fort.



- Retention of key existing buildings around the Fort to ensure the setting of the Fort is protected and existing buildings remain the nucleus of the development.



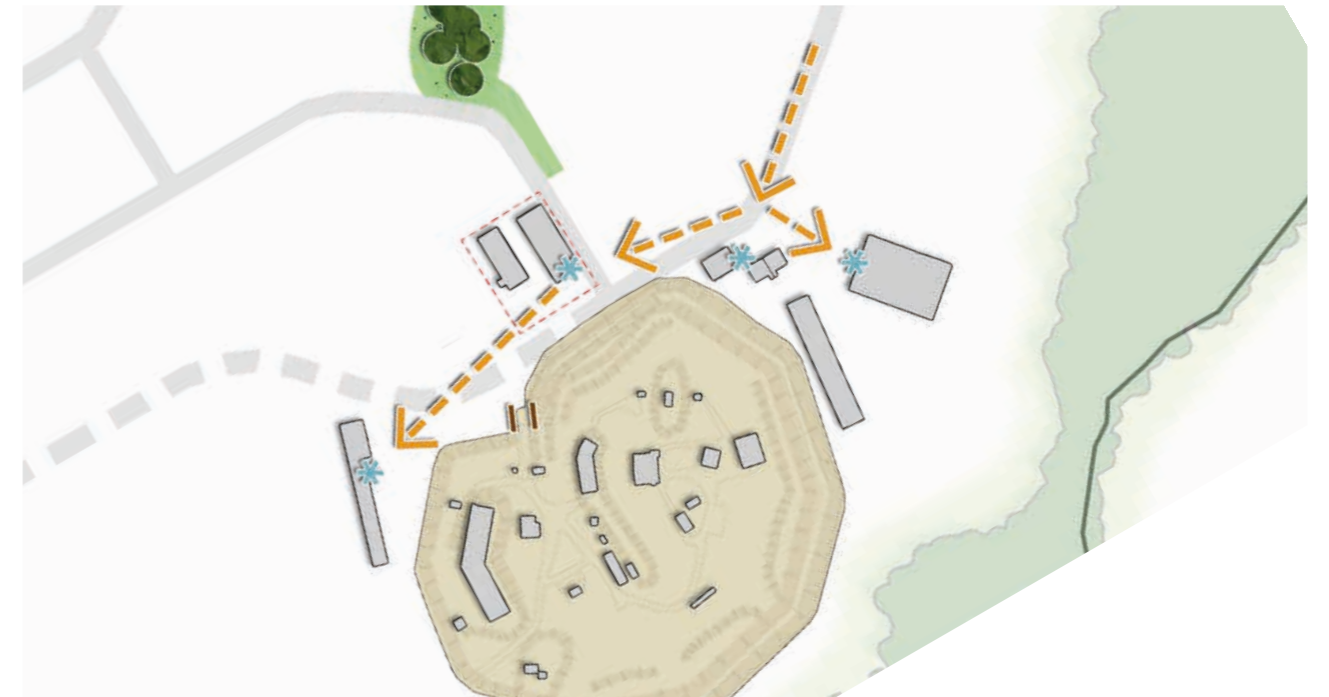
- Opportunity for new development which respects the existing buildings, the Fort and its historic setting.

1



* Designated assets:
The Fort (Scheduled Monument) and the Grade II Listed Penney building (Q14) alongside the retention of key existing buildings.

2



*Sequence of vistas of existing buildings create a historic narrative along Crow Drive.

3



New public spaces create a setting for the Grade II Listed Penney building (Q14) and an interface with the Fort and the Village Green.

4



Opportunity to frame new public spaces with built form and create key features.



3.4 PROPOSED LAYOUT

The restoration of Penney (Q14) and The Q (Q13) will provide flexible working accommodation.

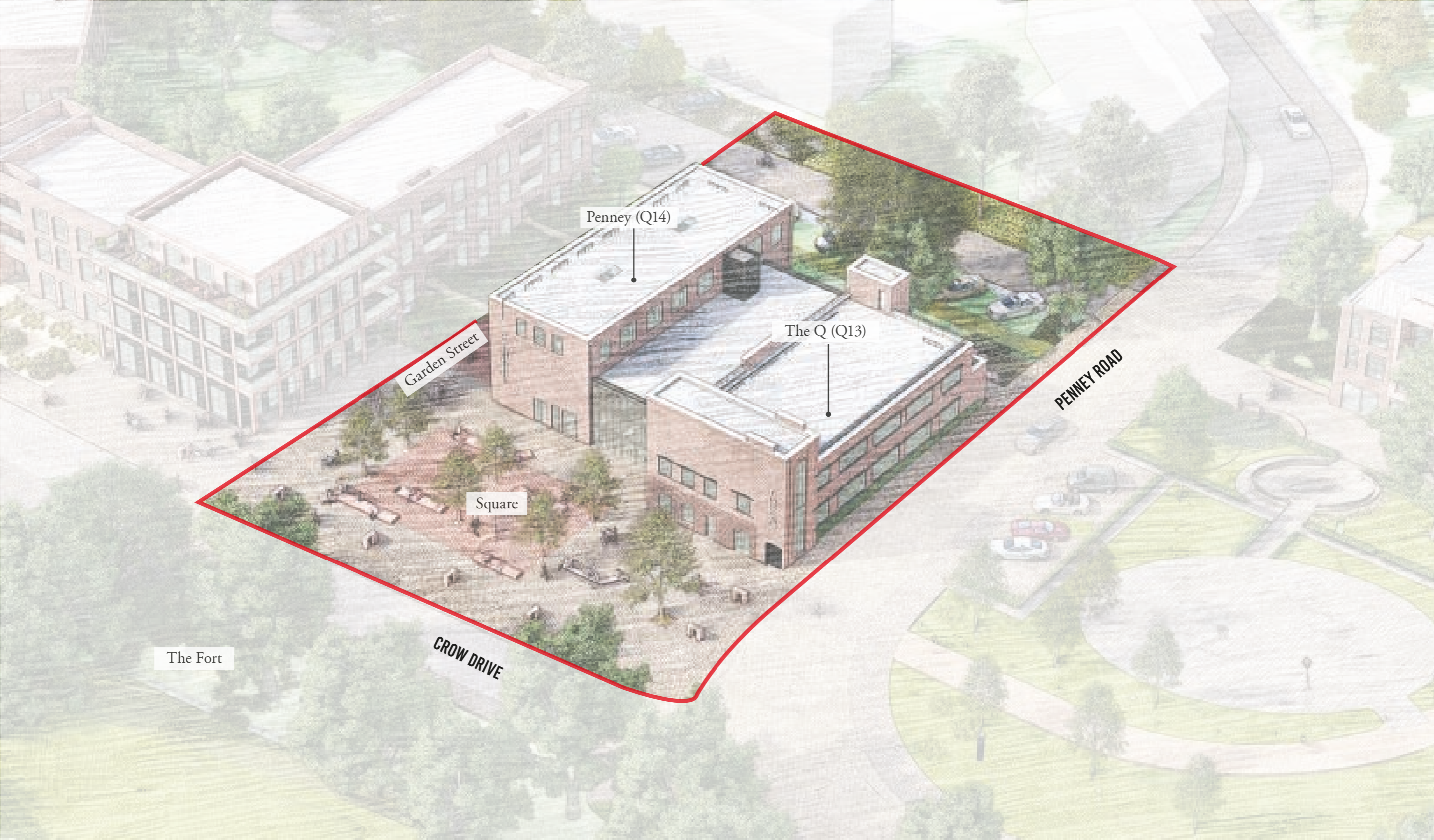
The proposed new atrium will bring the two buildings together as a modern hub for employment.

The buildings will be set on a new square which provides an important interface with the Fort.



KEY

- Detailed planning application boundary
- 1 The Fort
- 2 Penney (Q14) (Grade II* Listed)
- 3 The Q (Q13)
- 4 Proposed Atrium
- 5 The Square
- 6 Garden Street
- 7 Parking
- 8 Cycle / Bin storage



3.6 PROPOSED PLANS

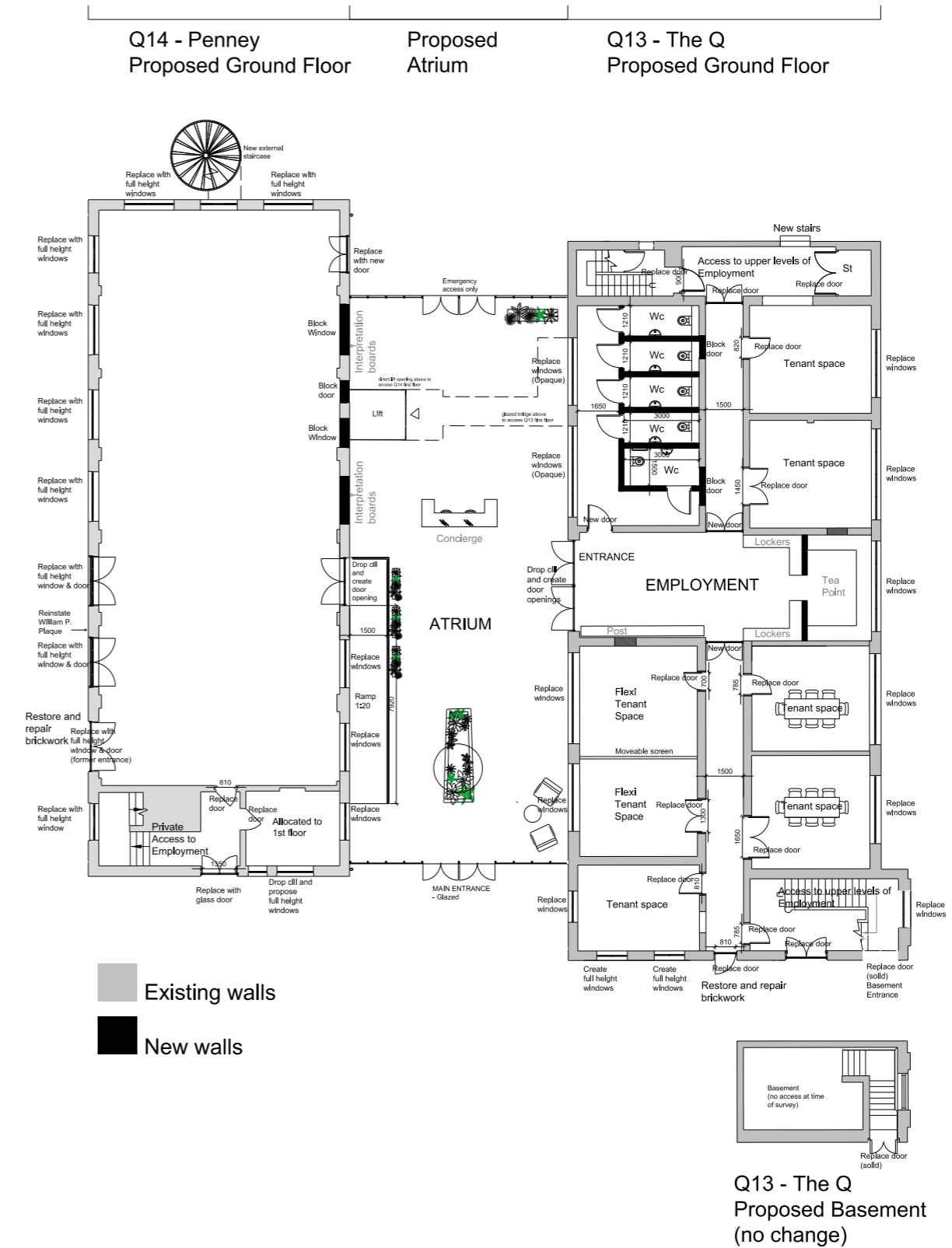
PENNEY (Q14) – LISTED BUILDING CONSENT

THE Q (Q13)

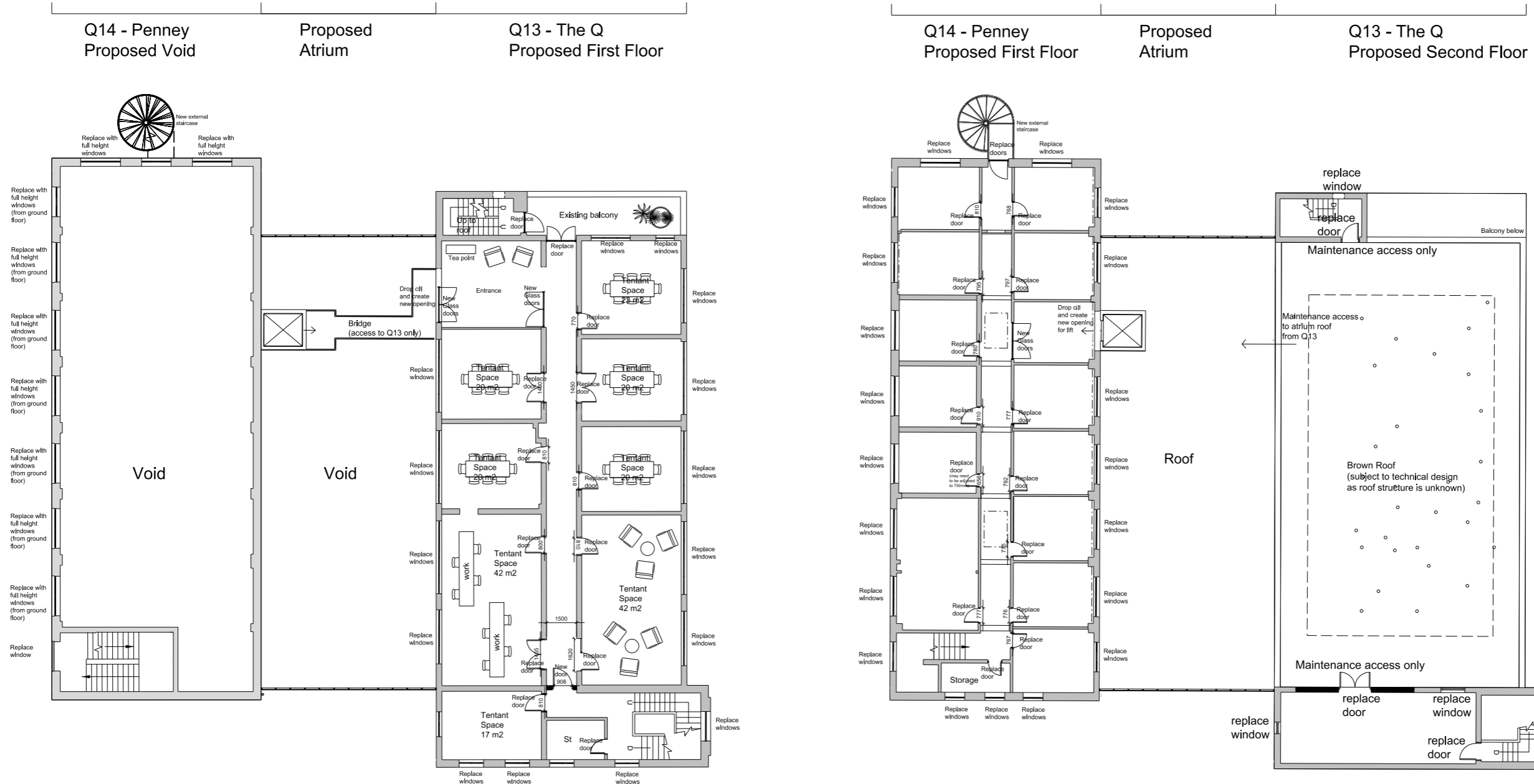


Plan arrangement key:

- Q14 First Floor - Q13 Second Floor
- Q14 Void - Q13 First Floor
- Q14 Ground Floor - Q13 Ground Floor



3.6 PROPOSED PLANS PENNEY (Q14) – LISTED BUILDING CONSENT THE Q (Q13)



3.7 PROPOSED ELEVATIONS PENNEY (Q14) & THE Q (Q13)

GENERAL NOTES

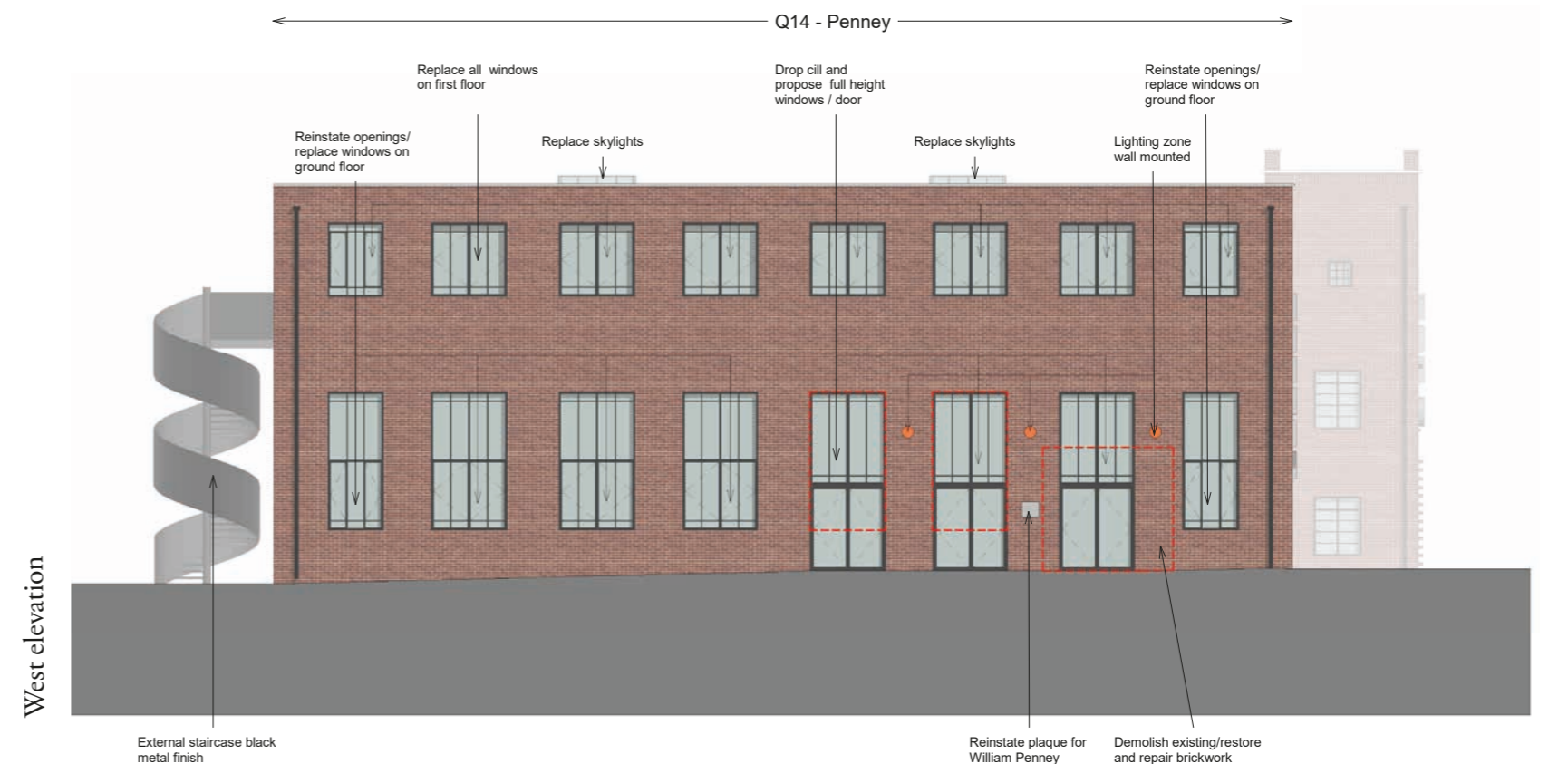
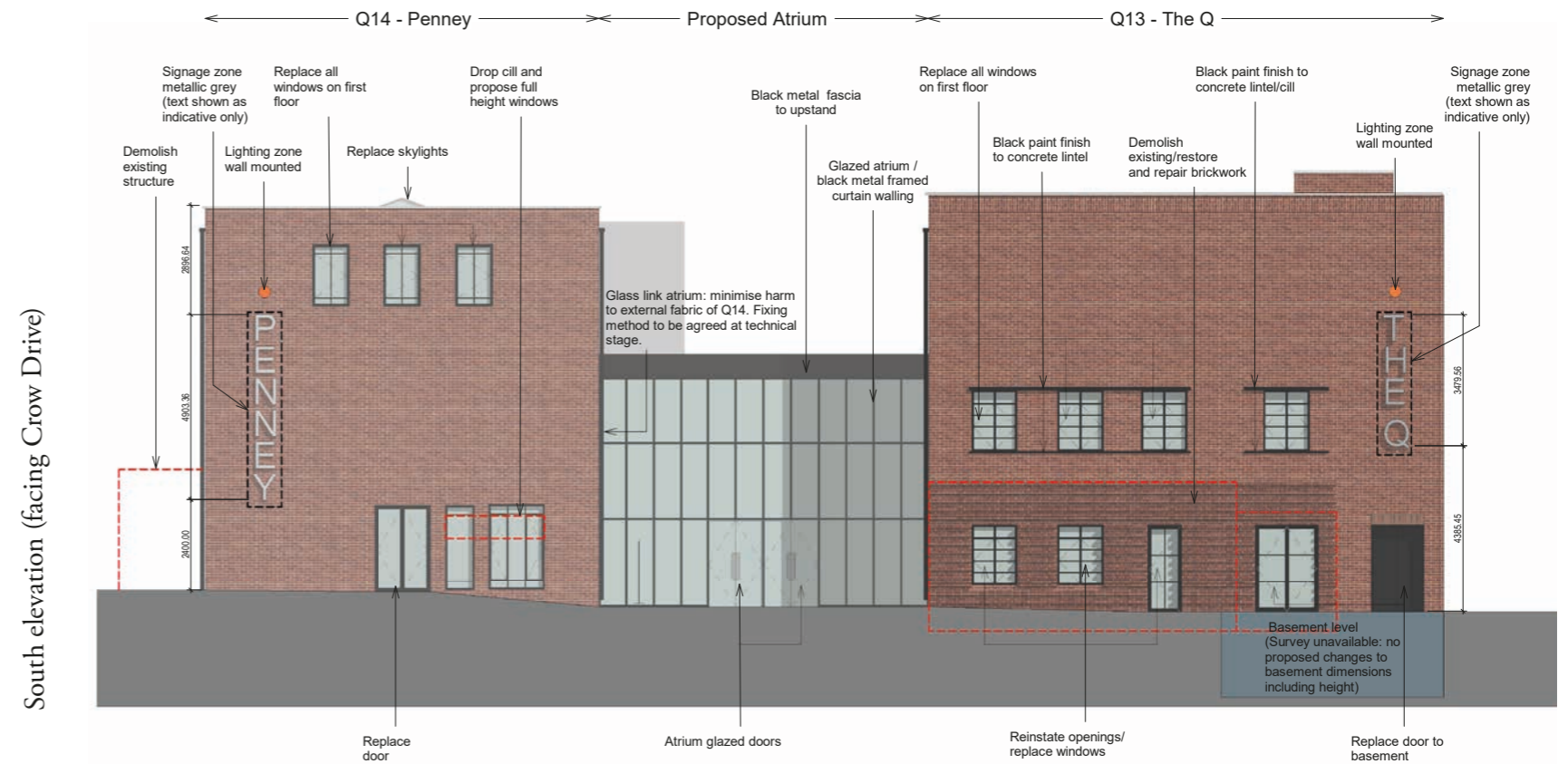
- The original window design from the 1949 plans for the Penney (Q14) and plans from 1939 for The Q (Q13) have been re-instated.
- Black metal Crittall style windows to replace all windows (a T-profile is mandatory).
- The condition of the walls will need to be investigated on site during the opening up works. There are small areas of demolition that could be used to source reclaimed bricks for making good the scarred elevations.
- The making good of scarred brickwork assumes specialist bricklayers. Scarring to be minimal by use of contemporary brick detailing.

NOTES FOR PENNEY (Q14)

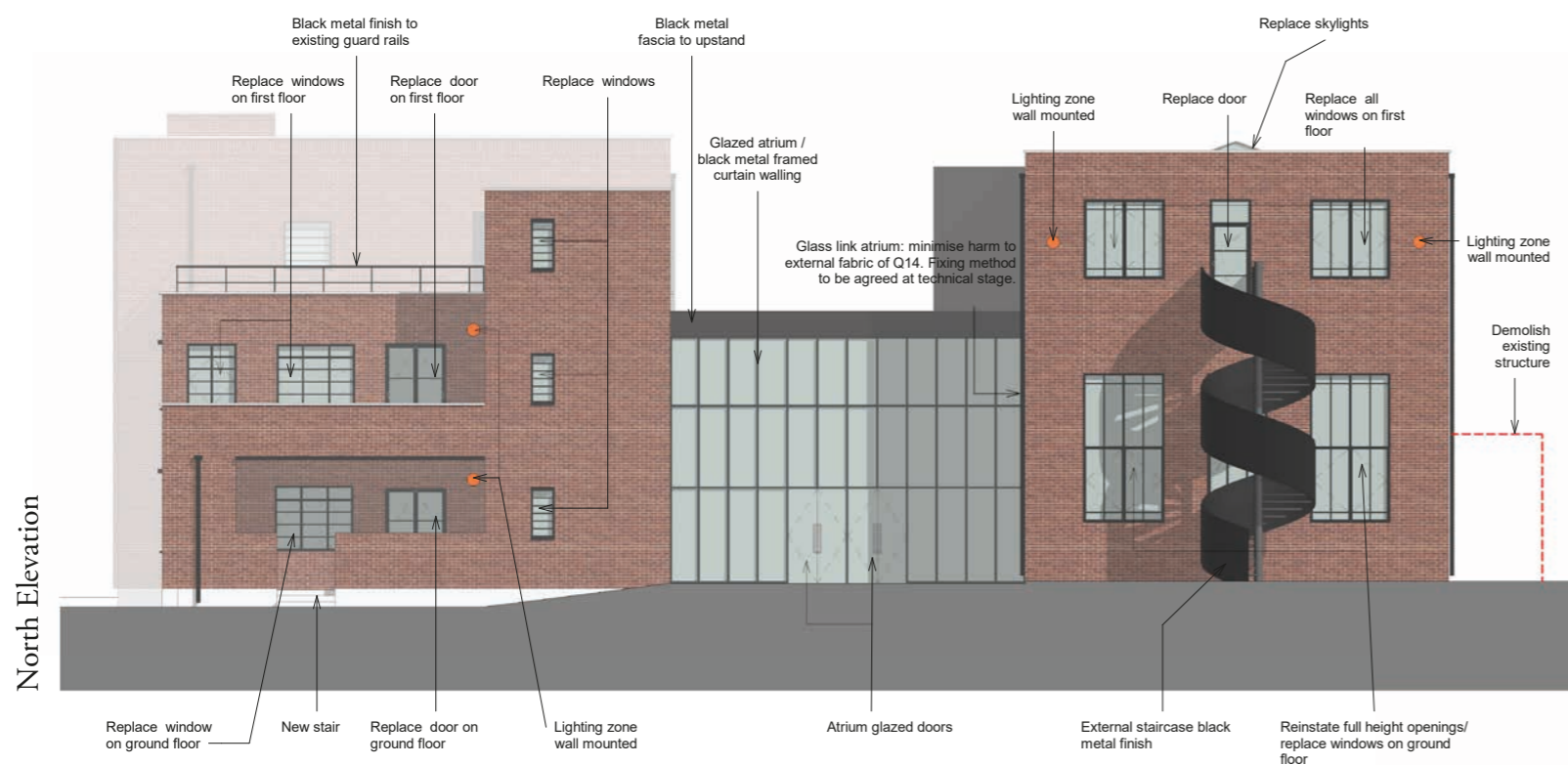
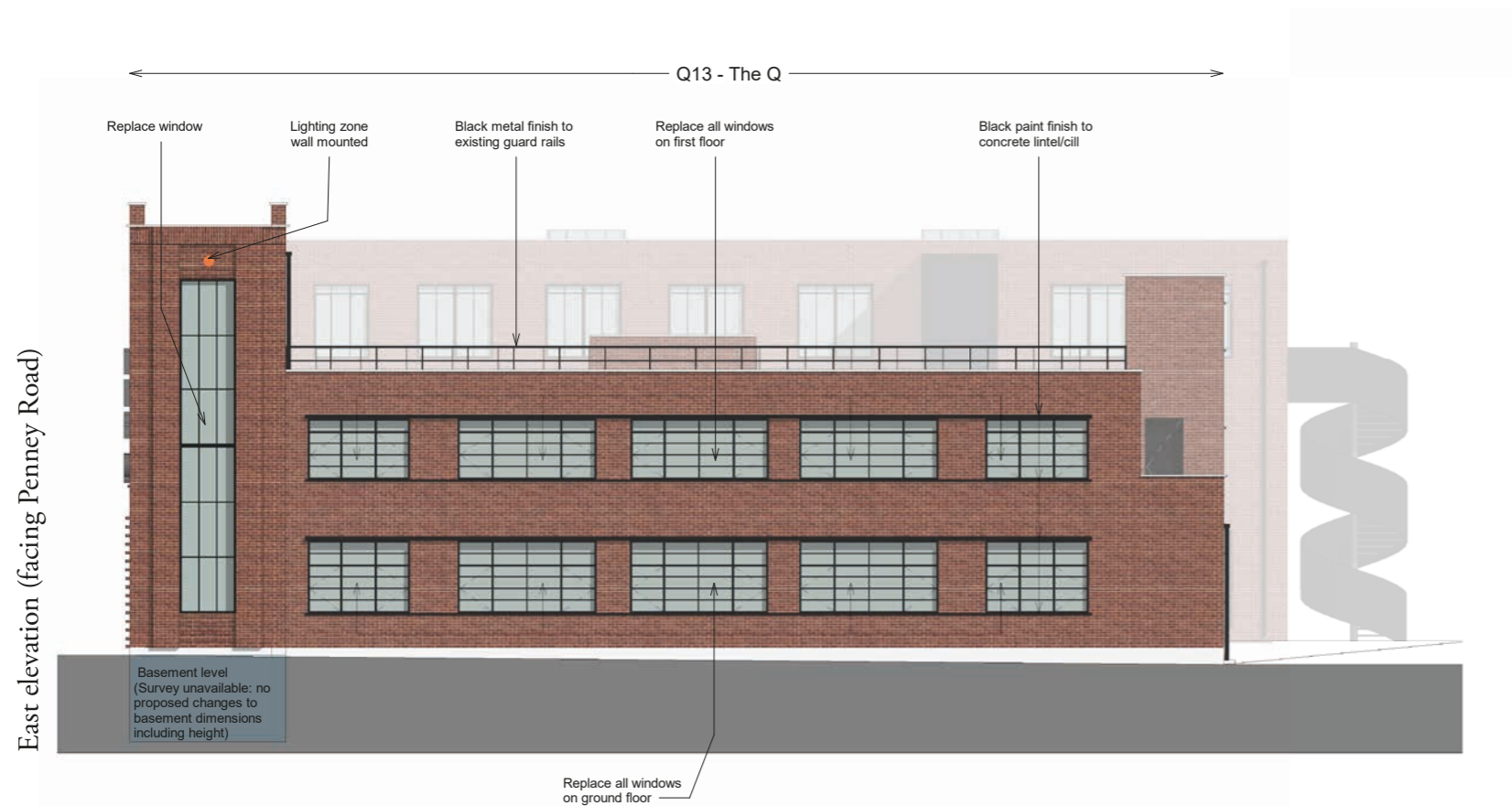
1. Re-open former entrances
2. Remove later additions (plant room)
3. Reinstall original plaque unveiled by William Penney
4. Reinstall proportions of double height window openings

NOTES FOR THE Q (Q13)

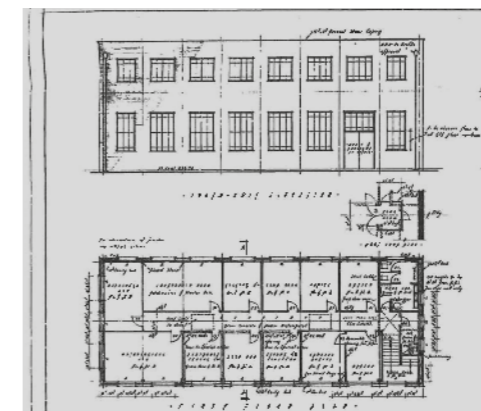
5. Remove one-storey element to front elevation
6. Restore scarring with contemporary brick detailing



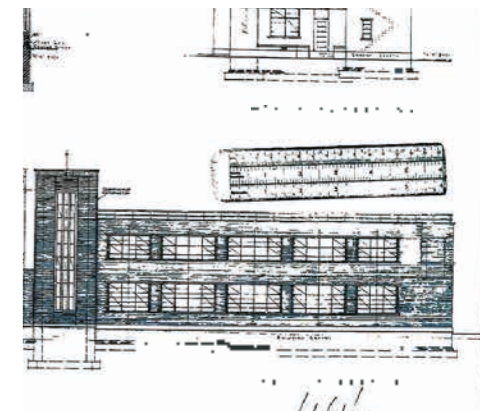
3.7 PROPOSED ELEVATIONS PENNEY (Q14) & THE Q (Q13)



REINSTATE:



Q14 Window plans – 1949



Q13 Window plans – 1939



Crittall style windows – T-bar profile

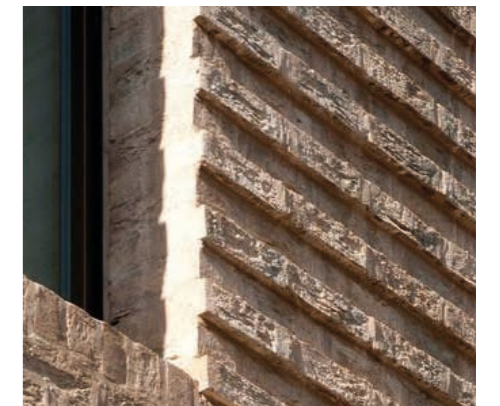


Plaque to be installed on west elevation by the entrance doors

NEW ELEMENTS:

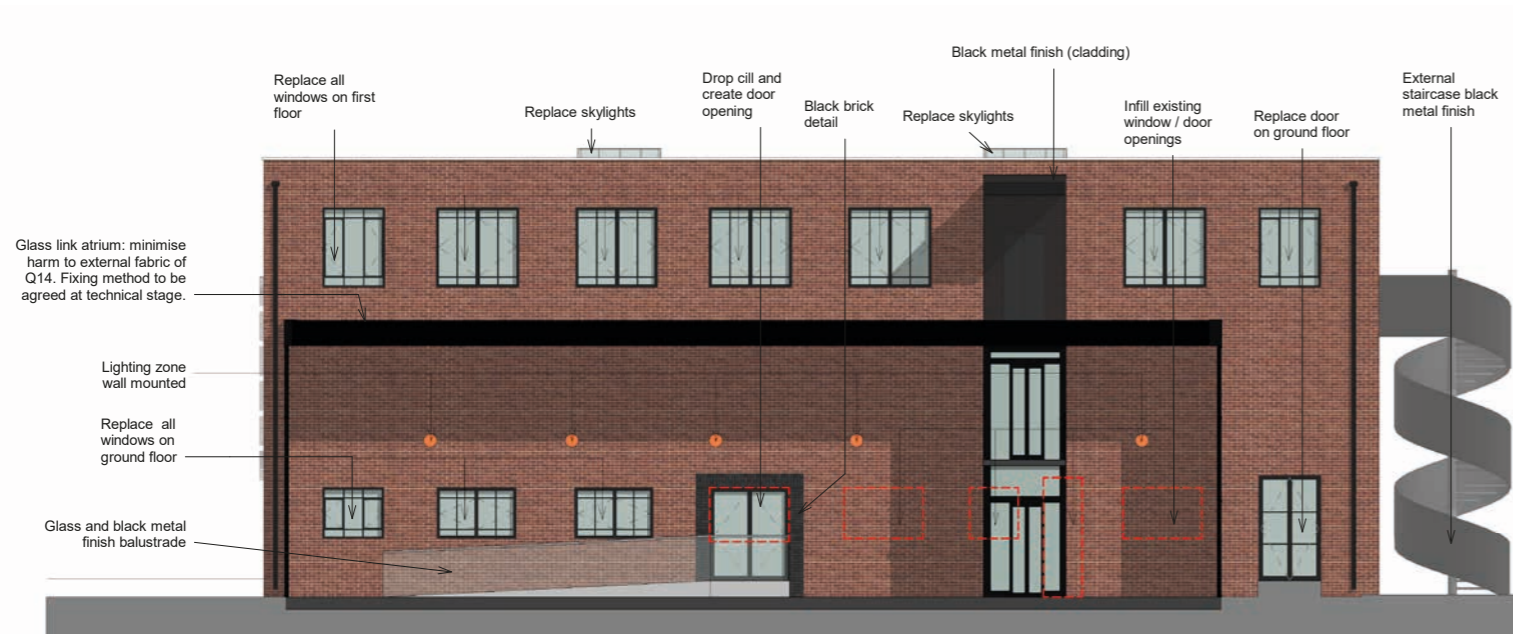


External staircase

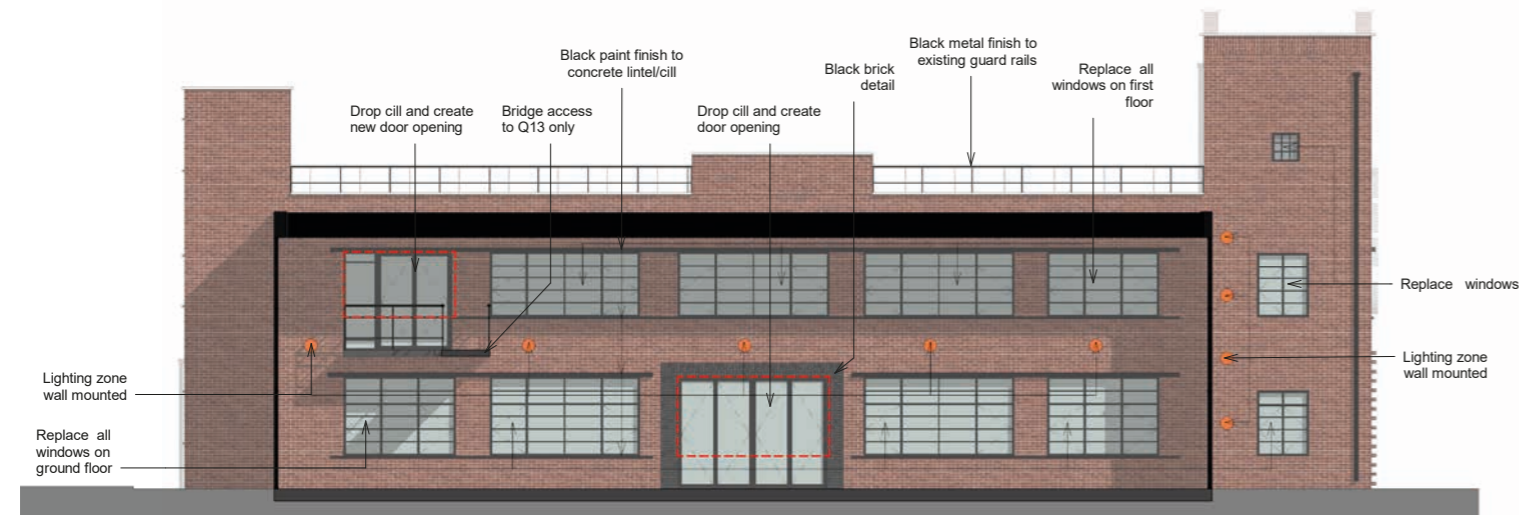


Contemporary brick detailing

3.8 PROPOSED SECTIONS / ATRIUM PENNEY (Q14) & THE Q (Q13)



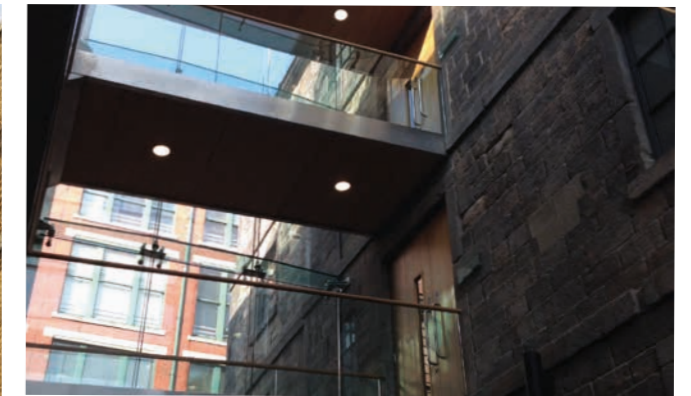
Section – East elevation of Q14



Section – West elevation of Q13



Lift to be glazed and of a contemporary design



Bridge link between Q13/14



Minimal fixings to existing buildings



Glass lift abutting existing building



Simple, utilitarian glazed link

3.8 PROPOSED SECTIONS / ATRIUM PENNEY (Q14) & THE Q (Q13)

The Atrium

FUNCTION

A new glazed atrium will bring together the Penney (Q14) and The Q (Q13) creating a joint space for the employment uses designated for both buildings.

The atrium connects the two buildings with minimal impact to the existing building fabric. New openings at ground level on both buildings will support horizontal movement whilst a contemporary lift abutting the Penney (Q14) will provide vertical movement to the upper floors. A new bridge will connect the lift and The Q (Q13) at upper level.

THE DESIGN

The atrium design is simple and utilitarian reflecting the architecture of the existing buildings. The new solid roof form and glazed walls were chosen to provide daylight and contrast to the existing buildings making it clear that the atrium is a contemporary addition.

FIXING METHOD

The fixing method (to be approved at technical stage) should ensure minimal impact to the building fabric of the Penney (Q14). There are several strategies that can be explored as follows:

- The use of The Q (Q13) as the primary source of support;
- Minimal mechanical fixings to the facade of the Penney (Q14);
- Exploration of sealants that could prove reversible;
- Secondary structures within the atrium to support atrium roof.

KEY

- | | |
|---|--|
| 1 Brown-red brick to match existing* | 7 Black metal finish |
| 2 Black brick (soldier course) | 8 Black paint finish: lintels/cills |
| 3 Black brick (stretcher course) | 9 Signage metallic grey* |
| 4 Black Crittall style windows (mandatory T-shape glazing bars) | 10 Lighting: Wall mounted grey metallic RAL 9007 |
| 5 Black Crittall style doors (mandatory T-shape glazing bars) | 11 Glazed elements |
| 6 Black curtain walling for Atrium | |
- *elements don't appear in this view



Section through the Atrium

3.9 PROPOSED STREET SCENE PENNEY (Q14) & THE Q (Q13)



3.9 PROPOSED STREET SCENE PENNEY (Q14) & THE Q (Q13)

Street Elevation South



3.10 ILLUSTRATIVE VIEW PENNEY (Q14) & THE Q (Q13)



3.10 ILLUSTRATIVE VIEW PENNEY (Q14) & THE Q (Q13)



3.11 Q14 BUILT HERITAGE STATEMENT

This Built Heritage Statement has been prepared in order to assess the potential impact on the historic built environment arising from the proposed alterations to building Q14 (Extract from Built Heritage Statement below)

| ELEMENT OF PROPOSAL | IMPACT OF SIGNIFICANCE OF Q14 | MITIGATION |
|--|--|---|
| Reinstate full height window openings on west and north elevations | HIGHLY BENEFICIAL | n/a |
| Reinstate Crittall style windows within historic openings based on original elevation drawings. Double glazed with a 'T' shaped glazing bars | HIGHLY BENEFICIAL | n/a |
| Demolish later plant room and re-establish former entrance on west elevation | HIGHLY BENEFICIAL | n/a |
| Insert new full-height window openings on south elevation | This elevation was originally designed to be devoid of windows at ground floor level. The current windows are secondary insertions and the change in brickwork under the windows shows that there has been an entrance here at some point. Given the high level of alteration to the fabric here, it is considered that the proposals would cause a NEGLIGIBLE LEVEL OF LESS THAN SUBSTANTIAL HARM . | Careful consideration of detail. Use of Crittall style windows to match style proposed elsewhere on the building. |
| Re-instatement of doorway on north-east corner | Evidence on the elevation clearly shows that an entrance has been positioned here previously but since infilled. It is proposed to reinstate the entrance but widen the doorway to allow for double doors to match those proposed elsewhere. This will result in the localised loss of fabric on either side of the previous opening. In order to reduce the harm, the doorway is proposed here given that this area has already undergone change. NEGLIGIBLE LESS THAN SUBSTANTIAL HARM . | n/a |
| Remove PCVu windows and doors and block openings on east elevation | This elevation was originally intended to be blind and all of these openings are later insertions. MODERATELY BENEFICIAL | n/a |
| Replacement of PVCu windows on east elevation with Crittall style windows, double glazed with a 'T' shaped glazing bars | MODERATELY BENEFICIAL | n/a |
| Replacement of fire escape staircase | NEUTRAL | n/a |
| Replacement of two existing windows with entrances on west elevation | This would result in localised loss of historic fabric below the windows and would further erode the historic circulation throughout the building which was devised to manage entrances and maintain secrecy. In order for the building to adequately address the Village Square and provide separate access to the rear of the building these doors are required. In order to mitigate this harm, the doors have been designed to sit harmoniously and discreetly next to the Crittall style windows. LOW LEVEL OF LESS THAN SUBSTANTIAL HARM | Careful consideration of detail. Use of Crittall style. |
| New entrance into atrium | This would result in localised loss of fabric below the window and would further erode the historic circulation/controlled visibility throughout the building which was devised to manage entrances and maintain secrecy. In order to minimise loss of fabric the opening has been located within an existing window and the cill dropped. LOW LEVEL OF LESS THAN SUBSTANTIAL HARM . | In order to minimise loss of fabric the opening has been located within an existing window and the cill dropped. |
| Inclusion of permanent interpretation boards telling the history of Q14 and the Q area | MODERATELY BENEFICIAL | n/a |
| Addition of glass link atrium | The design of the link building, set back, lower in height than Q13 and Q14 and in a different material, will allow it to be read as a subservient and modern addition linking two formerly separate buildings. NEUTRAL IMPACT on significance. | n/a |
| Removal of suspended ceiling in ground floor space to reinstate original double height proportions | HIGHLY BENEFICIAL | n/a |
| Insertion of lift within atrium with access from first floor of Q14 | Mid- late twentieth century plans show that it was previously proposed to add an external lift to the east elevation however there is a lack of fabric evidence to suggest that these plans were ever carried out. The insertion of a lift will allow greater access to the first-floor rooms. In order to minimise harm caused by the insertion of a lift, it has been located outside of the building within the atrium to avoid loss of historic fabric internally. Furthermore, the entrance will be formed by an existing window opening which will have a dropped cill. Whilst this will result in the localised loss of fabric and partial concealment of the external elevation, it will increase access to the building which is considered beneficial. On balance it is considered that the lift would have a MINOR BENEFICIAL impact through increasing access to the asset. | Carefully positioned in order to minimise loss of historic fabric and disruption of internal spaces within Q14. |
| Removal of air conditioning units to external elevations | MODERATELY BENEFICIAL | n/a |
| Re-installation of plaque | NEUTRAL IMPACT | n/a |



3.12 LANDSCAPE STRATEGY

The landscape design within the detailed planning application includes 2 of the 4 main green spaces; the Square and the Garden Street.

THE SQUARE

The square is designed as a simple and elegant paved space that connects the refurbished buildings with the new buildings and creates an appropriate setting to compliment the adjacent historic fort. The square is seen as a new public space at the heart of the development and includes a grid of semi mature trees with timber benches beneath, providing a strong focus and feature to the square.

Low edge features/bollards are proposed to define the edge of the square and to prevent vehicles accessing the space. A semi-mature feature tree is proposed in the south eastern corner to contain the edge and act as a visual feature terminating views along the approach roads.

GARDEN STREET

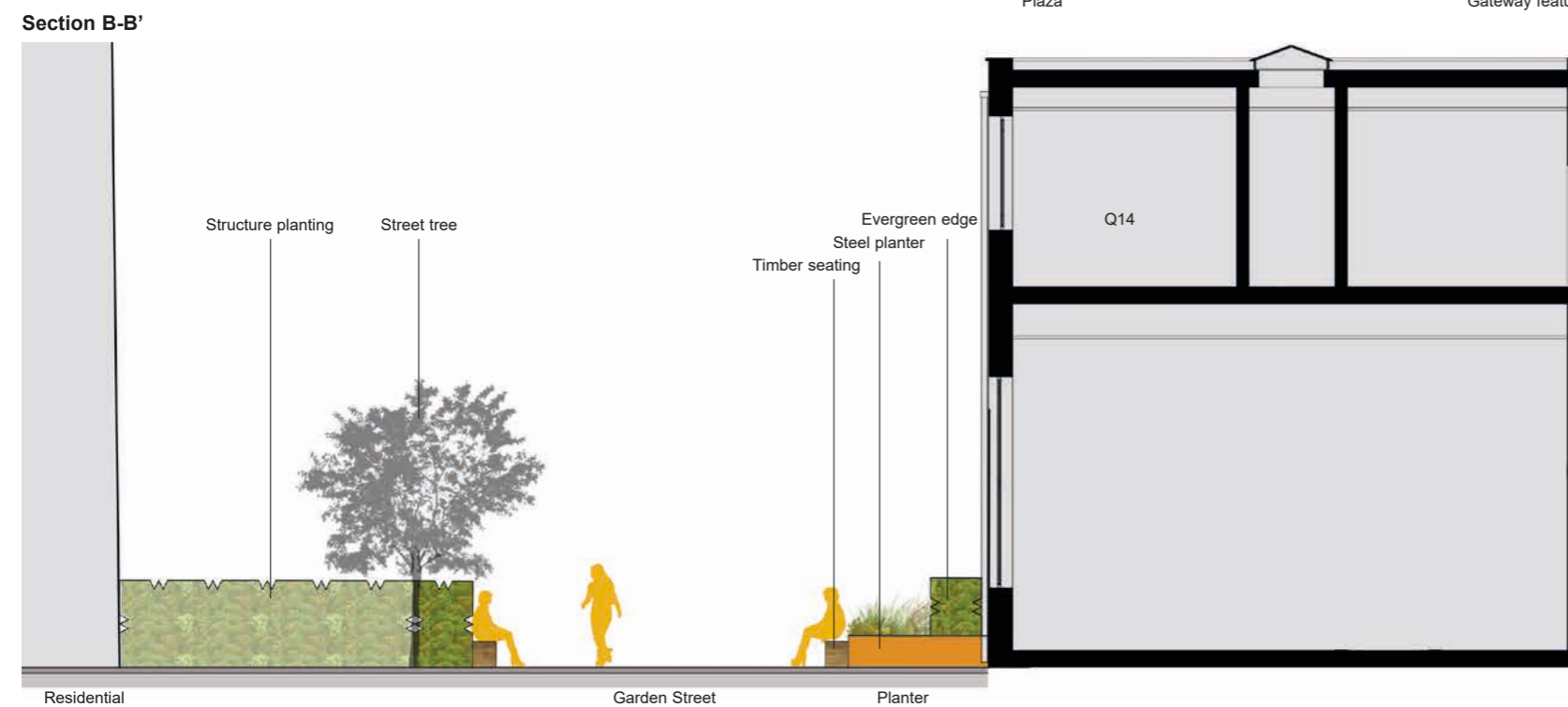
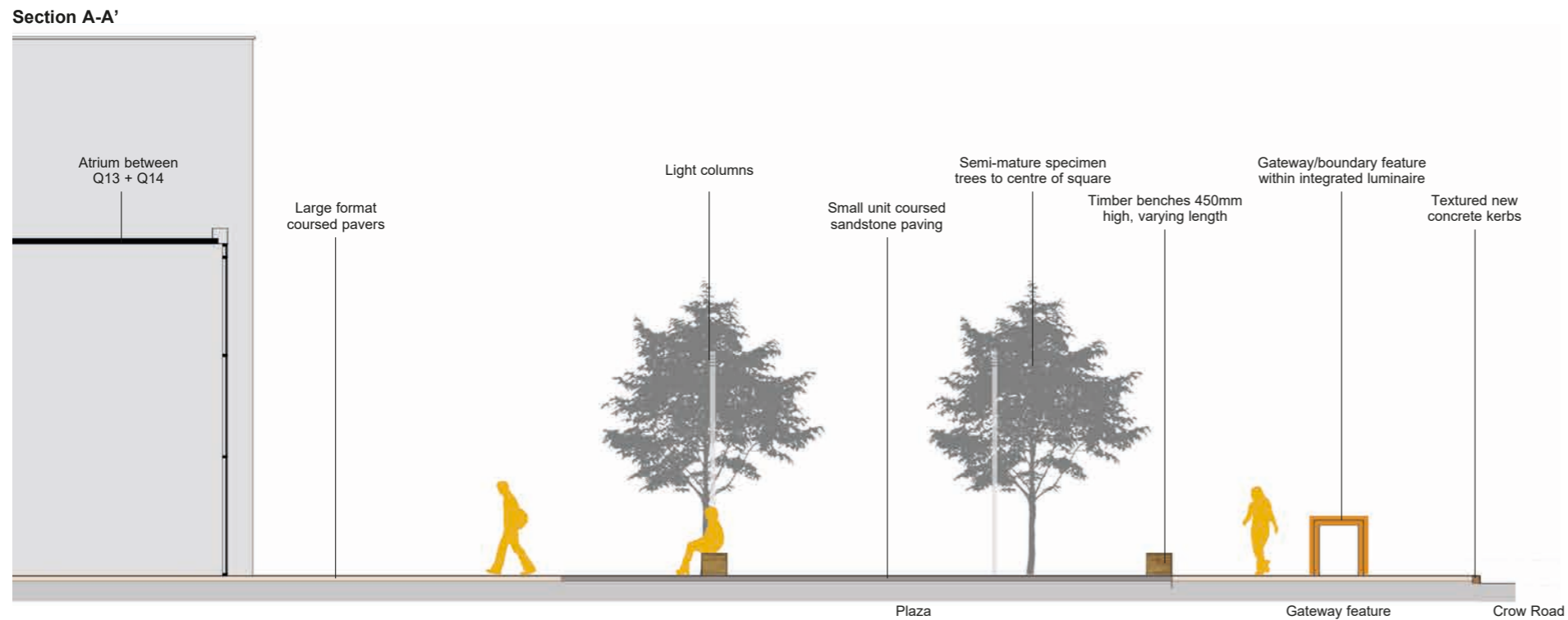
This street connects the square to the parking area to the north and to future development phases beyond. The street is intended to have a natural garden character framed by linear evergreen hedges and naturalist perennial planting borders. Street trees are proposed along one side to strengthen the link and filter views to the residential units. Timber benches are proposed along the edge of the street to create opportunities for sitting/socialising amongst the rich planting. Existing trees are retained in the grass verge to the north.

KEY

- 1 The Fort
- 2 Penney (Q14) (Grade II* Listed)
- 3 The Q (Q13)
- 4 Proposed Atrium
- 5 The Square
- 6 Garden Street
- 7 Parking
- 8 Cycle / Bin storage



- LEGEND
- Redline boundary of detailed application within Village Centre
 - Design guidance boundary line of Village Centre (outline planning)
 - Retained trees with RPA
 - Existing trees to be removed
 - Proposed trees
 - Proposed hedge
 - Amenity grass
 - Structure planting
 - Mixed Naturalistic perennial and structure planting
 - Small scale natural stone paving
 - Feature paving to plaza
 - Large scale natural stone paving
 - Resin bound paving to pedestrian paths
 - Timber top Benches
 - Raised planter with integrated bench
 - Bespoke gateway features
 - Retaining wall
- Lighting (illustrative only subject to Engineer specification)
- Pole mounted LED luminaire. Reference WE-EF PFL540 LED, 4-5 metres high. Finish in grey metallic RAL 9007.
 - Wall mounted fitting - mounting height TBA. Finish in grey metallic RAL 9007.
 - Recessed light source integrated within bespoke gateway features
 - Bollard/pathway LED luminaire, 700-900mm high with anchorage unit. Finish in grey metallic RAL 9007.
 - Tree Uplighter: WE-EF ETC130-GB LED inground uplight or similar
 - Light column with shielded light source. Reference WE-EF, LTM440 LED-FT, 3-4 metres high. Finish in grey metallic RAL 9007.



The Square; view from the Fort



The Garden Street; aerial view

3.12 LANDSCAPE STRATEGY

SOFTWORKS

A simple palette of mixed deciduous trees is proposed to add focus and seasonal interest, whilst softening elevations and reinforcing street and space hierarchy.

Existing trees will be retained wherever possible and the landscape proposals have been developed to respond to their location. The key principles of the tree strategy include:

- A formal rectangle of semi mature feature trees within the square to create a strong sense of arrival and a distinctive character to this area of the site, appropriate to the scale of development proposed;
- Single specimen feature trees to the corner of the square in front of Q13 to define the edge of the space and create a visual focus on the corner;
- New tree planting to the northern boundary strip between the access road and parking area, to strengthen the boundary and to filter views between this area and future adjacent development phases;
- New street trees along the pedestrian link between the Q14 and the adjacent residential block to strengthen the street scene and to create an attractive green corridor and frontage.

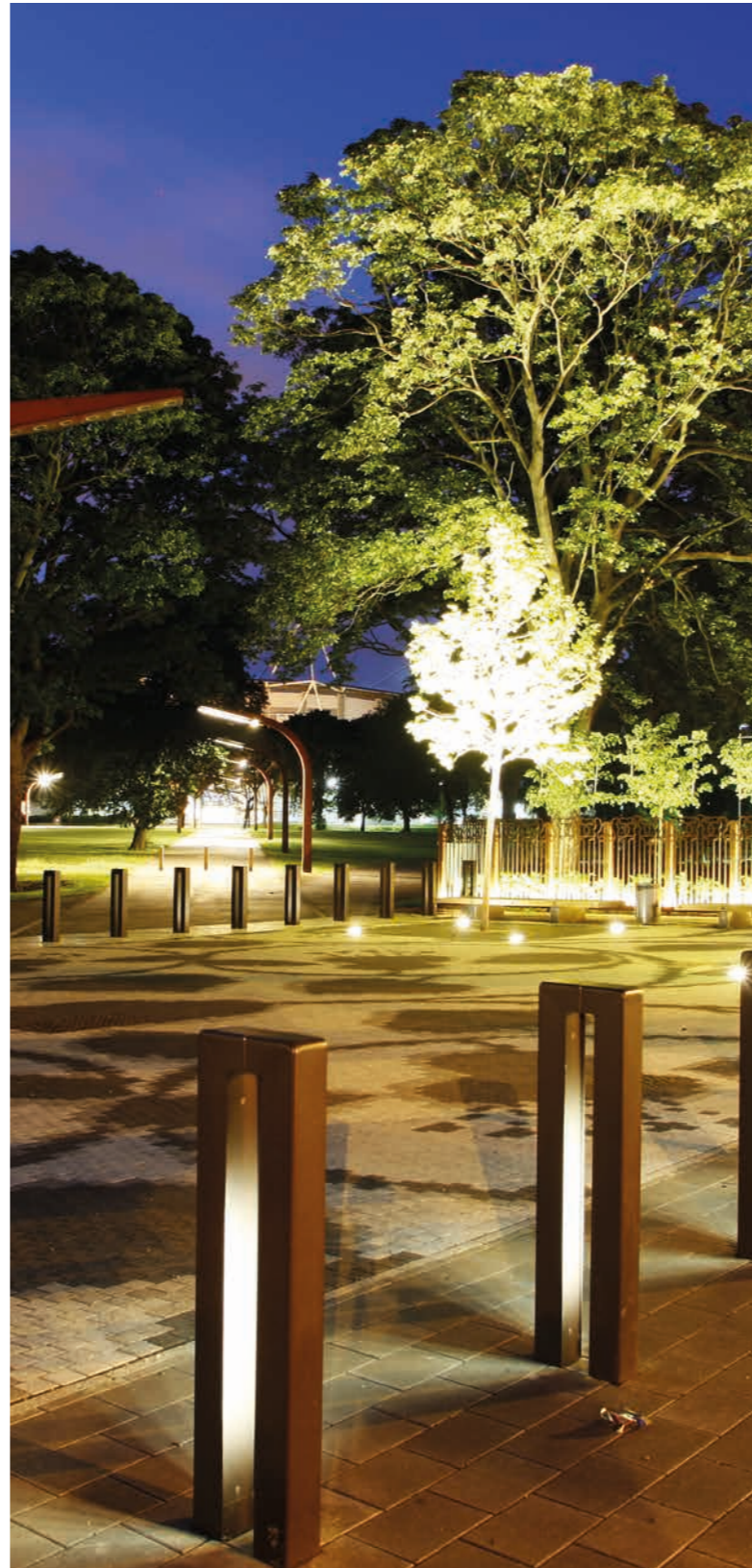
PLANTING

The planting strategy responds to the setting of the site, considers the shaded and sunny areas, whilst also creating seasonal interest and distinct character areas. It also takes into consideration future maintenance requirements. Planting is used to create spaces for intimate seating and outdoor areas through a mixture of evergreen structure planting and perennial planting with seasonal interest. The key principles of the strategy include:

- Creation of distinct character responding to use and the microclimate of the area;
- Evergreen structure planting;
- Ecological interest and contribution to biodiversity;
- Distinctive and attractive set of outdoor spaces and public realm.



3.13 LIGHTING STRATEGY



The Lighting Strategy proposes a range of luminaires in response to the different character areas, with the aim of achieving a unified palette across the Village Centre.

The proposals aim to create a safe and distinctive environment for residents and visitors living and working at Fort Halstead, whilst ensuring the public realm is usable both in the daytime and during the evening.

The key principles of the strategy include:

- Wall mounted fittings to building facades to minimise visual clutter in the square;
- Pole mounted luminaires through the garden street and car parking area;
- Feature light columns to the square;
- Tree uplighters and integrated luminaires within the boundary edge features.

The lighting strategy; including light pollution and illumination levels will be subject to further technical design.

Obtrusive light, sky glow, luminaire intensity and light intrusion can be addressed by careful selection of luminaires with good reflectors reducing overspill and intensity. Improvements of colour definition and recommending lighting levels to meet the lowest lighting levels required can also minimise impact.

3.14 ACCESS STRATEGY

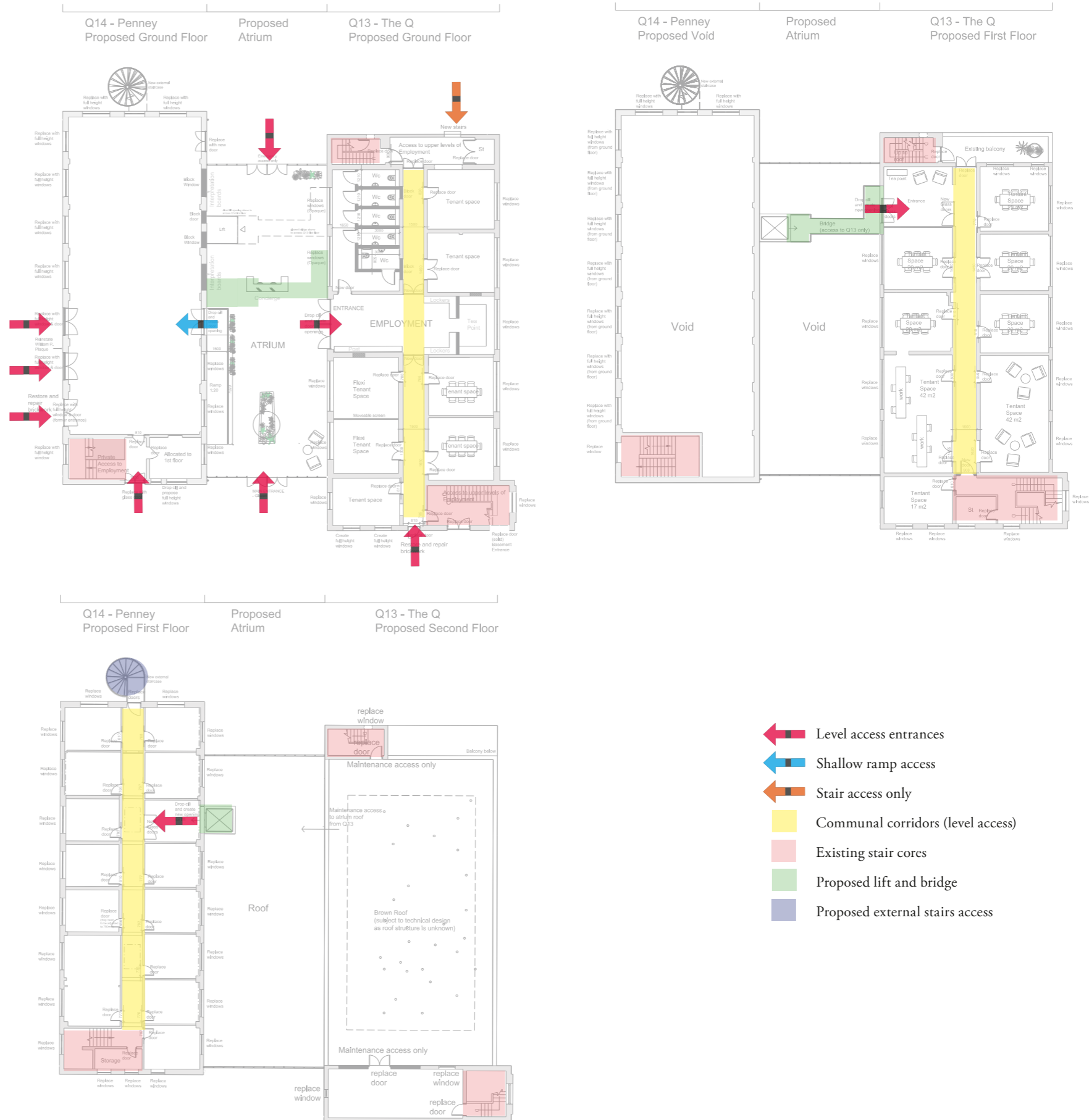
The aim is to convert the existing buildings to community and employment use and to make them as accessible as possible.

LISTED BUILDINGS

By virtue of the significance of the Q14 (Penney) building which is subject to listed building consent approval, minimal disruption to the internal fabric has been sought. Please refer to the Built Heritage Assessment.

THRESHOLDS

Level thresholds have been retained where they exist, and where possible, external levels have been raised to serve access doors. Raising ground levels or extensive use of ramps would be detrimental to the appearance of the listed buildings. Therefore any use of ramps or lifts have been proposed within the adjoining new atrium.



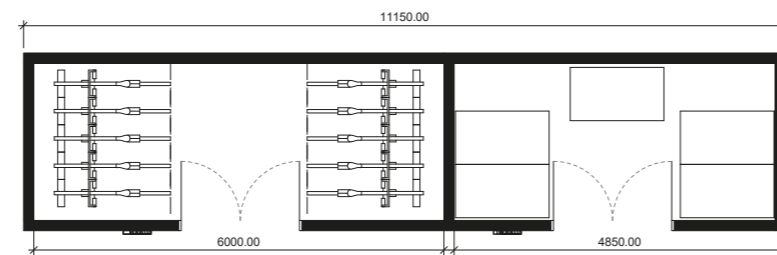


- Parking (4 spaces)
- Wheelchair accessible parking (6 spaces)
- Cycle provision (20 spaces)



- Refuse storage

Refuse vehicles will access the refuse store directly off Penney Road. If the refuse vehicle require access to buildings in future phases (outside the red line boundary), then there are feasible options dependant of phasing (shown as Option A and B above).



Bin & Cycle Store Plan





APPENDIX

APPENDIX A: DESIGN EVOLUTION

The layout has evolved through key stages of the consultation process.

1. Extant Permission (2015)
2. Pre-application meetings (Oct 2018) and Public Exhibition (Dec 2018/Jan 2019)
3. Design Review Panel (DRP) with Design South East (Feb 2019)

Please refer to the Design and Access Statement (Outline Planning) for full details of masterplan evolution.



Pre-application October 2018



Pre-application November 2018



APPENDIX A: DESIGN EVOLUTION



Pre-application December 2018



Pre-application February 2019



KEY DESIGN DEVELOPMENT CHANGES:

PRE-APPLICATION NOVEMBER 2018:

The re-introduction of existing building Q1.

PRE-APPLICATION DECEMBER 2018:

The setting back of new buildings and creation of a larger square and oval lawn.

DESIGN REVIEW PANEL SOUTH EAST JANUARY 2019:

Comments on the Village Centre layout:

While the objective of ‘stitching’ the Fort into the new community is laudable and using a village square to create a formal interface could work well. However, providing the new village green to the north of the village centre itself, with a linear route then connecting the two needs reworking. Instead of sequencing the spaces to create views between them, the aim should be to provide a consolidated, single area of focus that can be related to by the whole residential and working community.

PRE-APPLICATION FEBRUARY 2019:

The re-location of the Village Green. The removal of existing building Q1 and reconsideration of landscape features.

As of February 2019, the Village Centre design has been refined with the same principles of that agreed at the Pre-application meeting in February.

