shedkm

kampus listed

design + access statement addendum

30/04/2021

kampus listed

design + access statement addendum

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01.00 introduction
02.00 external changes
03.00 internal changes

01.00 introduction

01.01 document purpose

The purpose of this document is to itemise and explain all changes made to the original planning application made for the Listed Buildings at Kampus (MCC ref: 115570/FO/2017 main application and 115571/LO/2017 for Listed Building Consent).

The process of capturing changes made from the original submission was agreed to be via S19/S73 applications/variation of condition 2. Changes identified have been discussed with case officers informally/accepted in principle prior to the formal submission of this document and a set of substitution drawings. For ease of reference, a substitution list has been provided to align new drawings with those previously approved. The substitution drawings are to be read alongside the changes schedule.

02.00 external changes

02.01 ext 01 • minto window treatment

Change - wholesale replacement of existing windows in timber

Design Team proposals at planning stage were to remove all the existing windows to the Minto & Turner building and replace with new aluminium windows throughout, reflective of the original fenestration. MCC requested via condition 32 that further exploration and survey works be undertaken to evaluate feasibility of repairing the original windows (see extract of document adjacent).

The survey, cost analysis and operability concerns provided to the Local Authority concluded that is was not feasible to retain/repair the original windows and new timber windows were put forward for sample review. These were approved by case officers on 22.07.19.

Refer: documentation submitted under Condition 32



chorlton street



m&t gable

fig 01: extract from condition survey presented in Condition 32

key:

- infill / door with fanlight
- significant window (as identified in SLHA Heritage Statement)
- window missed from survey (status tbc)
- window not accessible at time of survey
- repairable (onsite)
- repairable (off-site specialist input)
- replace / not repairable (original window - poor condition)

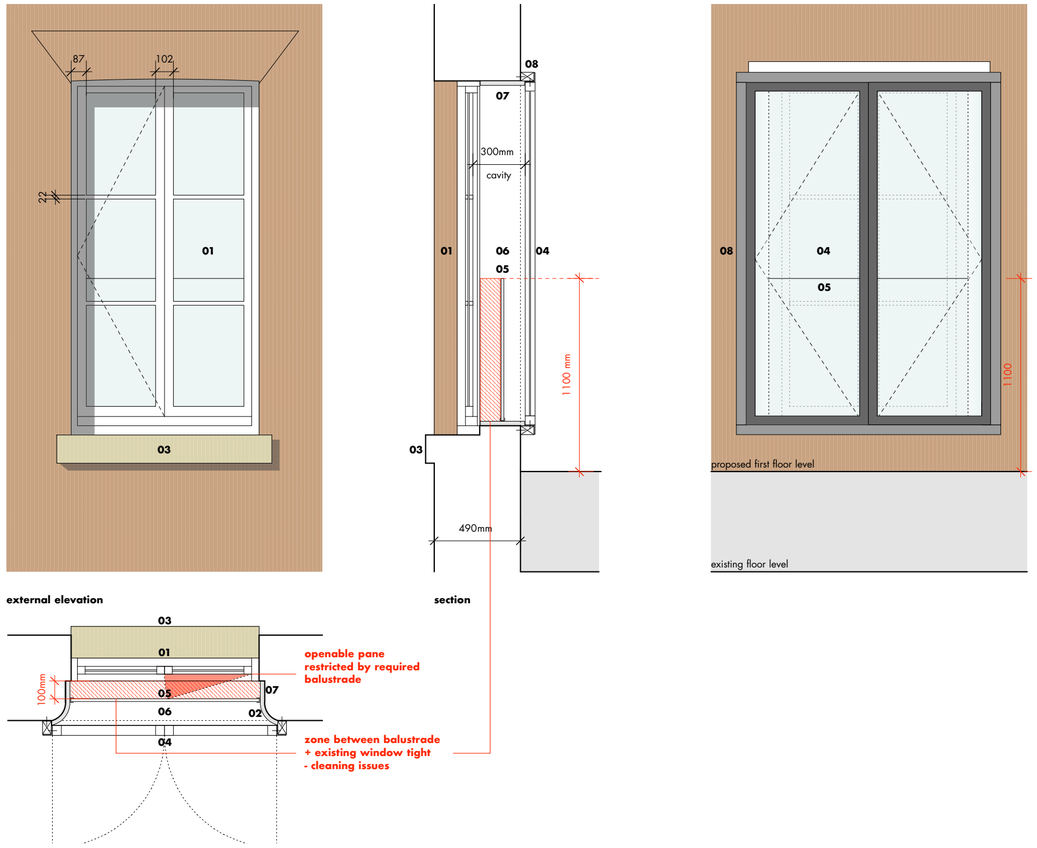
note:
windows G009 and G010 are missing from the survey due to internally infilled aperture and existing decorative grating externally impacting accessibility

02.02 ext 02 • roof slates

Change - wholesale replacement of existing roof slates to both buildings

Design Team proposals at planning stage was retain/re-use existing slates where possible and supplement with a slate to match existing, with the expectation that 80% would be salvageable. Unfortunately during surveys undertaken on the roof by specialist subcontractors the potential retention rate was far less than originally anticipated, with approximately 20% salvageable, and also highlighted that the use of salvaged material leads to warranty issues as no sub-contractors will warrant product or workmanship with existing materials.

The Project Team provided a viability statement, highlighting the above and warranty issues with retention of any existing slates. Wholesale replacement of the roof tiles using Welsh slate (Cwt-Y-Bughail) in a uniform laying pattern was put forward and sample approved by case officers. Approved by case officers 07.06.18.



01 existing timber window
02 curved brickwork reveal
03 existing stone cill
04 proposed aluminium secondary glazing
05 fixed glass balustrade
06 cavity
07 sound absorbant lining to reveals (25mm)
08 timber section to take face-fixed secondary glazing

warranty:
• existing window repairs - tbc
• secondary glazing - 5 years (frames + glazing) / 2years (moving parts)

appraisal notes

- ✓ existing windows retained
- ? character impacted internally - concealed bullnose detail
- ? visual impact externally - crowded reveal
- ✗ functionality impaired - clash with required balustrade
- ✗ cleaning restrictions - narrow zone between balustrade + existing window
- ✗ longevity - short warranty period

fig 02: extract from dismissed retention option presented in Condition 32

02.03 ext 03 • secondary plant deck

Change: Omission of secondary plant deck to Minshull House -+ relocation of G5 kit within tenant demise (extract fans) and in landlord plant room (supply AHU).

The commercial services strategy at planning stage relied on the formation of two rooftop plant decks; a main deck suspended within the existing roof valley (A on diagrams) and smaller, secondary deck to the roof of the smaller wing of the building (B on diagrams).

Whilst this removed the need for supply and extract fans out of the tenants demise; it created a requirement for siginificant structural intervention to the roof by the removal of a large section. It would also have placed additional load on to existing structure, which would likely require further strengthening in order to accommodate.

The Project Team sought to develop a strategy to potentially relocate plant, to retain more of the existing fabric, save on the extent of complex structural works and reduce complexities of tenant access to roof in this area. This was developed alongside the link to the site wide CHP (internal change 06), which freed a spatial allowance internally for tenant plant equipment (refer to plan diagrams overleaf).

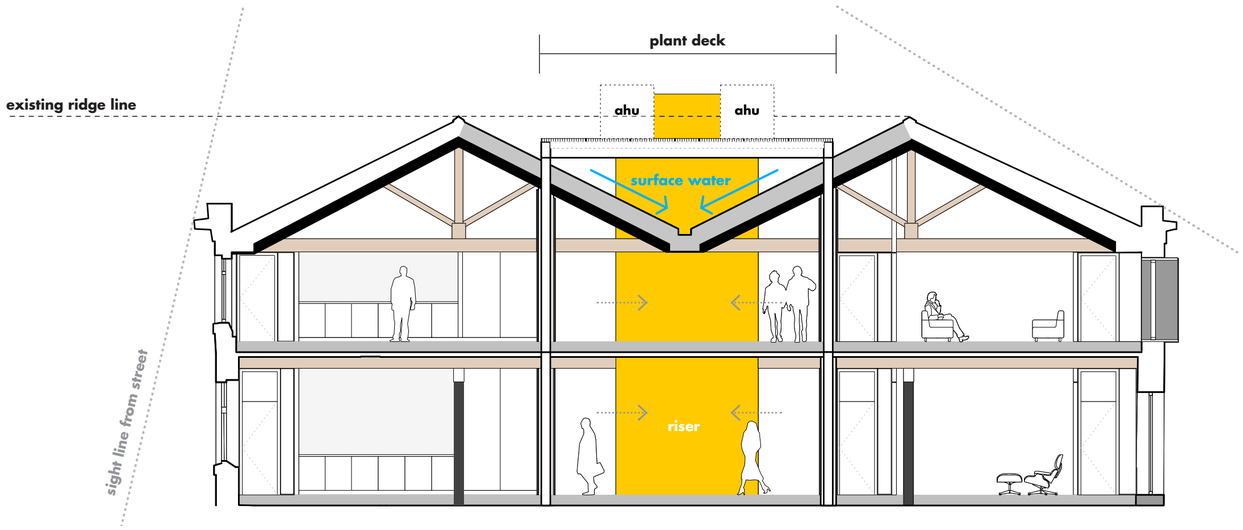


fig 03: planning section through main plant deck A

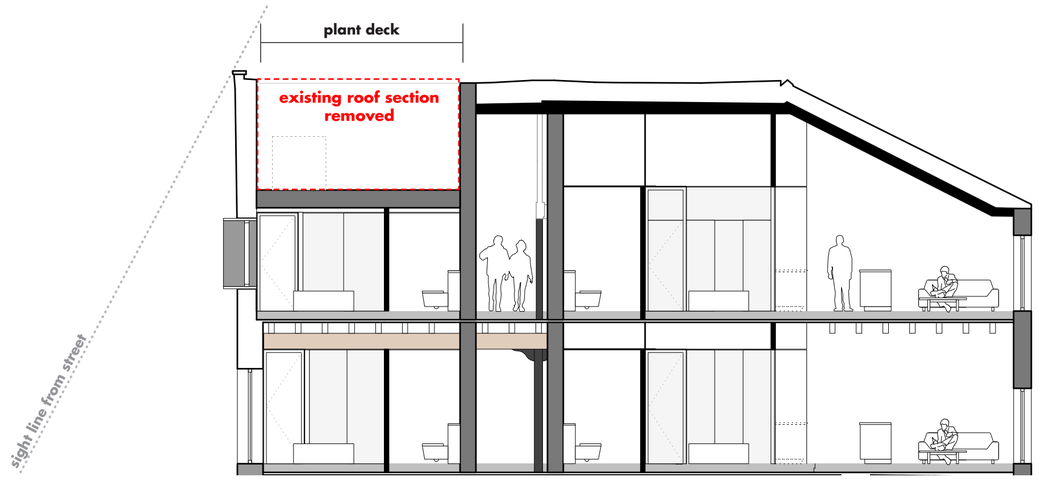
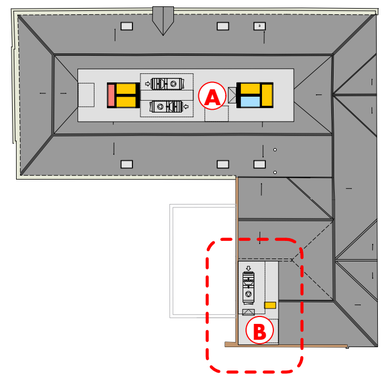


fig 04: planning section through secondary plant deck B



key plan

02.03 ext 03 • secondary plant deck (cont.)

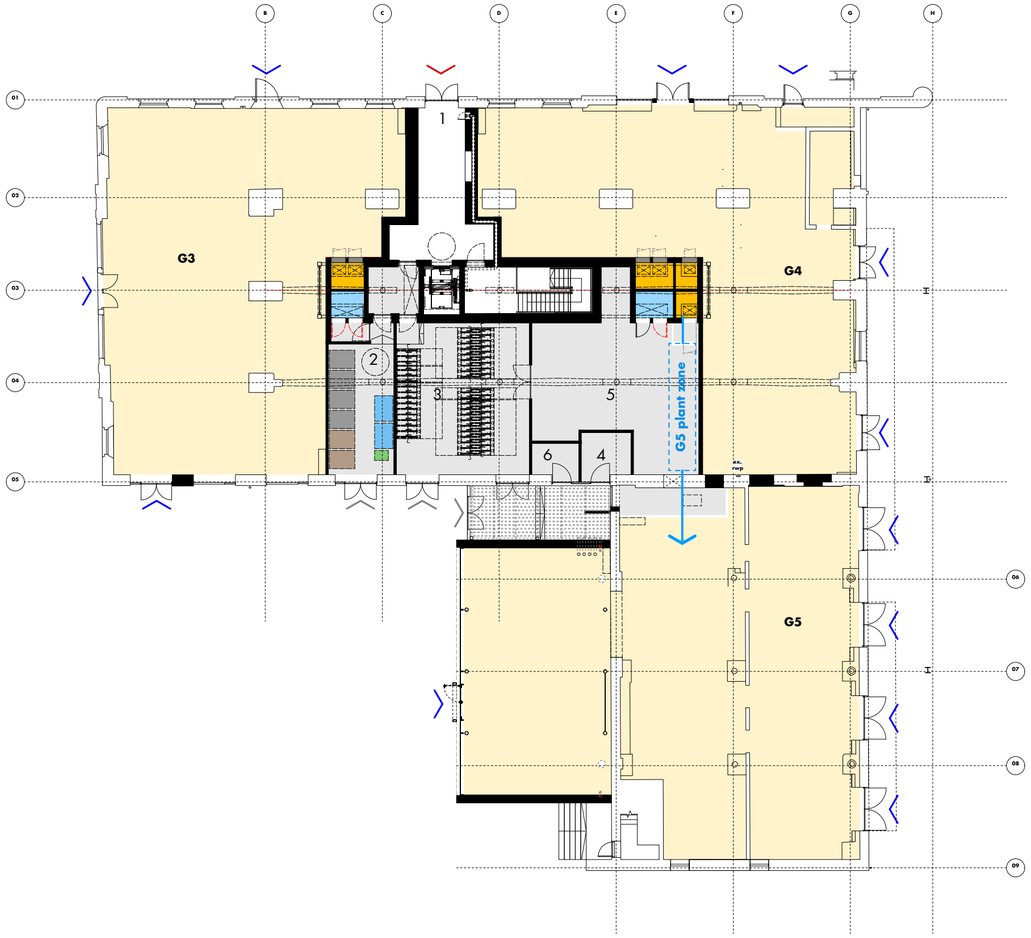


fig 05: revised ground floor plan • tenant plant relocated to main plant room (WS3+)

1 - residential entrance
2 - refuse store
3 - cycle store
4 - switch room
5 - landlord plant w/dedicated tenant zone
6 - gas meter room

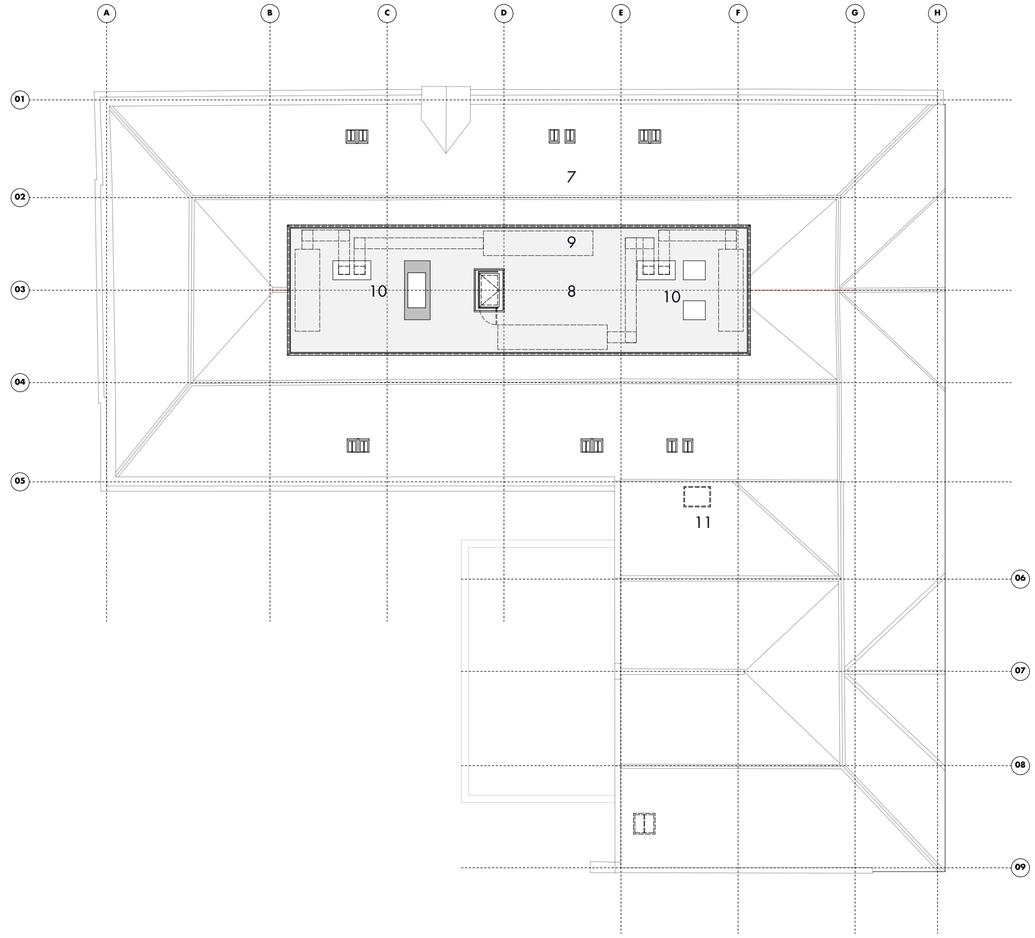


fig 06: revised roof plan • secondary plant deck omitted (WS3+)

7 - main roof
8 - plant deck
9 - indicative commercial equipment size + routing
10 - risers
11 - kitchen extract duct (unit G5)

02.04 ext 04 • rear overhang cladding

Change: Rear elevation/extension of Minshull House to change to profiled aluminium cladding from stained timber weatherboarding

At planning approval stage, the design intent was to re-clad the existing overhang structure to the rear of Minshull House in a black-stained timber. The cladding treatment of another larger modern intervention, the single storey extension to commercial unit G5 was to be treated the same for continuity across the building.

The reasoning behind the use of timber at this stage was two-fold. Firstly it made reference back to the original timber cladding material to this elevation, as uncovered in historical photographs. Secondly was in regard to the site wide material palette. The wider development team was conscious of capitalising on opportunities to unite the buildings within the masterplan; therefore the rear elevation/G5 extension adopted a timber clad approach akin to the proposals for the new build dutch houses.

Since the departure from the use timber cladding to the dutch houses as a result of fire protection requirements, the Listed Project Team have reconsidered the approach to the timber clad elevations to Minshull House. Although Minshull House falls below the 18m height rule, the team felt that maintaining the use of a similar cladding material was important to aid cohesion throughout the Kampus development; therefore have developed proposals to use profiled aluminium cladding as being used on the dutch house; albeit at a smaller pitch size to suit the smaller scale of the buildings.

Cladding sample approved by MCC at meeting on 18.03.19.



fig 07: minshull house • rear elevation drawing showing reclad overhang at levels 02 + 03



fig 08: image of 1x1m sample panel agreed as part of Condition 3 + 33m

elevation key

01 retained brickwork
02 new aluminium windows
04 new slates to roof
- uniform laying pattern
06 new smoke vent
11 30 x 30mm PPC corrugated metal cladding
- colour: RAL 7021
12 cast iron downpipes
13 air bricks for MVHR intake/extract
14 vent tiles for MVHR intake/extract from third floor
- position and latout to be co-ordinated with m+e sub-contractor input
15 signage canopy
16 new full height windows in existing aperture
- cill dropped + timber lintel retained
17 new glazed doors in existing aperture
- cill dropped + timber lintel retained
21 new glazed doors in existing aperture
- existing cill dropped
- slot louvre to head of aperture
24 existing steel column
25 retained timberwork
- refer to heritage report for treatment
28 existing cast iron haunch support to cantilever
35 plant deck
37 external lighting
40 cctv camera
41 external power socket

02.05 ext 05 • riser shrouding

Change: Shrouding to service risers omitted from plant deck

At planning stage, the Design Team proposed to conceal the riser with additional rainscreen/decorative cladding. However, due to concerns raised previously by MCC regarding visability of the commercial plant generally, the Project Team have opted to reduce visual impact of risers by omitting the decorative cladding. This would also ease installation of tenant services.

02.06 ext 06 • level 03 windows + corbels

Change: Window layout to third floor of Chorlton Square elevation adapted due to clash with existing corbels.

At planning stage, the proposal for the level 03 windows to the Chorlton Square elevations of Minshull House were the same; new aluminium windows sat within a 300mm projected sleeve from the elevation. In order to achieve this, a number of new openings needed to be created to one of these elevations as there were no existing apertures present.

Architecturally, the Design Team had hoped that the new openings would align cleanly with those positioned on the levels below. However a number of corbel stones (supporting the roof structure) were uncovered during the soft strip works, which unfortunately fell in locations of/or close proximity to the proposed new openings.

The revised approach was to maintain sleeve arrangement but extend it to pick up the extents of a group of window below. This sleeve would be fixed back to the front face of the brickwork and any existing brickwork retained and over-clad to match the framing; giving it the appearance of being part of the same system. As the sleeve addressed the windows below, it freed up the structural opening position so that they could be relocated an acceptable distance away from the corbels (as advised by the structural engineer). Agreed with case officers 26.10.18.



fig 09: minshull house • chorlton square elevation at planning stage with overlay of existing corbel positions



fig 10: minshull house • chorlton square elevation revised scheme with overlay of existing corbel positions

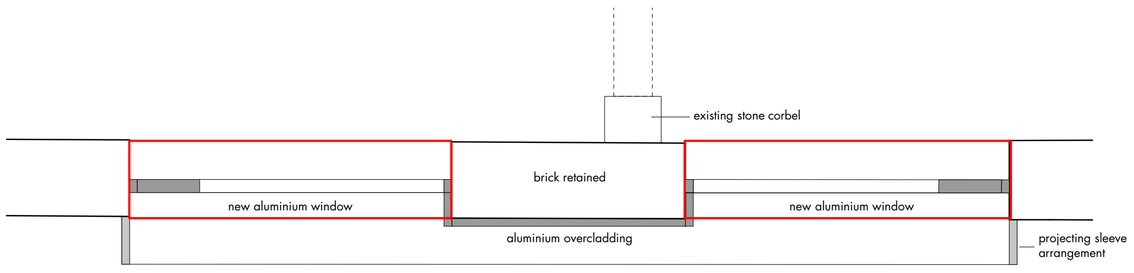


fig 11: minshull house • chorlton square elevation revised scheme plan diagram

02.07 ext 07 • reduction of gable windows

Change: Aperture size of windows reduced at ground floor level on gable elevation (Minshull House).

Change to these windows due to retention of existing insitu concrete wall in the existing section of commercial unit G5. Refer to internal change int11 in internal changes section for further details.

02.08 ext 08 • escape stair windows

Change: Arrangement (glass to solid ratio) changed to escape stair windows of Minshull House.

Original proposals were to demolish a larger opening to this area to match the remaining type 9 windows to the Chorlton Square elevations. Unfortunately upon further inspection this would clash with existing concrete stair. As the stair was embedded into the existing masonry and would require substantial remedial works to existing stair, the Project Team revisited the design of the window.

Similarly to the level 03 windows, a 'sleeved' approach is now proposed to be adopted, with the ratio of glazed/solid flipped. The smaller apertures can be accomodated within the confines of the stand landing areas and the existing brickwork can be overclad to give the overall appearance of a continuous system which bridges levels 01/02; as original proposed at planning stage.

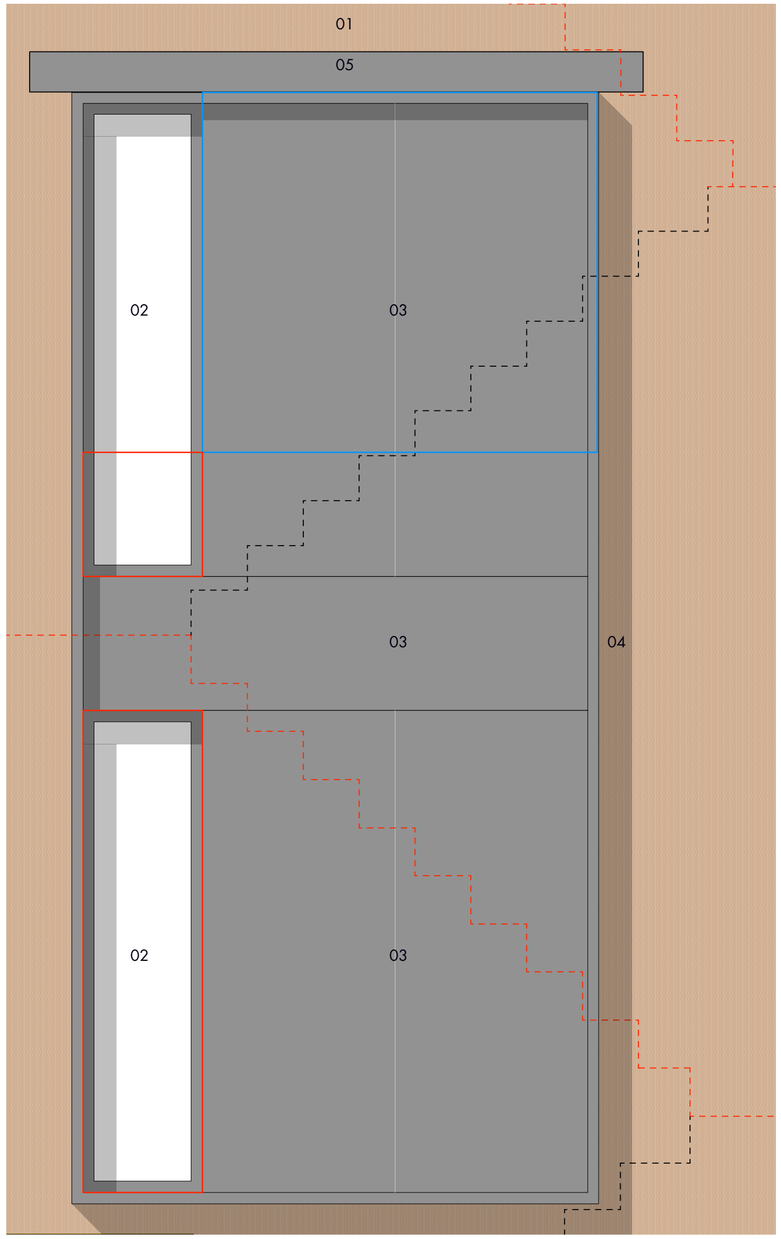


fig 12: minshull house • revised elevation of the window arrangement to existing staircase

key

- extent of brickwork to be demolished
- existing aperture to be infilled
- position of existing escape stair

01. existing brickwork
02. new aluminium window
03. ppc aluminium overcladding to brickwork
04. continuous alumnium sleeve
05. existing lintel



figs 13 + 14: minshull house • photographs of found condition of existing escape stair showing stair treads inbedded within the external brickwork



fig 15: minshull house • approved elevation with staircase position overlaid



fig 16: minshull house • revised elevation with staircase position overlaid

02.09 ext 09 • rear elevation window

Change: Solid vent panel omitted from slot glazing (type 5 window) to rear elevation of Minshull House

The Type 05 window design to the rear elevation has had to be revised in order to provide adequate openable area for purge ventilation (revised elevation with updated window design appended to this note).

In order to provide the required openable area to satisfy Building Control Approved Document F (equating to 1/10th of the apartment floor area), the solid vent panel has been omitted and replaced by a glazed opening vent to the full width of the aperture. The Project Team felt this improved the rhythm of the elevation, provided cleaner sight lines whilst providing more natural lighting quality to the apartments served.

The above was discussed and agreed with MCC under Condition 33m / LB Condition 6m.

02.10 ext 10 • new timber door to little david street

Change: Existing timber door to be retained on Little David Street (MT) elevation to now be new timber door.

It has been confirmed that the existing timber door to Little David St. elevation has unfortunately been misplaced since it's removal from the building. This door will now require replacement and early site photos of the door in-situ will be used to build the replacement to the same design as the existing.

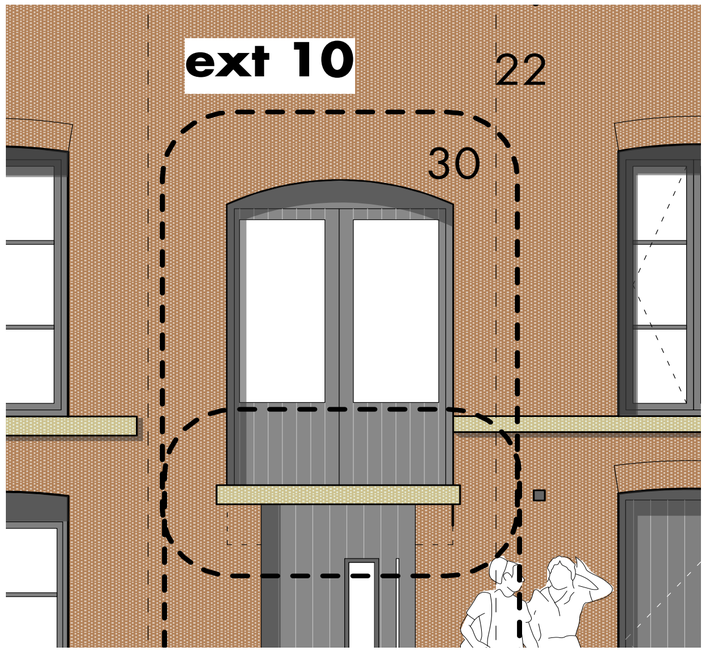


fig 20: existing door to little david street (MT elevation) to be replaced with new



fig 17: minshull house • amended rear elevation with relocated vents and new type 5 window design

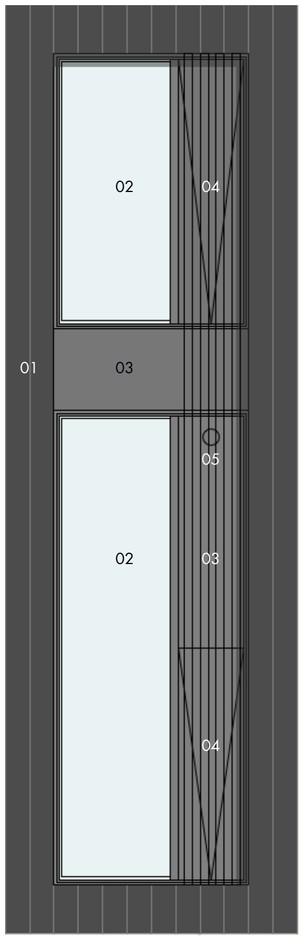


fig 18: type 5 window @ planning

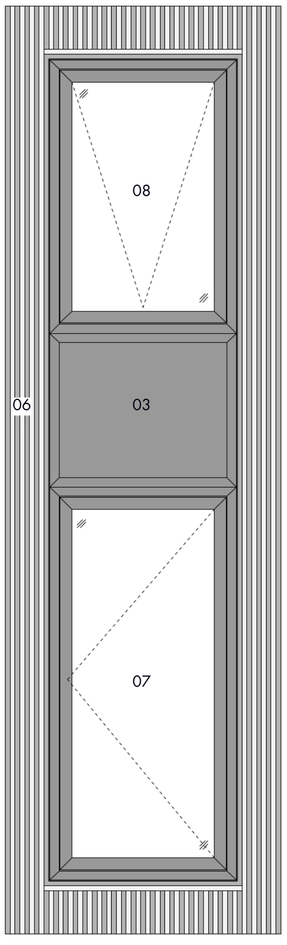


fig 19: type 5 window • amended design

elevation key

01 retained brickwork
02 new aluminium windows
04 new slates to roof
06 new smoke vent
11 30 x 30mm PPC corrugated metal cladding
12 cast iron downpipes
13 air bricks for MVHR intake/extract
14 vent tiles for MVHR intake/extract from third floor
15 signage canopy
16 new full height windows in existing aperture
17 new glazed doors in existing aperture
21 new glazed doors in existing aperture
24 existing steel column
25 retained timberwork
28 existing cast iron haunch support to cantilever
35 plant deck
37 external lighting
40 cctv camera
41 external power socket

type 05 window key

01 timber rainscreen cladding
02 new aluminium window - fixed pane
03 ppc aluminium spandrel
04 ppc aluminium vent panel
05 mvhr vent within window system
06 30 x 30mm PPC corrugated metal cladding
07 new aluminium window - side hung
- on restrictor
08 new aluminium window - bottom hung
- on restrictor

02.11 ext 11 • residential entrance door

Change: Residential entrance door to Minto & Turner amended to single door/open outward

Original proposals at planning stage was to install a double door arrangement to the residential entrance. During the redesign of the residential core area (internal change 02) potential pinch points were identified in the entrance as a result of inward opening double doors, for example potential collision if residents are entering at the same time as others are waiting for the lift or collecting post.

To improve circulation in this small entrance area, Project Team proposed a single outward opening door arrangment with two fixed panels either side to avoid any potential obstruction with door swings. Door guarding to be provided externally via use of a fixed planter (location + approx area shown as blue,hatched zone on adjacent plan).

The above was discussed and agreed in principle with MCC at meeting on 03.08.18.

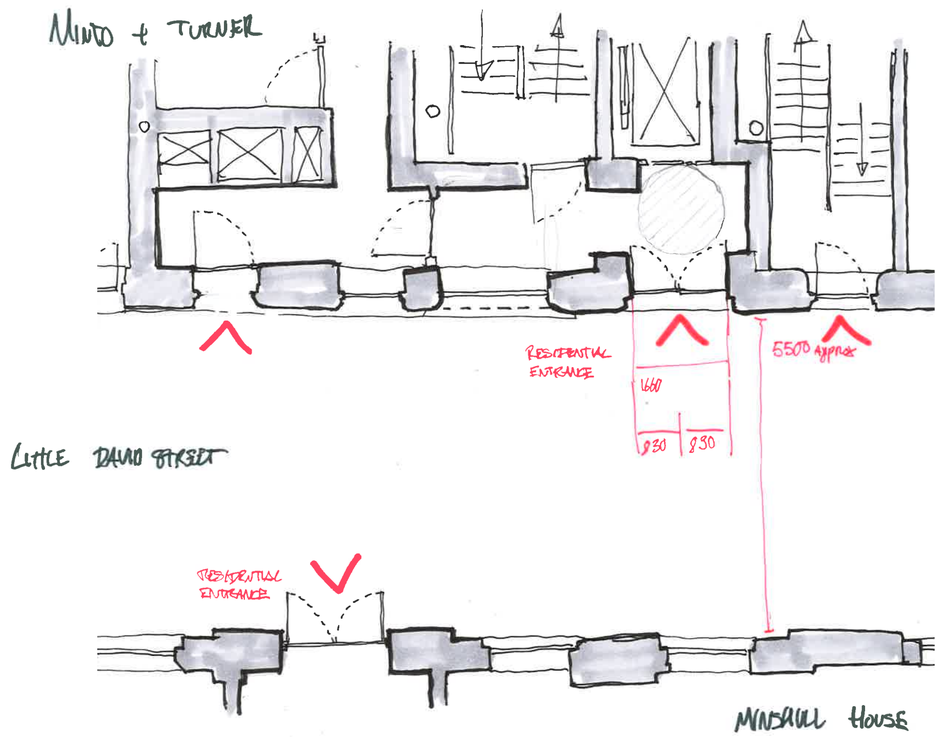


fig 21: planning proposal - double door arrangement (extract from planning presentation 03.08.18)



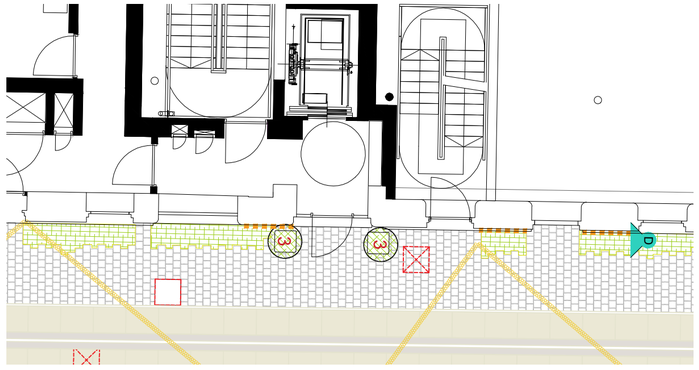


fig 23: amended proposal - exterior architecture detail plan to little david street with planters

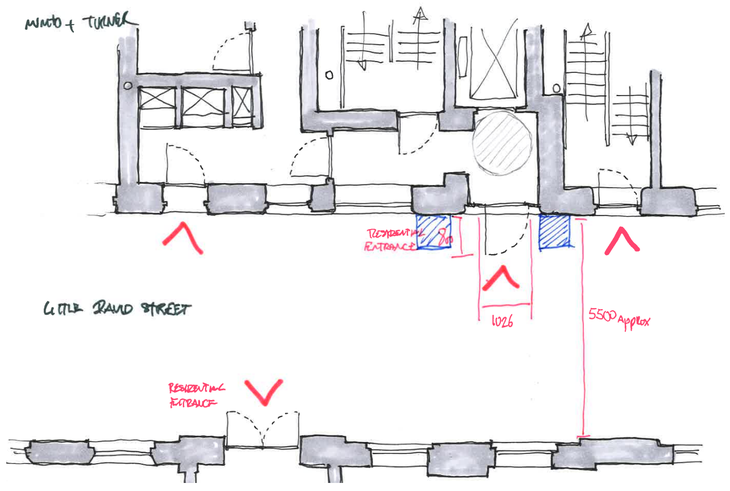
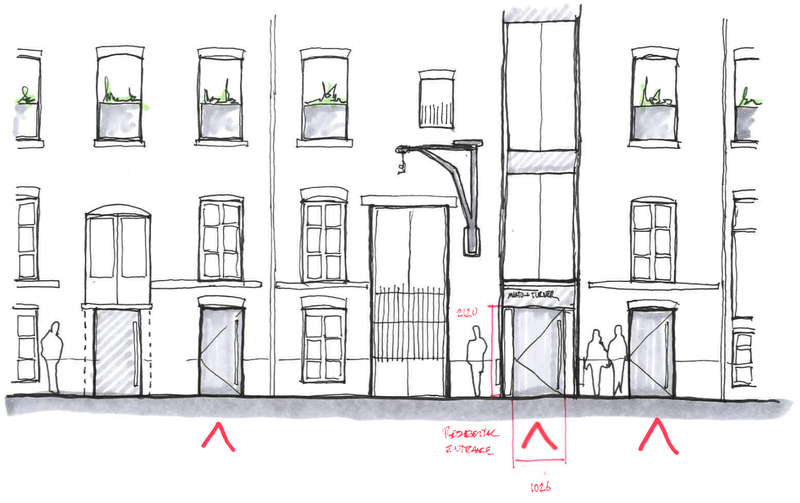


fig 22: amended proposal - single door arrangement (extract from planning presentation 03.08.18)



02.12 ext 12 • spandrel depth increase

Change: Spandrel depth increased to G4 shopfront + type 07 window of Minshull House

Due to the introduction of soffits concealing the existing floorboards (internal change 04) and the retention of a deep raised floor zone to allow residential drainage to collect and be routed to sensible locations within landlord spaces/commercial units, the floor zone increased in size. As a result the spandrel depth to windows spanning across ground/first floor increased to suit. As proposed as planning, these are integral spandrels to the window system and RAL colours are to match the frames.

Refer to internal change 04 for further details.

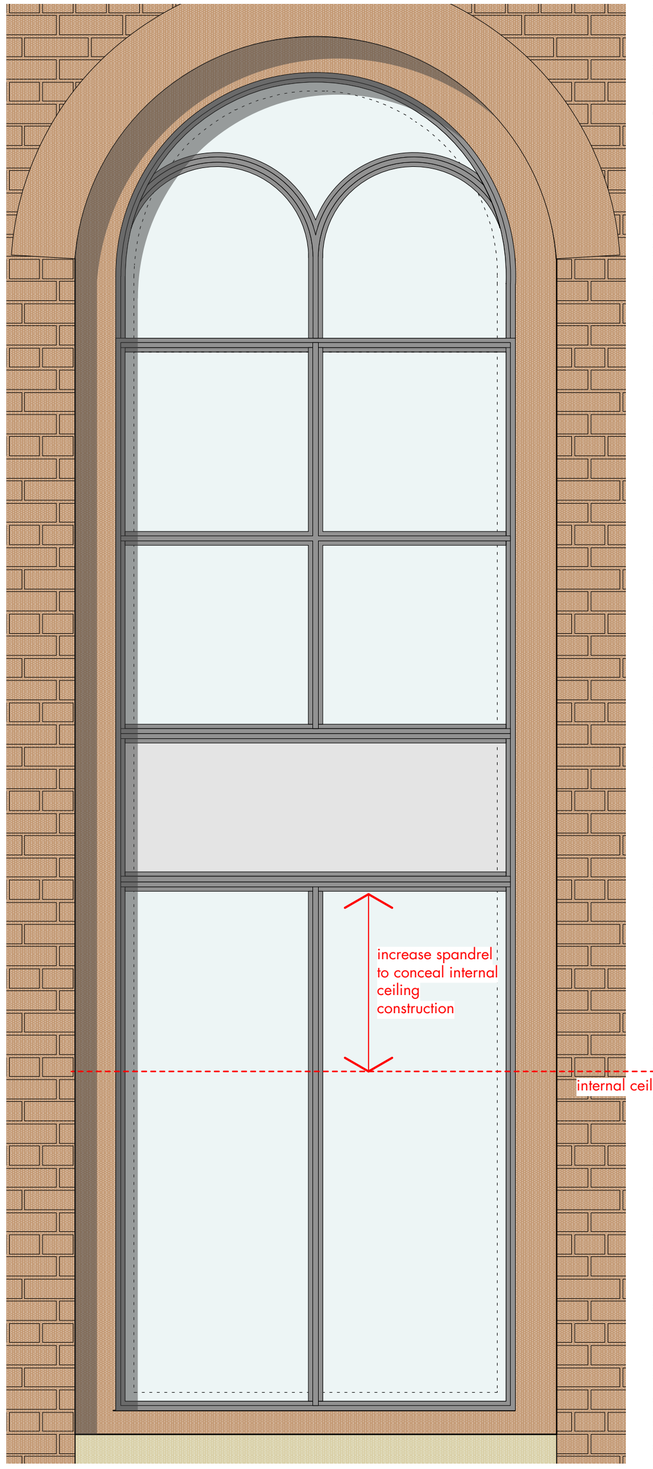


fig 24: type 07 window @ planning stage

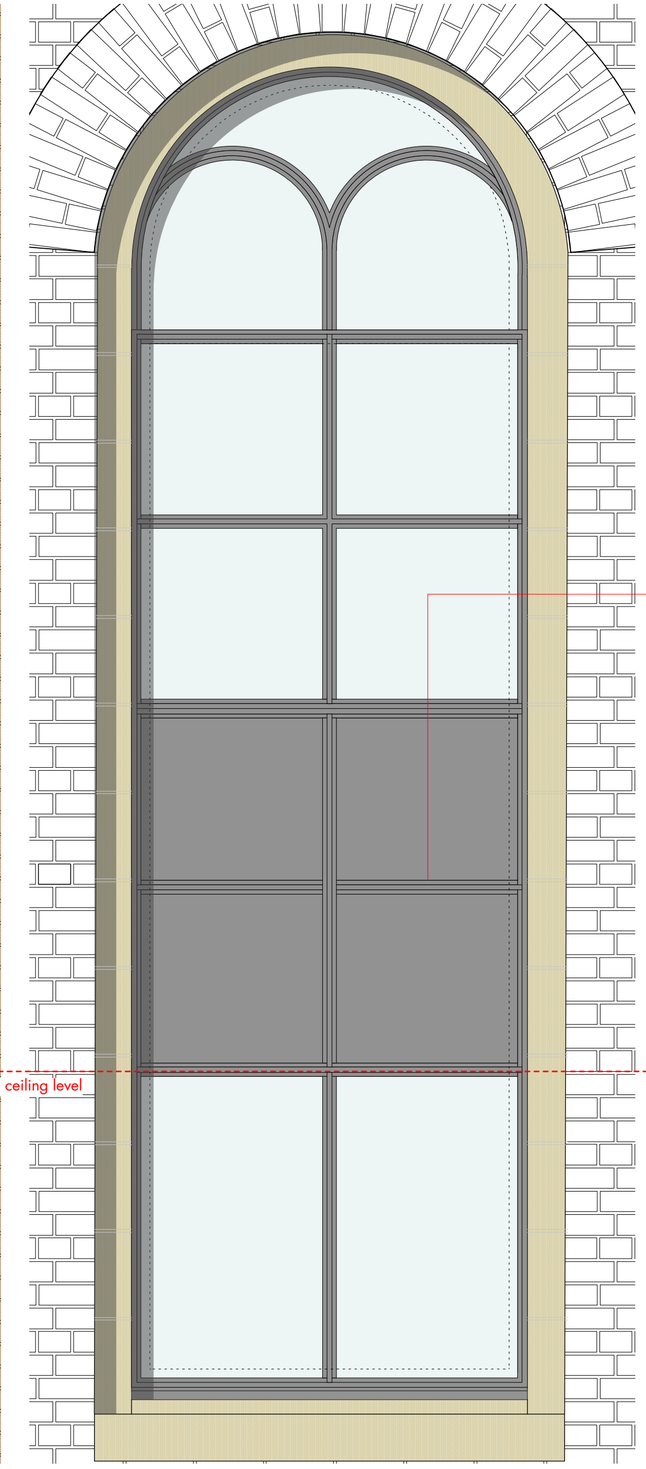


fig 25: amended type 07 window

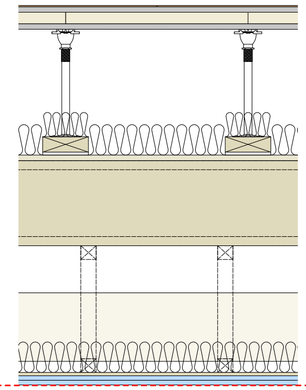


fig 26: level 01 floor build-up

02.13 ext 13 • retention of brick pier

Change: Additional spandrel element to windows above G4/G5 entrances to rear elevation of Minshull House

Following the appointment of a new structural engineer post planning, the level 01 windows and their associated span/extent of demolition works were reviewed. Due to their proximity to the cast iron brackets/cantilever structure, the structural engineer advised that a central brick pier be retained for stability.

As a result the window was redesigned using a similar approach to the Chorlton Street windows, with brickwork retained and overclad to maintain the appearance of a larger window arrangement as proposed at planning.

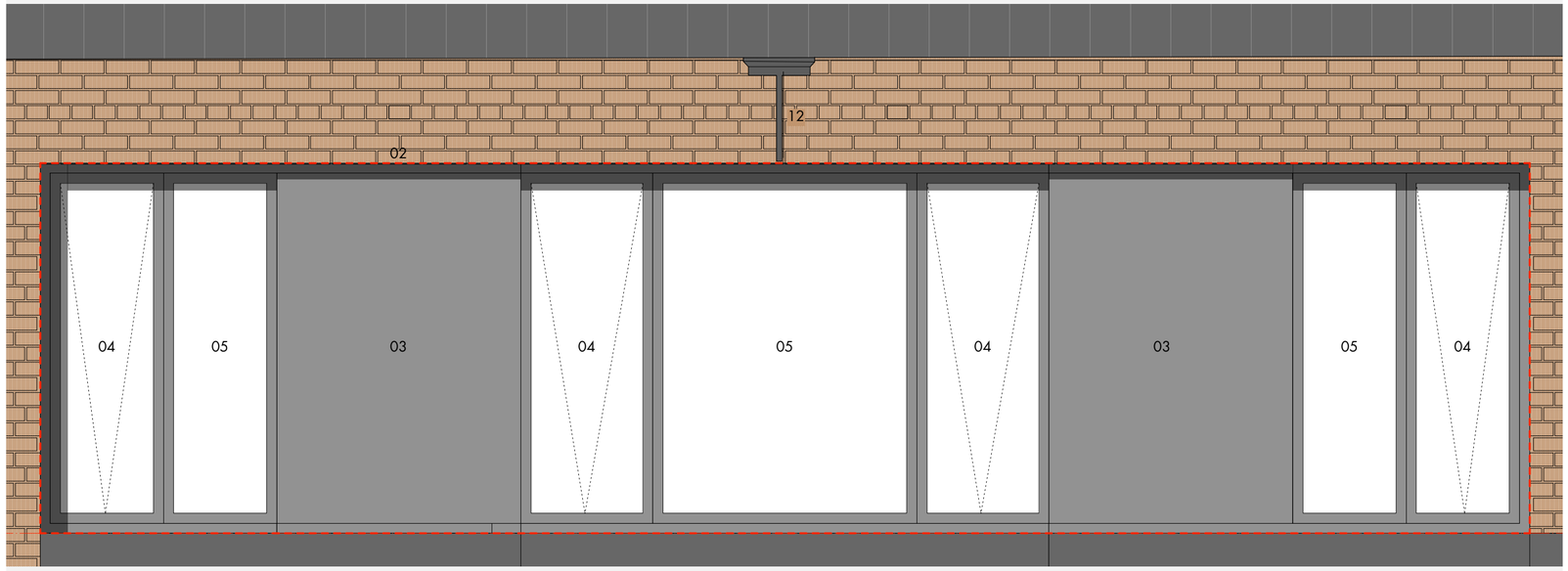


fig 27: planning proposal - window type 14 above G5 shopfront entrances

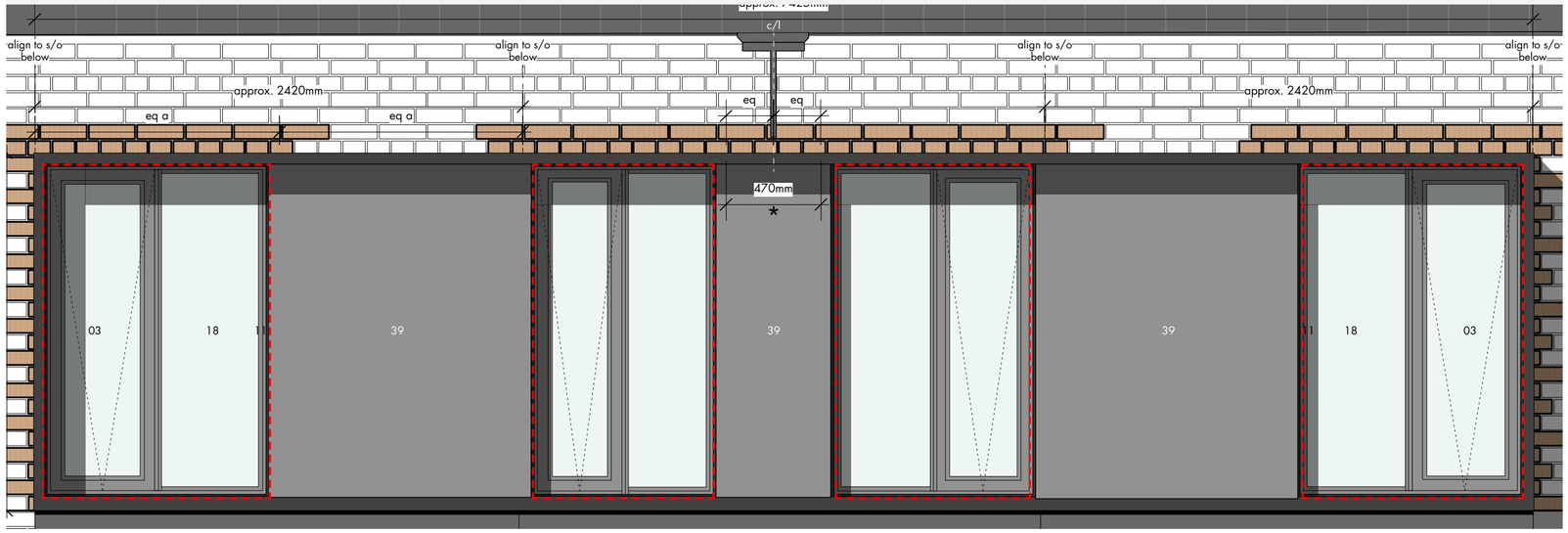


fig 28: amended proposal - - window type 14 above G5 shopfront entrances

key

extent of brickwork to be demolished

02.14 ext 14 • canopy extents amendment

Change: Increase of 300mm to all sides of the rear canopies.

Following a review from the site team, in order to conceal a non original concrete lintel above the entrances to G5 commercial unit, it has been agreed the best approach would be to increase the canopy by 300mm at this point. To maintain consistancy this 300mm protrusion will be picked up at all canopy gables.



fig 29: planning proposal - minshull house rear elevation



fig 30: minshull house - non original lintel site image

02.15 ext 15 • rear canopy structure paint finish

Change: Rear canopy existing steel to have paint finish - colour red oxide

Rear canopy steelwork colour finsih to be red oxide to match other existing elements across the Listed Buildings such as Minto & Turner's existing escape stair.

Discussed and agreed with MCC via email 16.02.21.

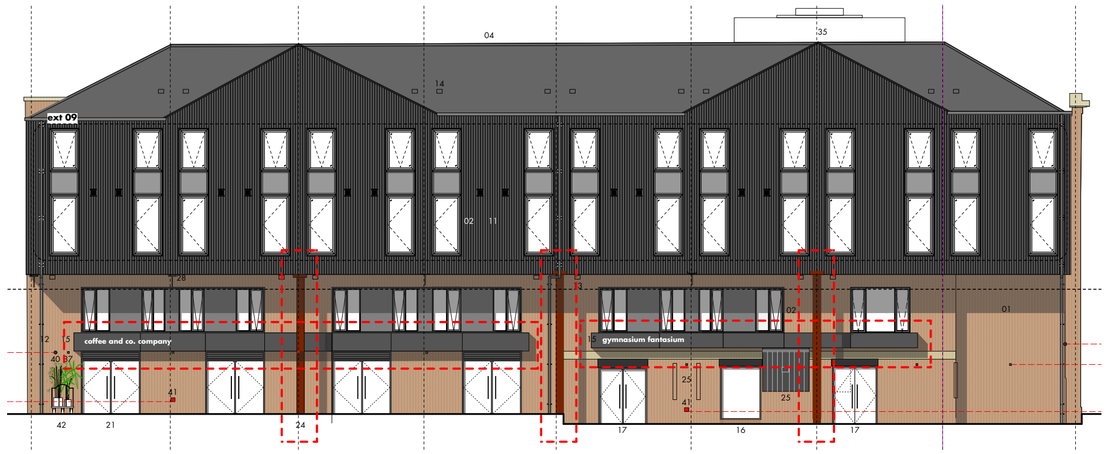


fig 31: amended proposal - minshull house rear elevation with updated canopy size and steel paint finish colour



fig 32: minto & turner escape stair site image

key

change location highlighted for reference

02.16 ext 16 • vision panels to external doors

Change: Inclusion of vision panels into external doors to Minshull House and Minto & Turner building.

Following comments from Building Control (Assent) it was requested that vision panels are to be included in new timber doors.

In the figures to the right hand side locations of vision panels have been included.

Discussed and agreed with MCC via email 27.11.20.



fig 33: minshull house - planning little david street elevation to include vision panels



fig 34: minshull house - planning chorlton street elevation to include vision panels

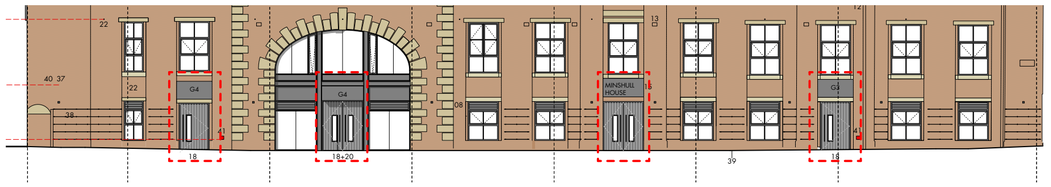


fig 35: minshull house - amended little david street elevation to include vision panels

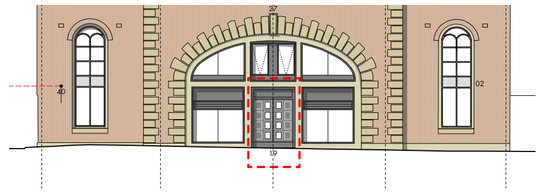


fig 36: minshull house - amended chorlton street elevation to include vision panels

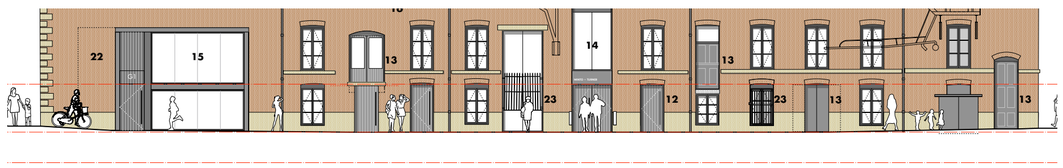


fig 37: minto & turner - planning little david street elevation to include vision panels

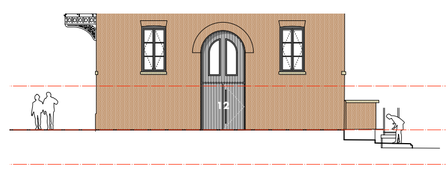


fig 38: minto & turner - planning minshull street gable



fig 39: minto & turner - amended little david street elevation to include vision panels

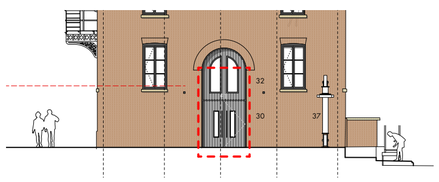


fig 40: minto & turner - amended minshull street gable

key

change location highlighted for reference

02.17 ext 17 • level 02 + 03 windows

Change: Glazed panels to level 02 + 03 window arches updated to a smaller solid fixed panel to allow for increased window sizes and therefore allowing more natural light into apartments.

Discussed and agreed on change at sample stage.

02.18 ext 18 • G4 shopfront glazing panel

Change: Solid blanking panel to G4 shopfront level 01 windows changed to glazed panel.

Discussed and agreed on change due to constraints of manufacturing the blanking panels due to the narrow width required for this condition. Glazing panel was suggested as being significantly easier to use and equally, it allows additional light into the affected apartments.



fig 41: minshull house - planning little david street elevation to include vision panels



fig 42: minshull house - amended little david street elevation to include vision panels

key

change location highlighted for reference

02.19 ext 19 • level 00 openings to chorlton square

Change: Openings to level 00 chorlton square updated to include louvre at side panel rather than original blank panel proposed + louvred doors included for bin and bike stores.

Door/window designs for ground floor chorlton square updated due to physical building constraints. Door and window heights required dropping due to clash with existing lintel which is now being exposed. Louvres originally above the door had to be moved to side panel for ventilation provision to commercial space G3.

Bin and Bike store doors updated to both be louvred doors for ventilation provision and consistency across elevation.

02.20 ext 20 • level 03 existing lintels to chorlton square elevation

Change: Existing lintels to windows at level 03 to be left exposed

Exsiting lintels to level 03 windows on Chorlton Square elevation are to now be left exposed.

02.21 ext 21 • second bay windows to chorlton square elevation

Change: Second bay windows orientation flipped.

Orientation of second bay windows to chorlton square elevation flipped following early stage design development.

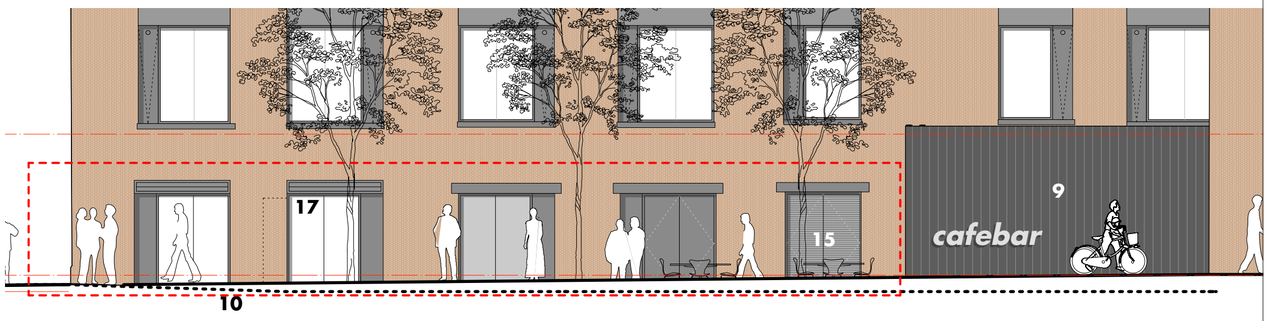


fig 43: minshull house - planning chorlton square elevation

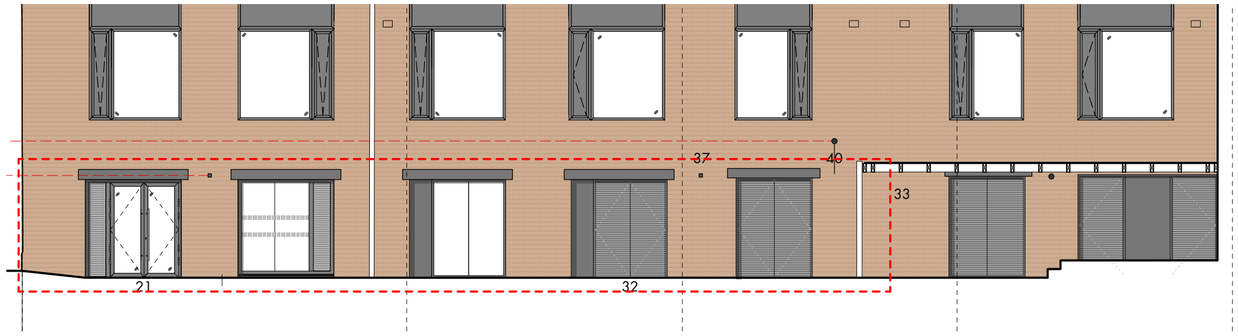


fig 44: minshull house - amended chorlton square elevation



fig 45: minshull house - planning chorlton square elevation

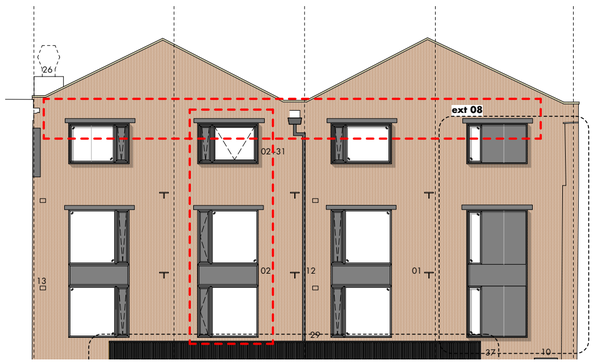


fig 46: minshull house - amended chorlton square elevation

key

change location highlighted for reference

03.00 internal changes





03.01 int 01 • loading bay structure

Change - Retention of loading bay transfer structure in Minto & Turner.

Minto & Turner has not undergone as many renovations as Minshull House, however one area of the building that has undergone significant change is the loading bay area to the Chorlton Street end of the building.

A large section of the existing floor has been removed and replaced by a lowered concrete slab to provide level access from Little David Street. The original structure has also been demolished/altered in this area; resulting in a large, brick pier and reinforced concrete beam sitting centrally to the space, smaller brick piers and dwarf walls to basement level, and remedial concrete encasement to 2no. original columns.

The alterations also extended to the removal of a substantial amount of the external masonry wall in order to create a large loading bay entrance with a roller shutter.

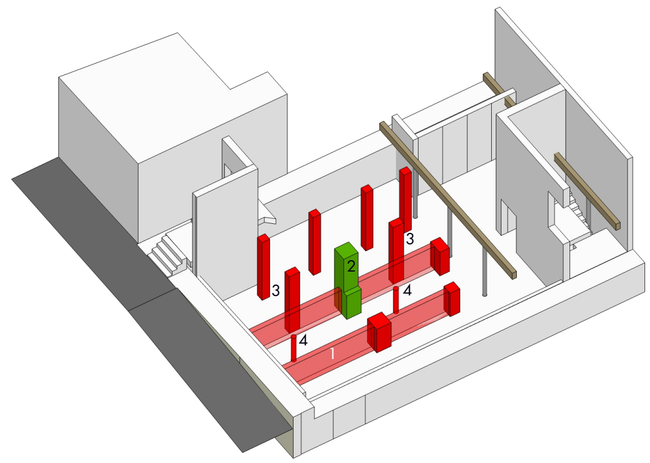


fig 47: existing transfer structure • loading bay basement

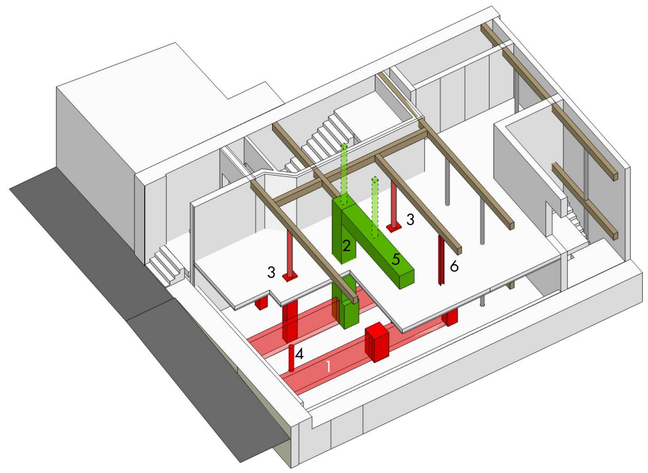


fig 48: existing transfer structure • loading bay u.ground floor

1 - masonry dwarf walls (supporting loading bay floor)
2 - central brick pier
3 - 2no. cast iron columns encased in concrete
4 - 2no. cast iron columns cut off
5 - r/c beam
6 - I-section support to beam

key

structure (to be removed)

transfer structure (to be retained)

columns @ 1st floor (to be retained)



A loading bay structural modifications • basement



B loading bay structural modifications • ground



C loading bay structural modifications • ground

figs 49: views around existing loading bay arrangement

03.01 int 01 • loading bay structure (cont.)

Following the overlay of the retained loading bay structure on the planning scheme, areas became cut off by the location of the transfer structure creating awkward, tight spaces.

The layouts were reviewed and revised in order to address these issues and potential clashes between new walls and the existing transfer structure. The alternative commercial stair/lift arrangement allows the enclosure walls to run up past the existing concrete beam.

The revision to the stair/lift arrangement has allowed the commercial entrance to be tucked into a corner; opening up more of the floorplate. It also frees up a window to the floorplate; improving active frontage to Chorlton Street and allowing more natural light into the unit.

The revised structural approach to this area is to retain the existing timber beams and the reinforced concrete transfer beam to gridlines B-F to the upper ground unit and gridline E/F in the lower ground unit. The reinstated upper ground floor plate is proposed to be supported by new steel beams. The beams will be supported by three new steel columns and padstones within the retained pier.

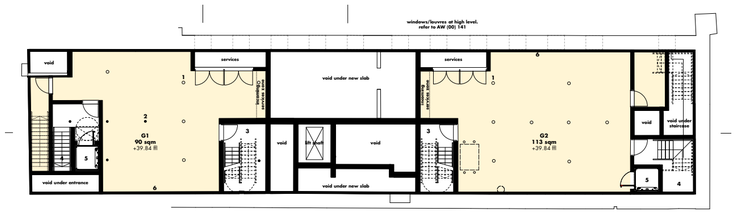
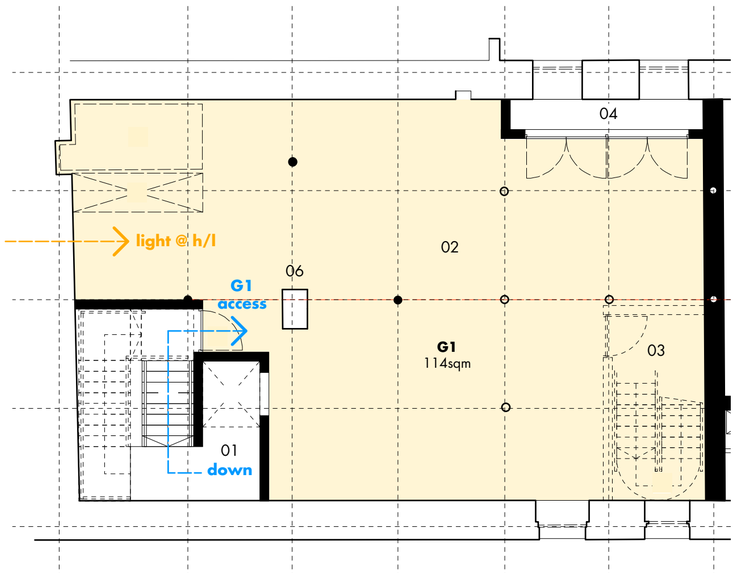


fig 50: planning stage basement level plan • units G1/F1

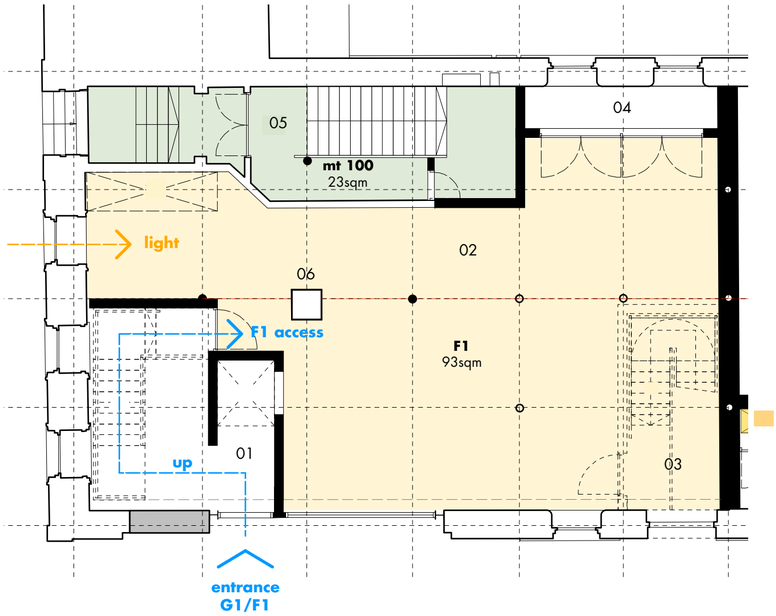
key

01 commercial unit entrance
02 commercial unit
03 secondary escape stair (tenant fit-out if required)
04 commercial services - condensers
05 apartment mt100 entrance
06 retained trasnfer structure

- retained timber beam
- retained reinforced concrete beam (transfer structure)
- new steel beam
- retained column
- new column

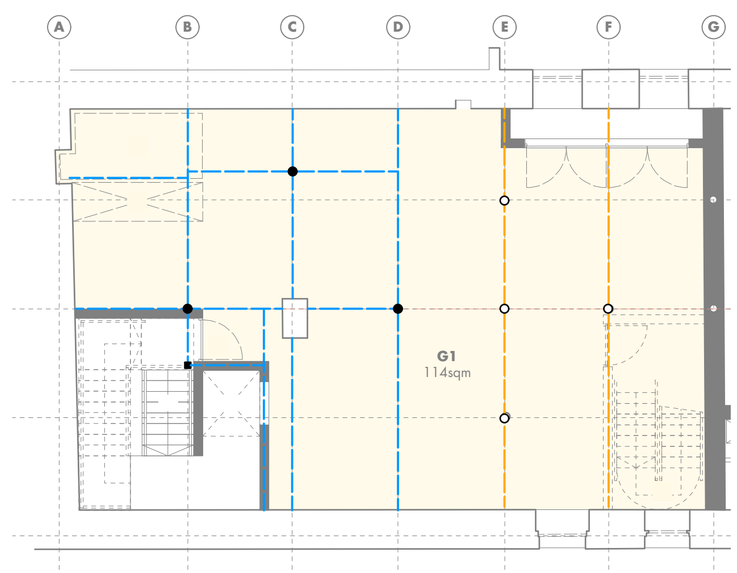


lower ground (unit G1)

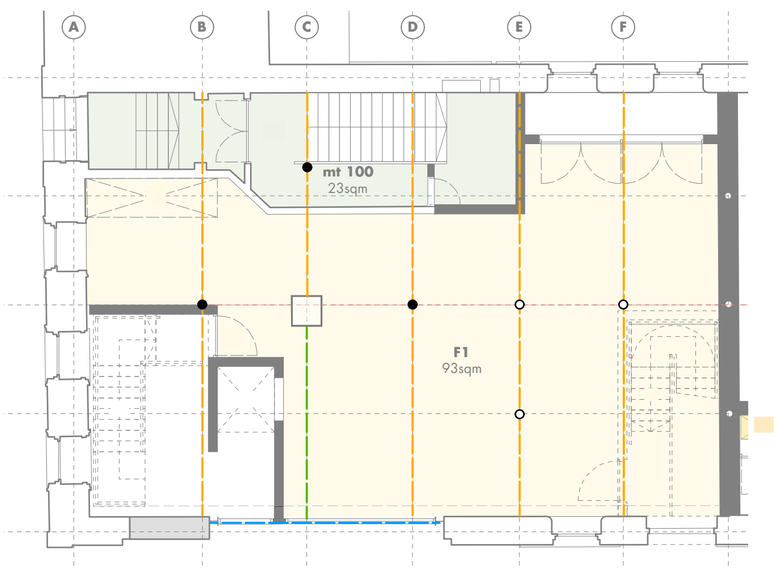


upper ground (unit F1)

fig 51: revised commercial level plans • units G1/F1 (Work Stage 3+)



lower ground (unit G1)



upper ground (unit F1)

fig 52: revised commercial level plans • structural strategy (Work Stage 3+)

03.02 int 02 • minto core redesign

Change: Core redesign to retain more of the existing central spine wall in Minto & Turner.

Following a peer review of the structural strategy, the removal of a large portion of the central spine wall was highlighted as problematic. The structural engineer indicated that the perimeter walls are assisted by two internal, masonry cross walls; providing lateral stability to the building, and that the central wall plays an important role in reducing the stresses by splitting the horizontal span in half (as highlighted on fig xx).

The core proposals at planning stage relied on the removal of a substantial section of this existing spine wall to allow the stair to rotate 90 degrees and sit within a structural bay. It also provided a greater plan depth for the apartment directly behind the stair.

Unfortunately in addition to removing historic fabric, this approach also undermined the lateral stiffness of the building causing the Project Team to review the core layout.

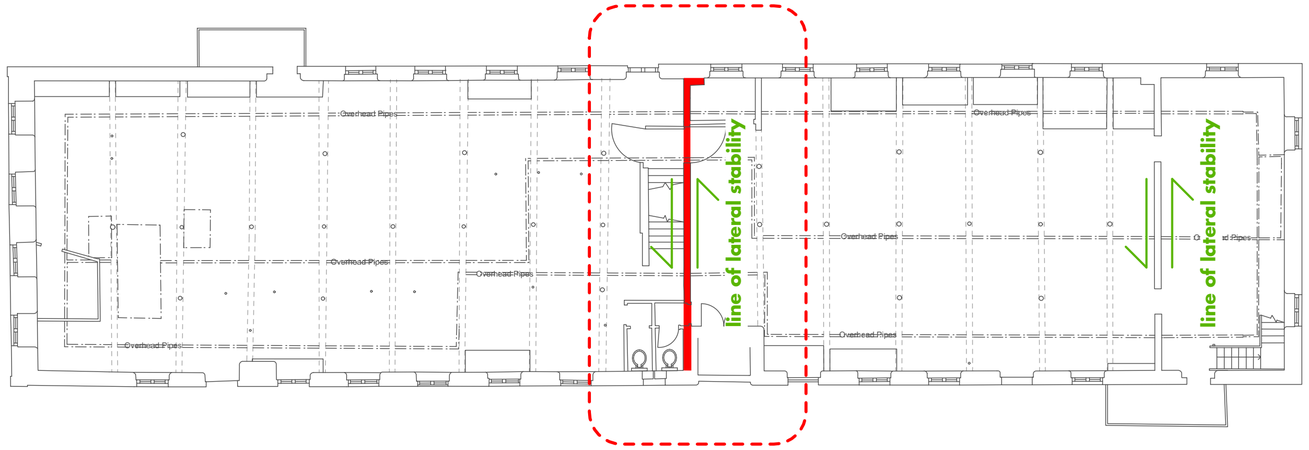


fig 53: existing plan • lateral stability diagram

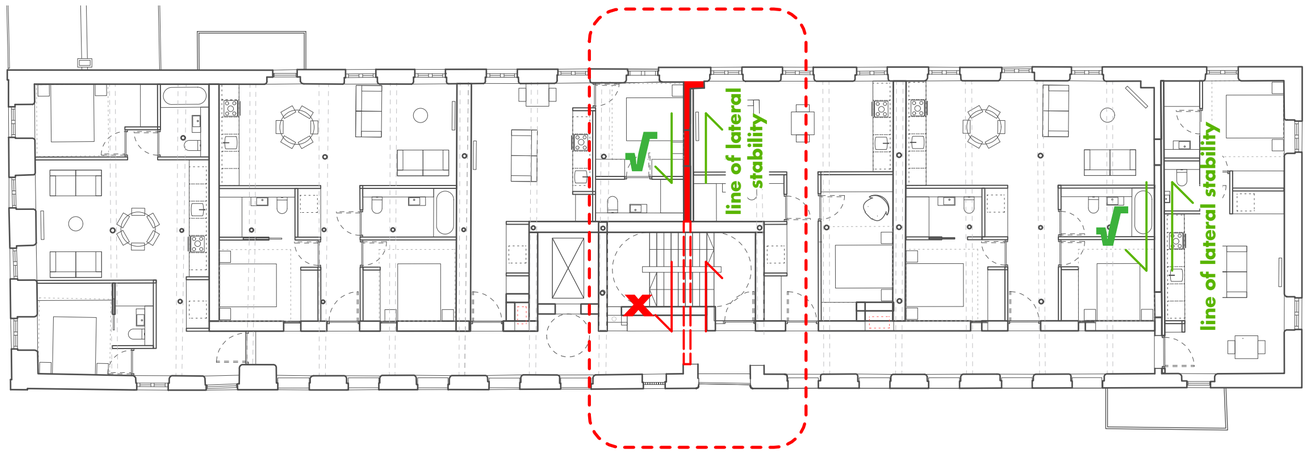


fig 54: proposed upper level plan (planning) • lateral stability diagram

03.02 int 02 • minto core redesign (cont.)

minto + turner core • layout changes

Core proposals have been reviewed and revised in order to retain as much of the existing central spine wall as possible and maintain the buildings existing lateral stability.

Main changes to the core arrangement are as follows:

A - Rotation of the residential stair

The key change to the core proposals is the 90 degree rotation of the stair, which now occupies a similar position to the existing timber stair (already proposed for demolition due to poor condition and its lack of compliance with Building Regulations). The new, compliant stair is located within the structural created between a column/beam line and the central spine wall; both of which remain exposed to the staircase.

B - Re-location of the new lift

The proposed new lift has also been relocated to make use of the existing spine wall as part of its enclosure. Shaft dimensions have been reviewed in order to expose a column/beam line within the commercial stair at lower floors and within an apartment on upper levels.

C - Refuse store arrangement

A resultant change from the above core alterations was the sizing/plan form of the refuse store. The original planning scheme relied on a smaller number of larger bins. With the refuse route through the servicing entrance comprised through the re-use of a narrow existing aperture, larger bins would need to be routed through the main entrance lobby/access doors.

The revised core layout provides space allowance for smaller bins which can be routed out through the service entrance; shortening the transit distance to Little David Street and the external collection point.

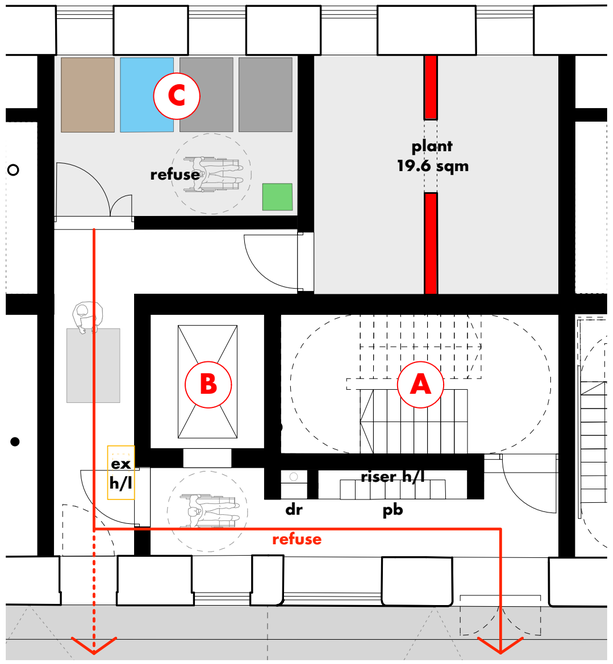


fig 55: ground floor core layout • planning stage

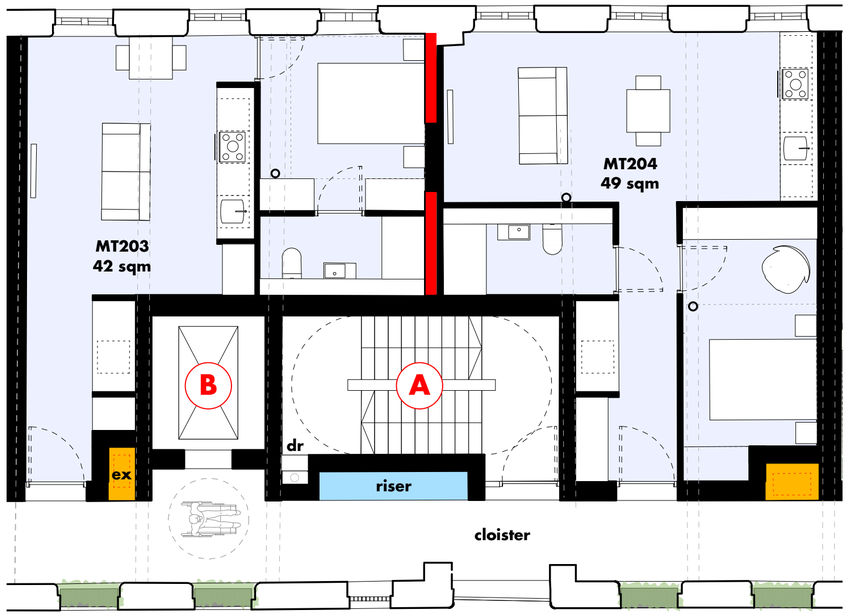


fig 56: typical floor core layout • planning stage

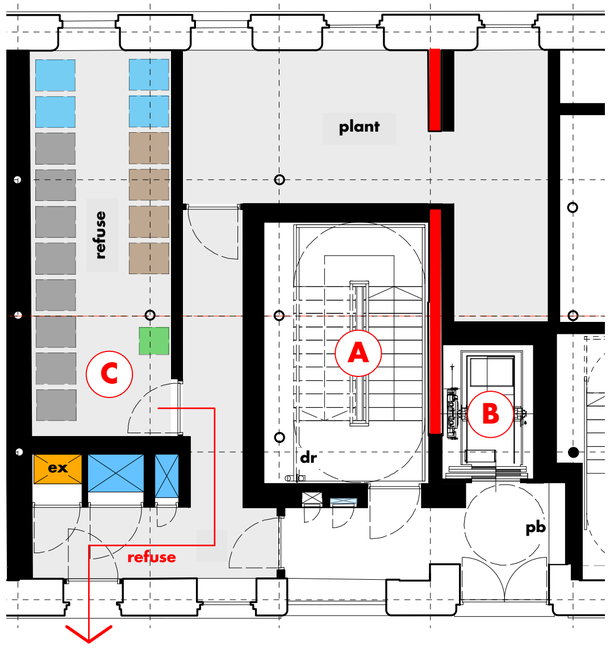


fig 57: ground floor core layout • proposed alternative (Work Stage 3+)

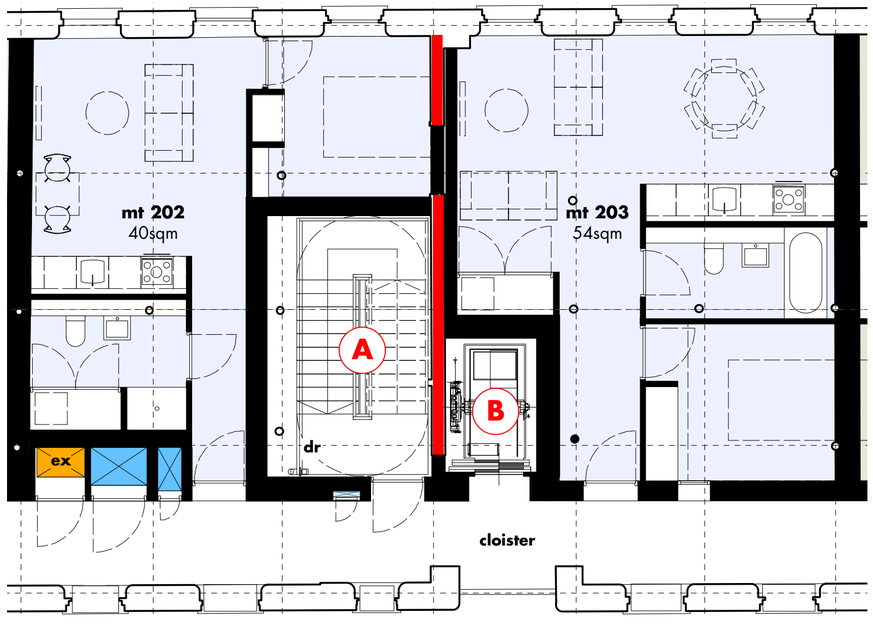


fig 58: typical floor core layout • proposed alternative (Work Stage 3+)

03.02 int 02 • minto core redesign (cont.)

C - Refuse store arrangement (continued...)

The revised refuse store and switch to smaller bins also improves refuse storage across the Listed Buildings scheme (see adjacent tables).

	waste type	weekly volume generated (v)	capacity required (litres)	no. of 1100L bins required	no. of 1100L bins provided	no. of 240L bins provided	capacity provided (litres)
	general	v = 59 * 110	6490	5.9	6	-	6600
	pulpable	v = 59 * 55	3245	2.95	3	-	3300
	co-mingled	v = 59 * 55	3245	2.95	3	-	3300
	organic	v = 59 * 5	295	0.26	-	2	480
totals			**13275**				**13680**

fig 59: refuse schedule • planning scheme

	waste type	weekly volume generated (v)	capacity required (litres)	no. of 1100L bins provided	no. of 360L bins provided	no. of 240L bins provided	capacity provided (litres)
	general	v = 58* 110	6380	4	8	-	7280
	pulpable	v = 58 * 55	3190	2	4	-	3640
	co-mingled	v = 58 * 55	3190	2	4	-	3640
	organic	v = 58 * 5	290	-	-	2	480
totals			**13050**				**15040**

fig 60: refuse schedule • alternative proposed scheme

03.03 int 03 • tanking system (minto)

Change: Change in basement tanking system to egg crate/ cavity drain tanking system.

In Minto & Turner, there is a partial basement condition; with the lower ground floor level set approximately 1300mm below street level. As the lower ground floor spaces are designated for commercial use, proposals have been developed to provide a completely dry environment to Grade 3 to 'British Standard 8102 Code of practice for protection of below ground structures against water from the ground' where protection and guarantee is provided against water ingress. This is of particular importance to the Minto & Turner building due to its proximity to the adjacent canal.

At planning stage, a liquid applied system was proposed, however specialists have advised that a drained protection water control system comprising cavity membrane vapour barriers installed to all walls and floors would be more appropriate given the building type and intended use. In association with a planned series of drainage channels concealed within the floor construction beneath, linked to a sump pump system. This system would be installed to the underside of the upper ground floorboards in the commercial units and to 150mm above external ground level within commercial entrances. Final internal finishes to conceal the system are to be installed by the tenant.

Additional advice from the specialist highlighted potential issues with the existing suspended timber floor with regard to its resistance to water pentration, due to the inherent gaps and holes. Therefore in order to provide a continunous structure and ensure robustness of the basement waterproofing; proposals rely on the removal of the existing timber floor and the installation of a new rc slab.

Approach considered acceptable with MCC in discussions regarding Condition 33j / LB Condition 6j application.

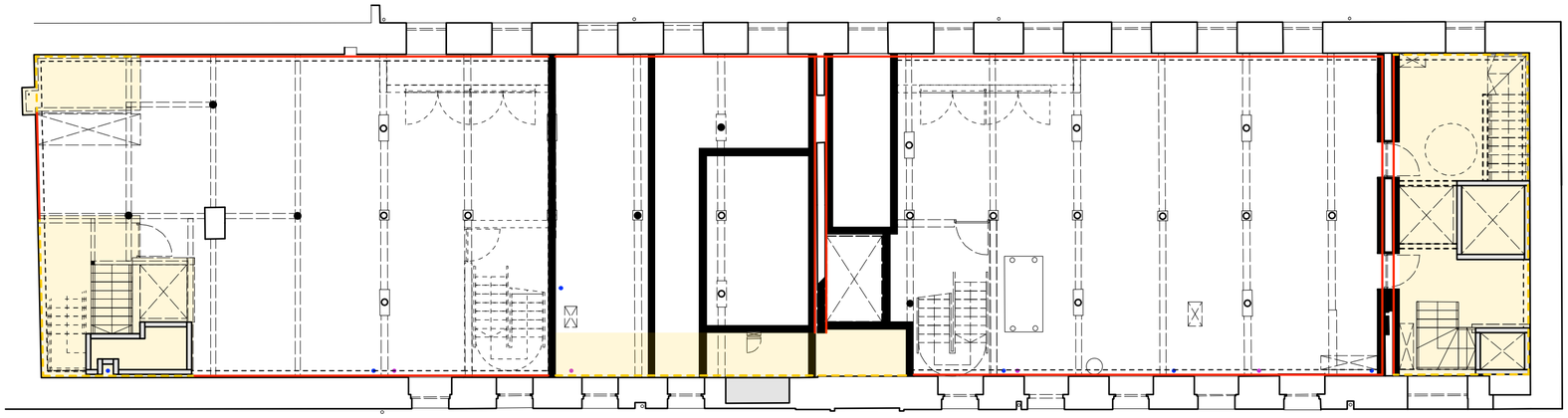


fig 61: minto & turner basement plan • tanking scope

key

- tanking to u/s u.ground floor
- tanking to 150mm above highest external ground level
- entrance spaces

detail key

01 hardcore
02 sand blinding
03 dpm
- 1200 gauge
04 rc slab
- 150mm thick
05 tanking system
06 insulation
- newton fibran xps 500-c closed cell slotted insulation board
07 screed
08 future tenant floor zone
- finishing allowance made
10 rc slab
- built off dwarf block wall sub-structure
11 void filler
- finish void filler 10mm shy to underside of upper slab
12 beam + block flooring
15 blockwork
16 dpc
17 tape
- lapped to dpc and cavity drain membrane
- spec. to be determined by specialist sub-contractor
24 drainage channel
- ref. drawing KAM-SKM-MT-B1-DR-A-(23)200 for drainage channel access points
27 external finishes
28 reconstituted stone cill
- laid on cement bedding
29 dpc
- lapped over existing wall and under cill
- lapped down cavity drain system and taped

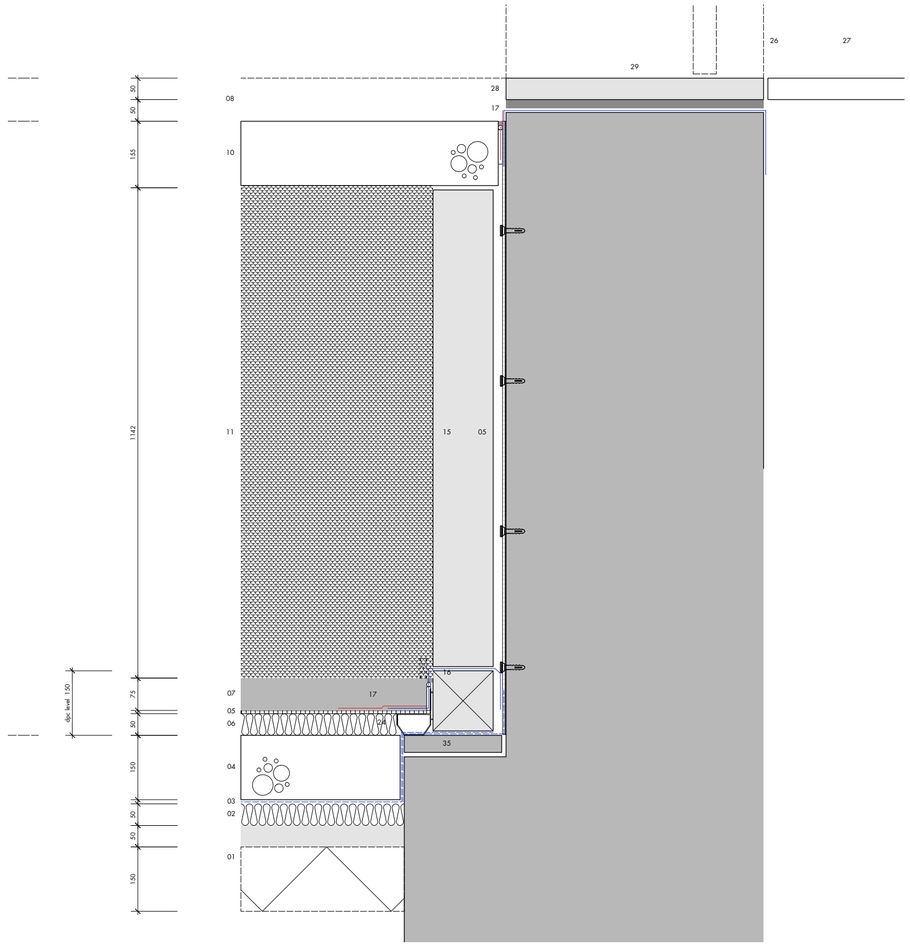


fig 62: minto & turner basement • tanking detail section @ entrance

03.04 int 04 • underdrawing of soffits

Change: Additional proposals to underdraw existing floorboards in both of the Listed Buildings.

At planning approval, the design intent was to expose the underside of the existing timber floorboards by protecting them with a clear, fire retardant lacquer. Unfortunately during detailled design it came to the Project Teams attention that the previously specified product lacked the required adequate test data to achieve required 60 mins fire protection (REI).

A number of alternative products were sought out and evaluated (as outlined in a justfication document issued to MCC under Condition 33o), however all were disproven to provide the required protection and therefore rejected by Building Control and the Fire Consultant.

"As the proposed use for this building is considered to be a change of use then full compliance with the current Building Regulations is required. For the Kampus scheme the design standard BS9991:2015 has been adopted which sets out the performance requirements to meet the Building Regulations. With the building being less than 18m then the building is required to provide compartment floors that achieves a fire performance of 60 minutes (loadbearing, integrity and insulation) when tested to the relevant parts of BS476. While the floors are existing they are still required to fulfil the fire performance of 60 minutes. If any products are to be considered that could be applied to the timber to achieve the 60 minutes then will need to be fully tested to reflect the current build up." [Joint statement from Assent Building Control and BB7 Fire Engineering].

As the Project Team were unable to obtain sign-off for a lacquer/paint protection, the Structural engineer undertook calculations to ascertain charring rates and the inherent performance of the untreated timber elements. In Minto & Turner, the existing timber beams were substantial enough to withstand 60mins therefore soffit proposals were developed with the plasterboard ceiling sitting between beams, in order that a proportion of the timber could be exposed. In Minshull, charring calculations could not justify the exposure of the existing timber joists, therefore soffit proposals were developed with the plasterboard ceiling underdrawing the joists with the underside of the cast iron beams and decorative fin plates to column heads remaining exposed.

The above was discussed and agreed by MCC via Condition 33o/LB Condition 6o.

03.05 int 05 • strong floor removal

Change: Omission of independent steel floor/strong floor above existing floorboards to raised access floor above the existing floorboards and independent soffit below.

At planning stage, the Design Team had proposed to install an independently supported 'strong floor' at level 01, which provided the acoustic requirement performance above the existing floorboards and allowed the exposure of the underside of the boards to be exposed within the commercial unit below.

As it became apparent that exposing the floorboards generally would not be accepted by Building Control and the Fire Engineer, the Project Team questioned the need for the intrusive structural works required to imbed the proposed new steelwork of the strong floor within the external walls. The steelwork was therefore designed out and a pedestal raised floor system proposed to maintain the deep void for transitions/offets of residential drainage and rainwater pipes.

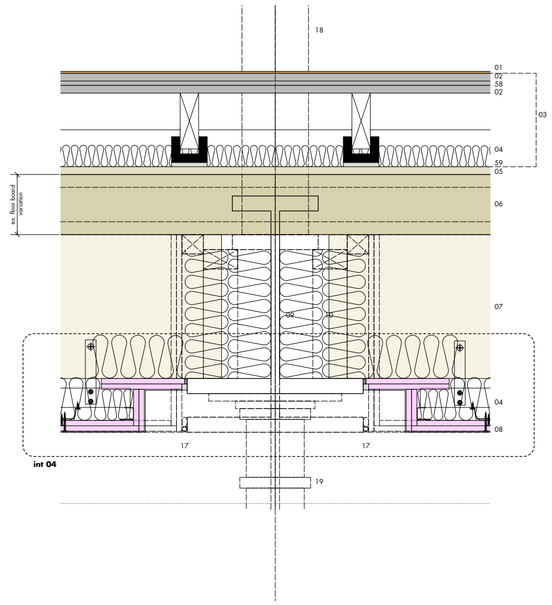


fig 63: minshull house • typical residential floor build-up

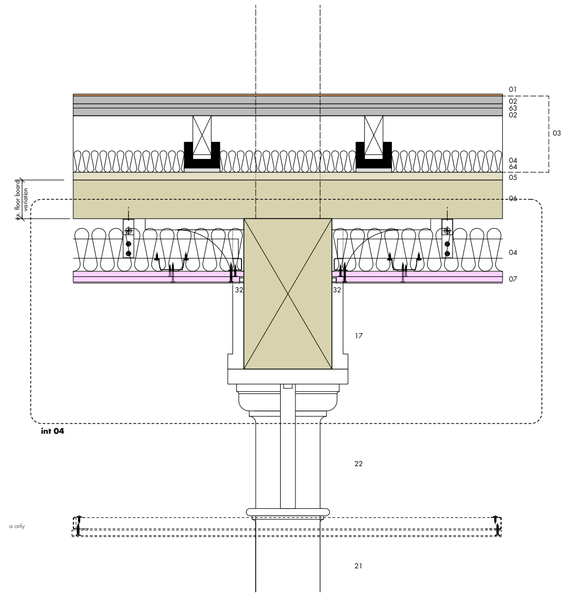


fig 64: minto & turner • typical residential floor build-up

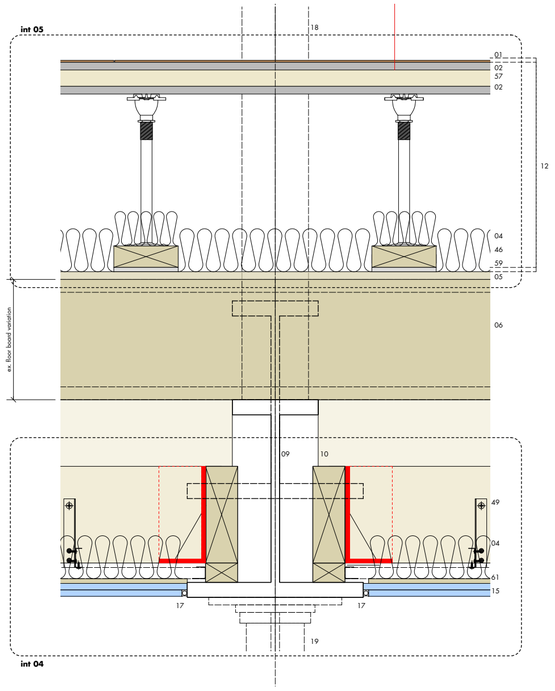


fig 65: minshull house • commercial to residential floor build-up

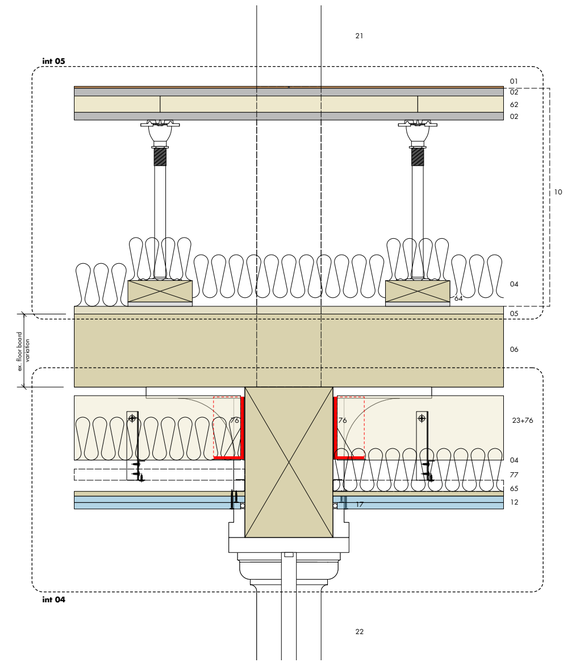


fig 66: minto & turner • commercial to residential floor build-up

03.06 int 06 • connection to CHP

Change: Connection of both Listed Buildings to site wide CHP/energy centre.

In order to omit the secondary plant deck, some internal space needed to be found for tenant plant. A site wide CHP is proposed to serve the new build elements of the wider Kampus development; with a deciated Energy Centre located in Block E.

The feasbility of connecting the Listed Buildings to the Energy Centre was reviewed, where previously they had their own gas fired boilers located in the Minshull House plant room. Space allowance was found within the energy centre resulting in no change to the internal layout of Block E.

As a direct result of linking to the Energy Centre, the plant room requirement for the Listed Buildings reduces; whereby the cold water tank can be removed completely and boiler plant can be reduced by 25%.

The area gain from the connection to the Energy Centre (image 01) unlocked potential space to house tenant supply equipment for unit G5 (image 02). A riser would still be required to take kitchen extract air to roof-level, as currently the strategy for Minto & Turner.

The strategy was developed in tandem with the core arrangement revisions discussed in a previous section.

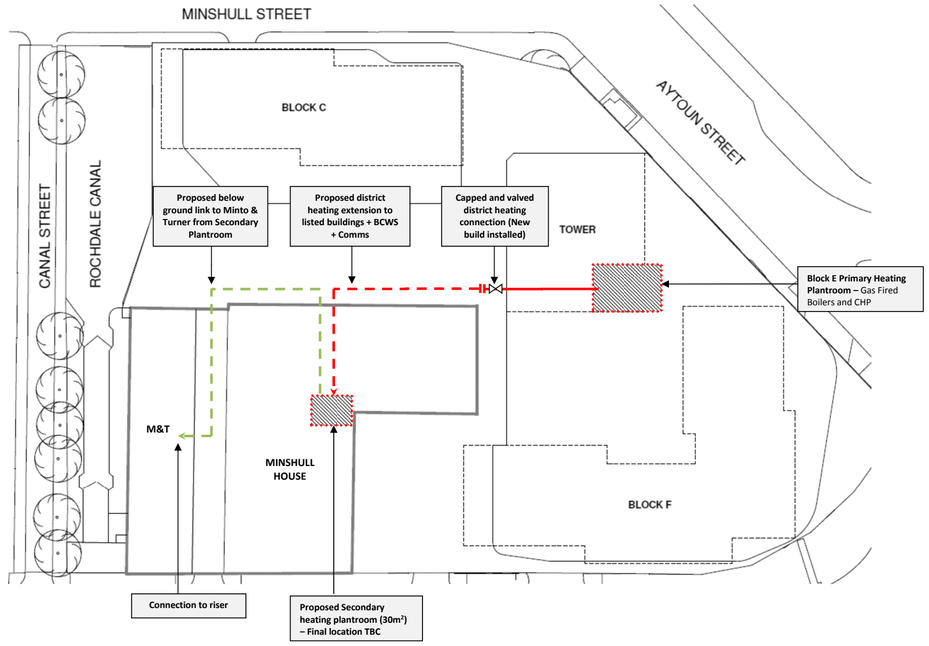


fig 67: 01 indicative incoming service routes from block e to listed buildings

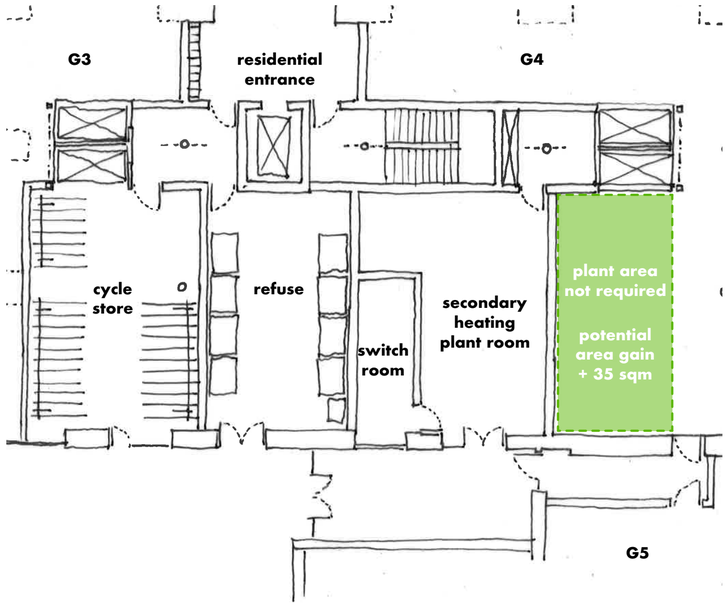


fig 68: 01 development sketch • potential area gain from connection to chp

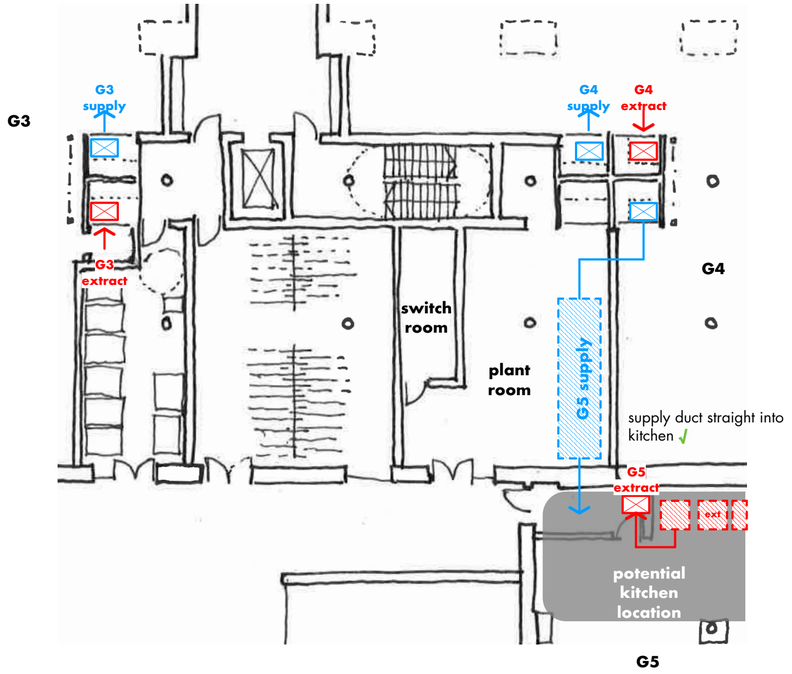


fig 69: 02 development sketch • potential relocation of G5 plant to landlord plant room

03.07 int 07 • service distibution

Change: Service distribution to core corridor spaces in Minshull House to be split across h/l and l/l. All high level at WS3.

At planning stage, service distribution to Minshull House was intended to all be at high level. During design development of the core spaces, and further input from the new MEP consultant regarding the pipework sizes and required spacing, it became apparent that there would be limited scope to run all the services overhead due to spatial constraints around decorative fin plates to existing column heads.

The Project Team therefore replicated the approach originally adopted for Minto & Turner, located all electrical, data and comms within the raised floor, leaving all mechanical pipework exposed at high level.

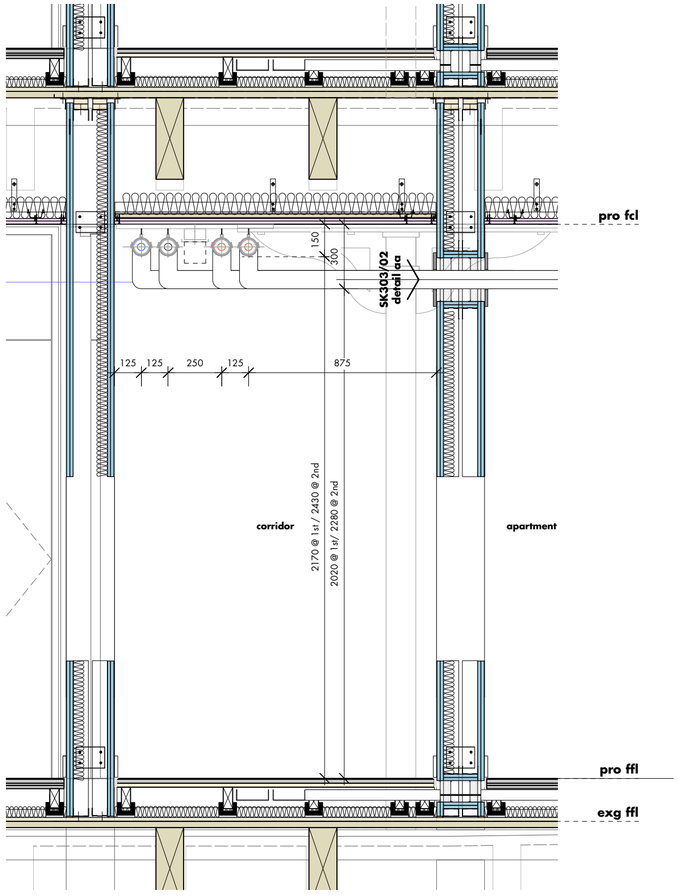


fig 70: proposed section through secondary corridor showing h/l services

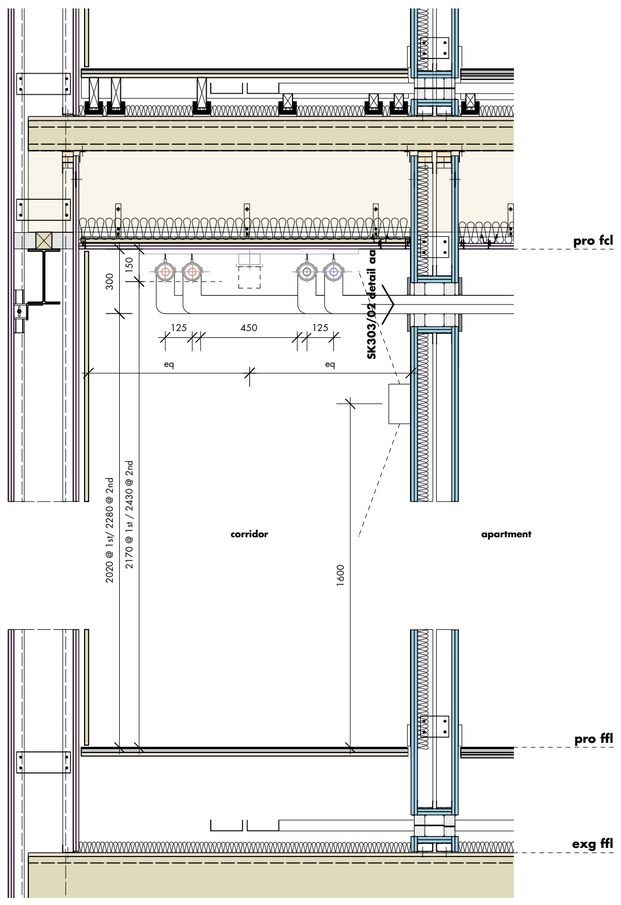


fig 71: proposed section through main corridor showing h/l services

03.08 int 08 • minshull core redesign

Change: Core redesign to retain more of the existing central spine wall in Minto & Turner.

Walk-rounds following the soft strip of the building highlighted the complexity of the roof structure; particularly at the valley. The existing structure comprises of a double beam arrangement providing support to the valley and incoming trusses (see photographs). At the mid span between columns there is a timber 'crux' support which carries the primary rafters, and a cast iron 'shoe' with ties back towards the column heads.

Proposals submitted at planning indicated a central core arrangement sitting directly underneath the valley beam support. The arrangement impacted all structural bays; relying on the removal of the cast iron ties; questioning the viability of retaining other existing structural elements.

Considering the heritage value in the retention of these elements and the desire to alleviate the considerable amount of temporary support required to achieve the planning scheme, the Project Team developed an alternative solution.

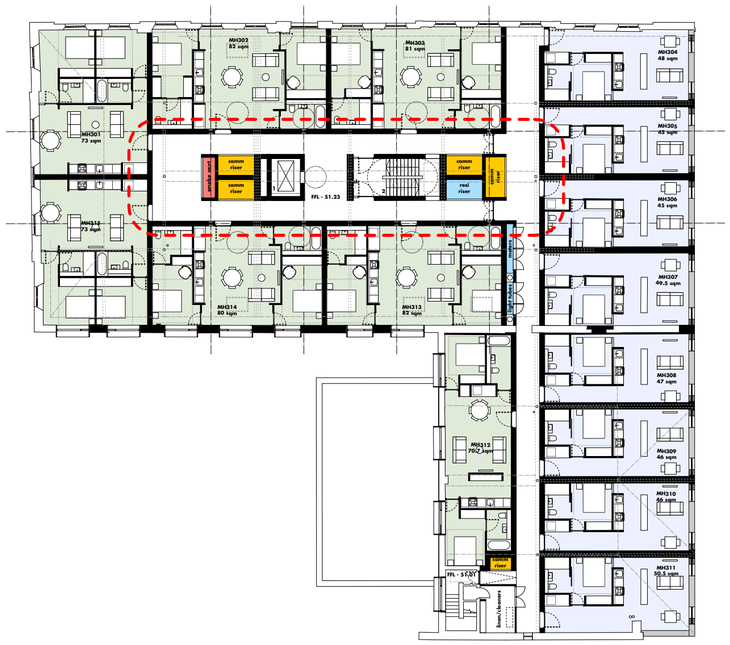


fig 72: 01 planning scheme • third floor plan

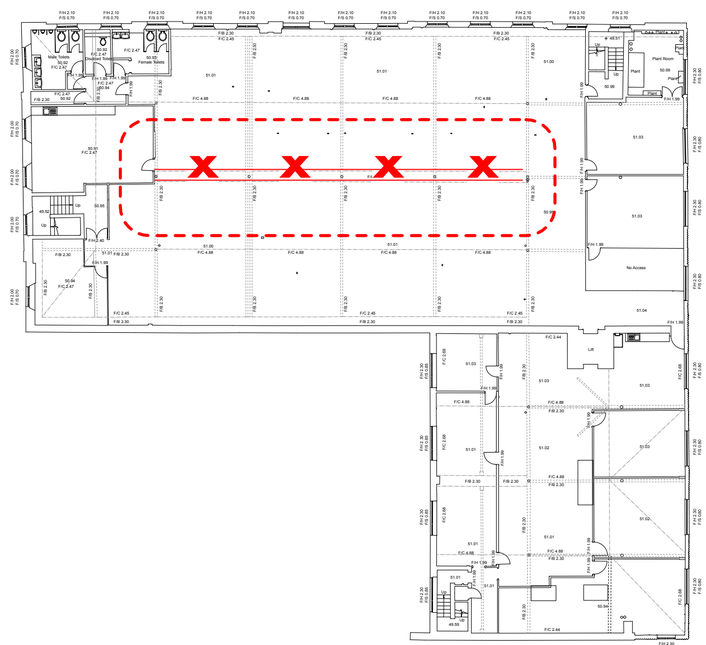


fig 73: 02 bays impacted by proposals • existing third floor plan







fig 74: 03/04/05 photographs of existing double beam/cast iron tie arrangement at the valley

03.08 int 08 • minshull core redesign (cont.)

The aim of the revised proposals was to maintain the simple centralised core whilst minimising the impact on the existing structure. The core arrangement was to be re-configured around the existing features, rather than rely on their removal; however there would be some intervention required locally for items needing to penetrate the roof (lift overrun and smoke shaft).

The adjacent development sketches show an approach that limit major structural works to valley to one central bay only. The core rearrangement minimises impact on existing structure allows a greater number of existing structural elements to be retained; particularly the more interesting beam elements and roof structure including the timber 'cruxes' and column heads. This has been achieved by separating the vertical elements (risers, lift and smoke shafts) and allowing them to pass alongside structural elements.

An 'exclusion zone' to column heads has also been considered in the revised arrangement in order to expose as many of these as possible.

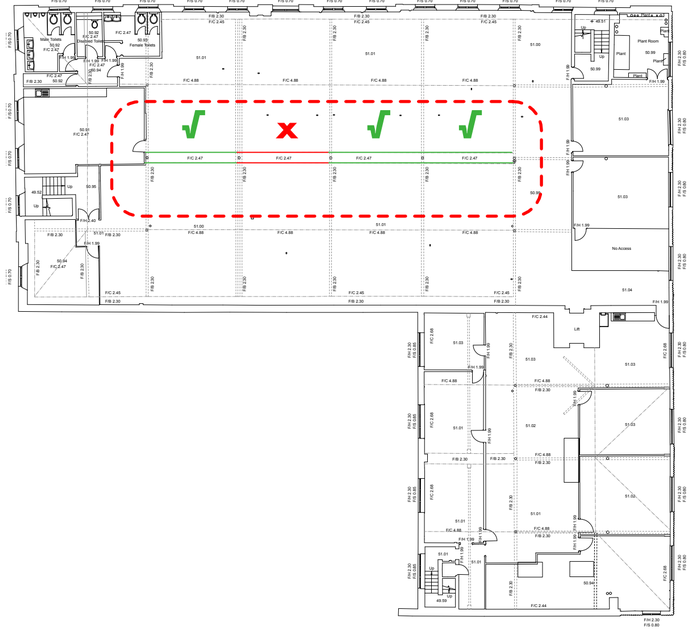


fig 75: 03 bays impacted by revised arrangement • existing third floor plan

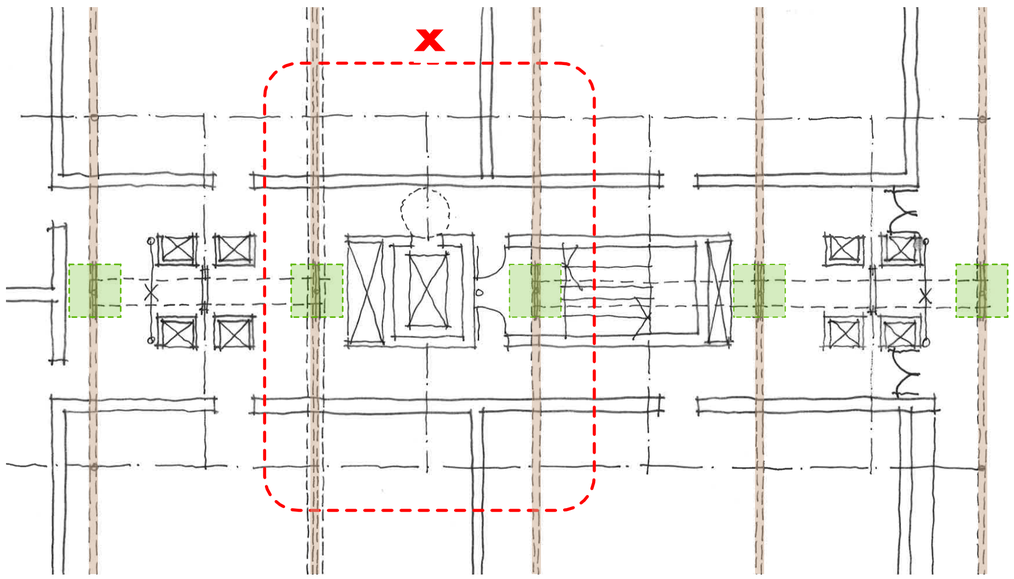


fig 76: 01 development sketch • third floor plan

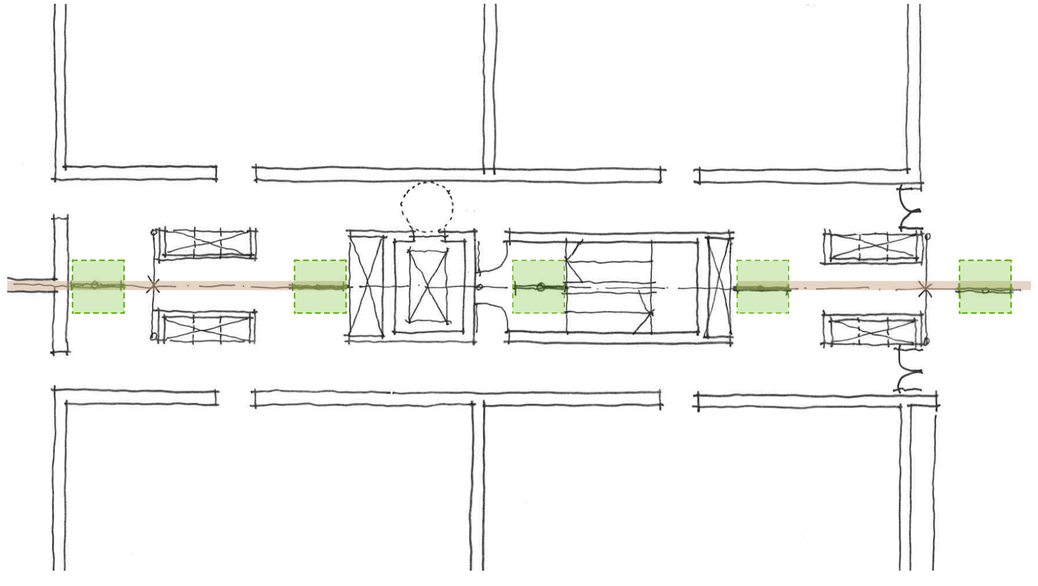


fig 77: 02 development sketch • first/second floor plan

key

column head exclusion zone

existing truss/beam

03.08 int 08 • minshull core redesign (cont.)

In addition to limiting major structural works to central bay only and exposing more of the existing structural elements, the new arrangement also reduces the requirements for new structural elements.

The main plant deck sitting above the roof valley can now be supported off new structure within central core walls; cantilevering out above roof level. New braced elements at either end of the core are expressed in the similar fashion to the existing.

The 'exclusion zone' approach to existing column heads has also been adopted at ground floor level, with back of house spaces working around them to keep them exposed and avoid awkward junctions.

The arrangement also now locates the lift centrally to the entrance space; improving wayfinding for visitors to the building.

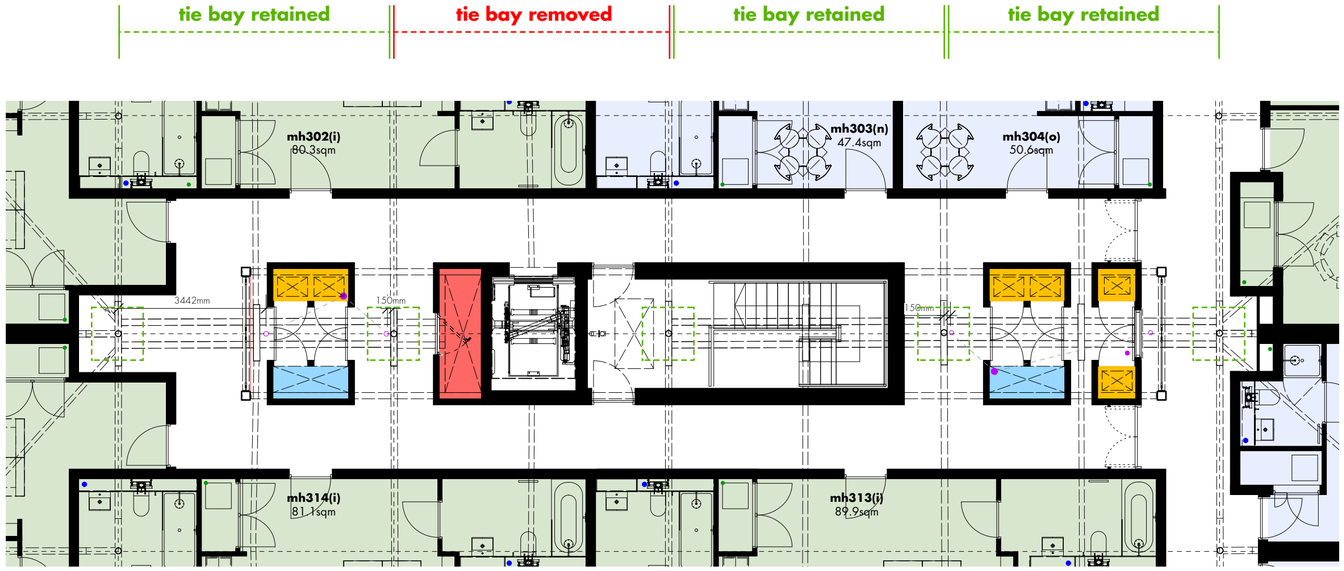


fig 79: 01 revised core arrangement • third floor plan (Work Stage 3+ development)

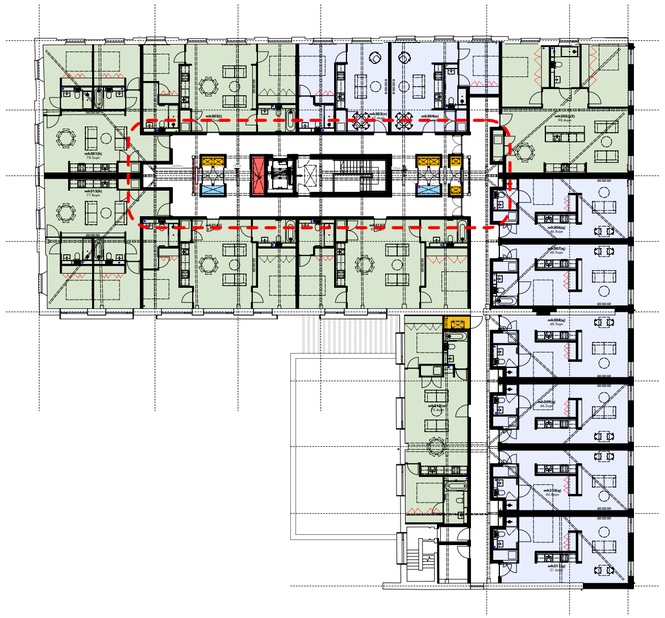


fig 78: 03 key plan • typical upper floor (Work Stage 3+ development)

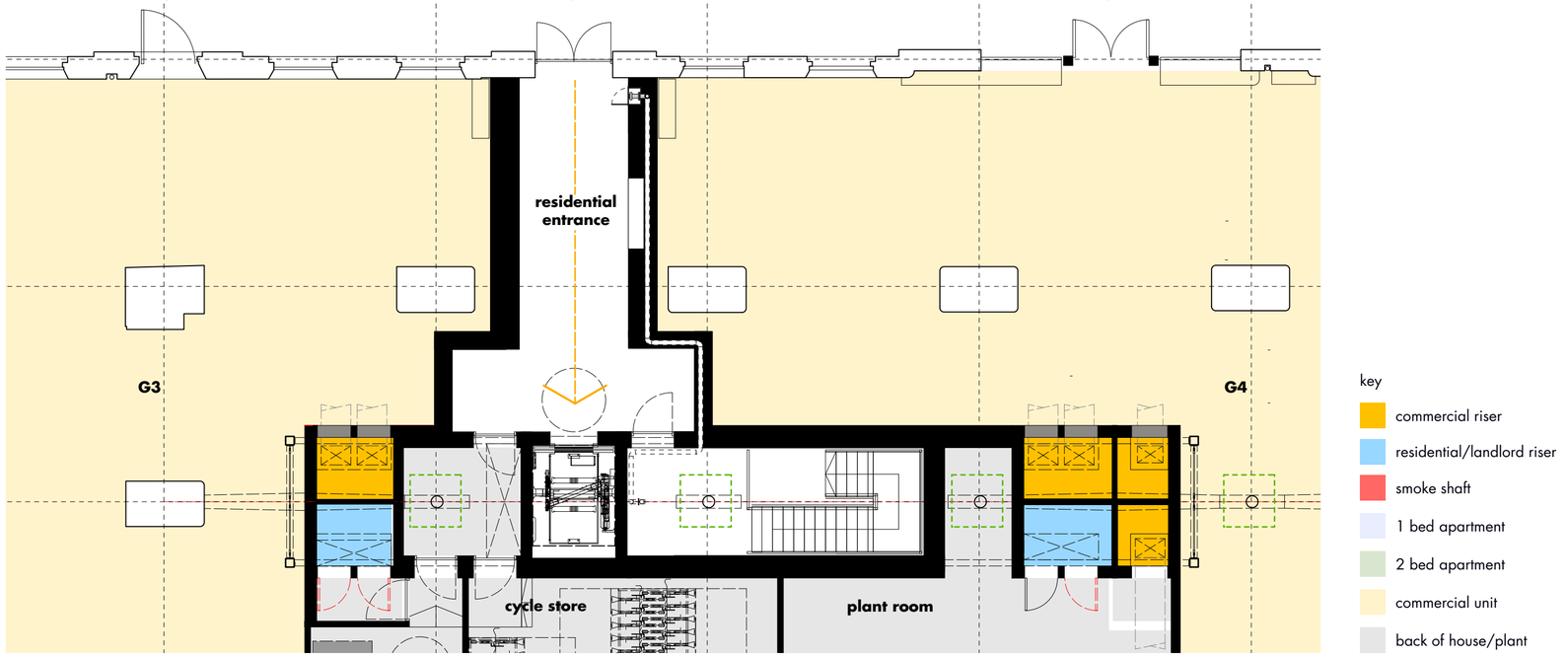


fig 80: 02 revised core arrangement • ground floor plan (Work Stage 3+ development)

03.09 int 09 • retention of staircase walls

Change: Core redesign to retain more of the existing central spine wall in Minto & Turner.

Advice from new structural engineers (WML) following their peer review highlighted that some of the lateral stability to Minshul House is currently provided by a section of the north stair wall; an element proposed for demolition as part of the planning scheme (see adjacent diagrams).

WML validation of WS3 proposal determined that removal of this section of wall may not be justifiable for the following reasons:

- No clearly defined lateral stability path for the existing building
- Typically the perimeter masonry walls will provide the primary stability contribution
- At the rear of Minshull, the main perimeter wall terminates at 2nd floor
- For the rear elevation above 2nd floor, it is only the north stair that provides meaningful lateral stability contribution
- Removal of the north stair will require alternative stability load paths to main lateral stability.

Proposals were developed that aimed to retain the stair enclosure walls and maintain the existing lateral stability system. In these proposals, only the existing stair flights would be demolished and the retained brickwork elements would be exposed to the apartment. Initial sketches looked to maintain the consistent run of one bedroom apartments along the courtyard elevation (second and third floor - image 03 below), however this meant the masonry wall bridged the party wall and provided a route for flanking sound transmission.

As a result, options were developed which combined the two1 beds units into a 2 bed unit. The alternative scheme layout manages to retain the existing stair enclosure, utilising it as bathroom space. The external faces are to be left unlined and exposed to living and bedroom spaces.

Aside from retaining the alternative scheme maintaining existing stability system, it reduces any significant structural intervention; leaving only the removal of stair flights and introduction of floor joists, which can be supported off the existing walls. The alternative layout also allows some of the original cross bracing to be exposed, whereas previously this had been encased in a party wall (re: apartment MH305).

Total number of apartments overall and the mix has been maintained in the new proposals.

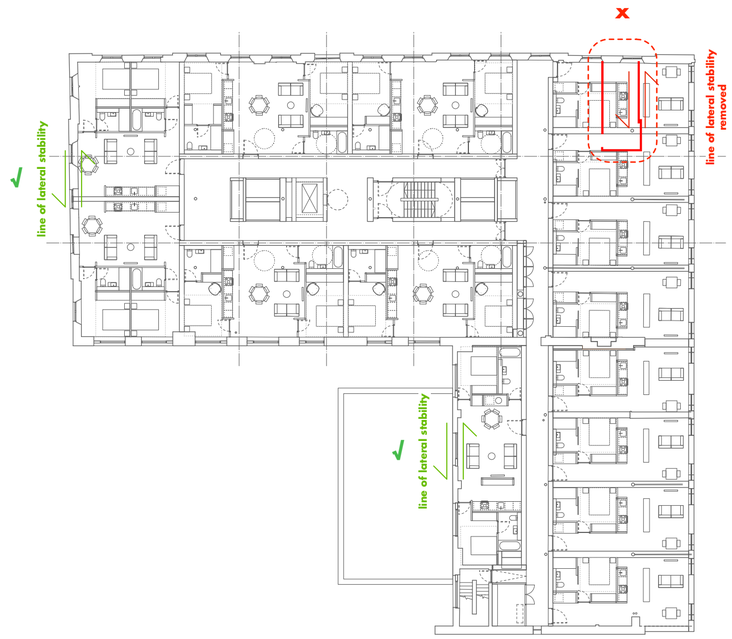


fig 81: 01 lateral stability diagram • proposed second floor plan (planning stage)

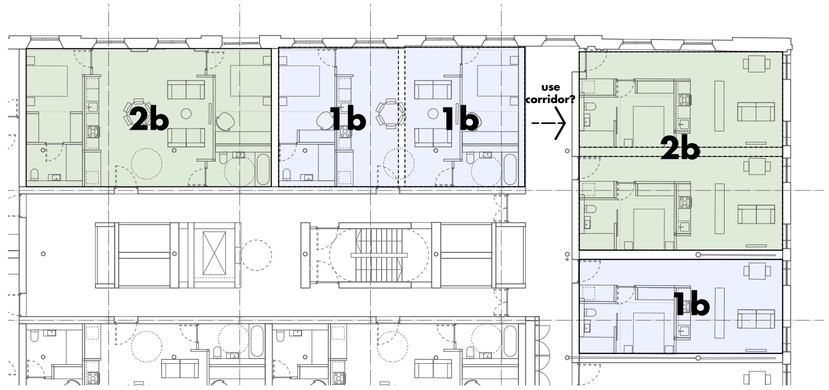


fig 82: 02 wall retention • development overlay

key

- commercial riser
- residential/landlord riser
- smoke shaft
- 1 bed apartment
- 2 bed apartment

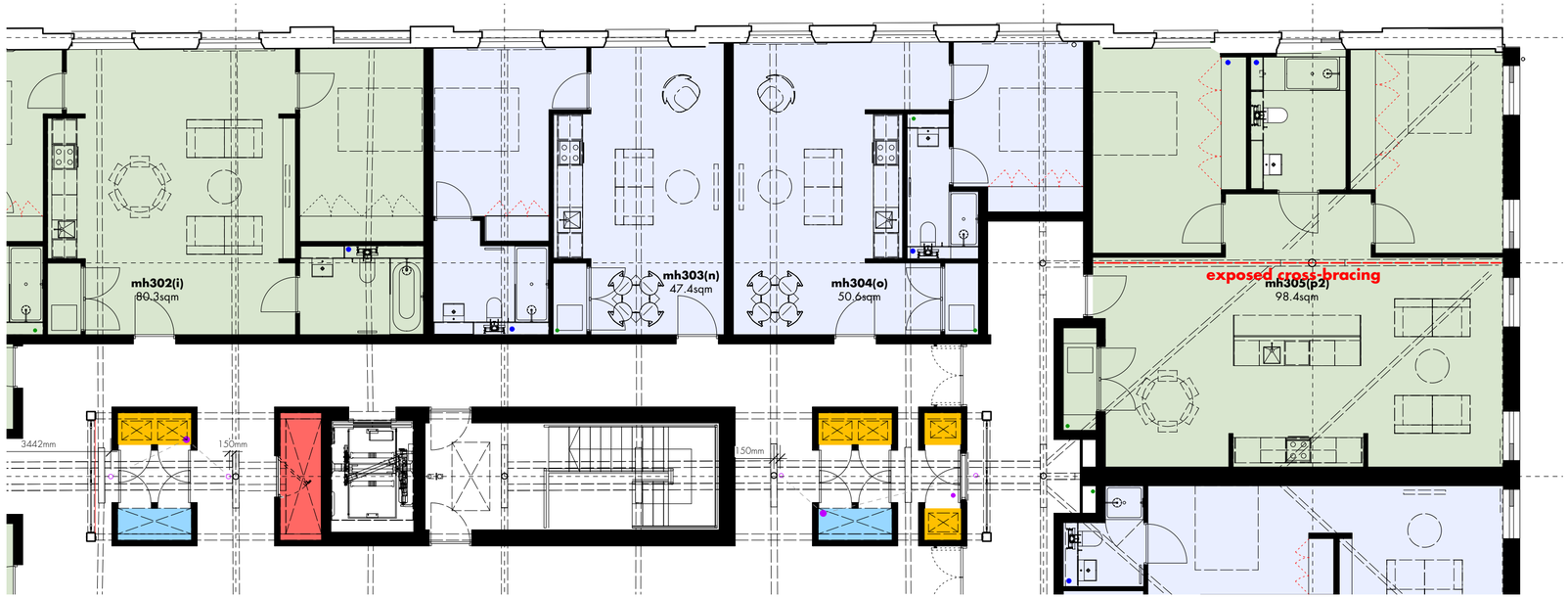


fig 83: updated proposal (work stage 3+)

03.10 int 10 • demolition of unoriginal slab

Change: Demolition of unoriginal composite deck slab at level 01 of Minshull House.

With the eliminate of the independent steel deck/ 'strong floor' at level 01, the Project Team began to explore alternative arrangements for the existing composite metal deck slab within the proposed G5 commercial unit. As this was unoriginal to the building and unfortunately did not provide enough concrete cover to perform as robustly as initially thought in regards to acoustic, an option to demolish and replace with a new r.c slab of a continuous thickness was reviewed. This option would provide a more robust acoustic performance as well as increased head height within the unit.

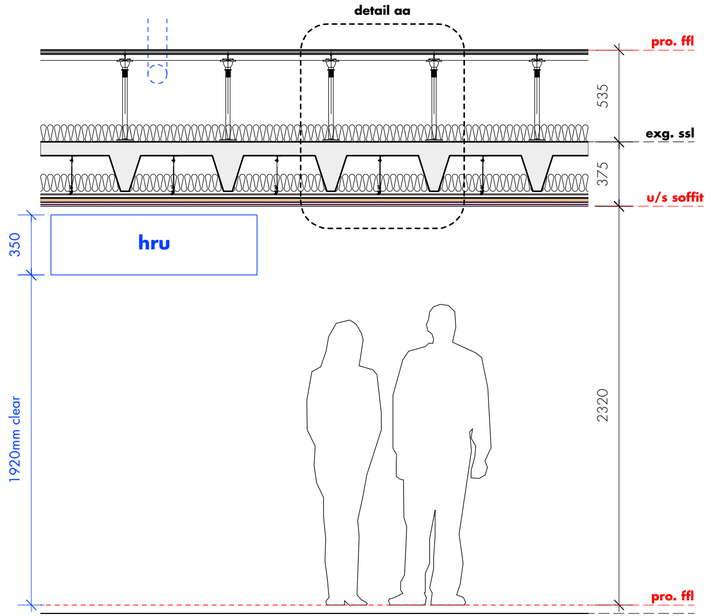


fig 84: minshull house G5 slab • planning stage - retention of metal deck

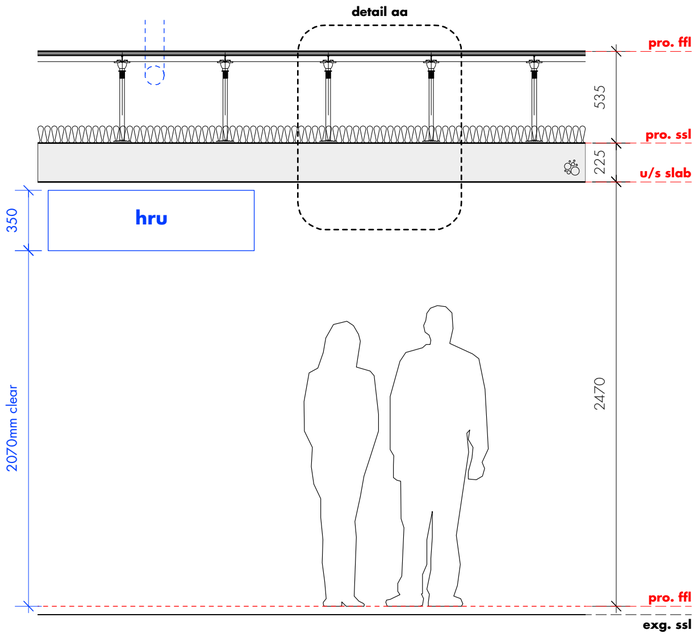
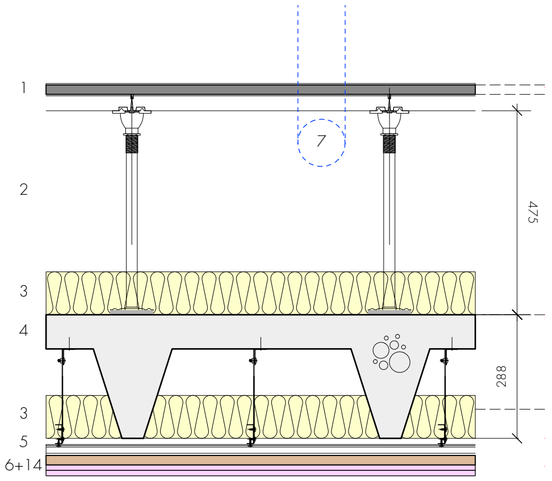


fig 85: minshull house G5 slab • amended design - installation of new r.c. slab



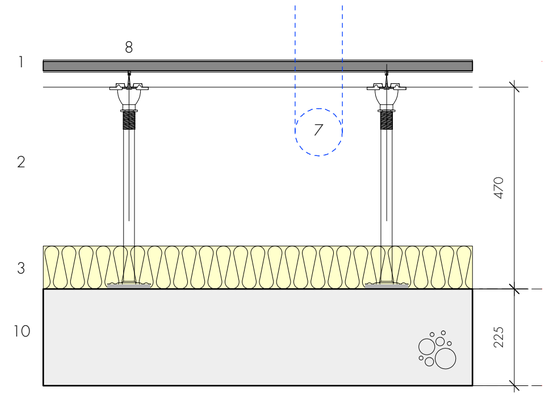
02 indicative detail section aa

01 22mm T&G cement particle board flooring (plus sealant if used as floor finish)
02 38mm kingspan acoustideck
- pedestal system
03 100mm insulation
04 existing composite slab
05 mf ceiling w/resilient hangers
06 2 x 12.5 fireline board
07 svp offset zone
08 floor finish as required
09 120mm screed
10 new rc slab - 225mm
11 1 x 18mm fermacell
12 acoustic cradle and batten floor
13 50mm insulation
14 18mm ply
15 strong floor construction - 250mm zone

√
- acoustic separation provided for commercial use
- existing slab retained/reduced demolition
- drainage offset zone provided at first floor
- fire compartmentation provided with underdrawn soffit

?
- allowance for ply pattress throughout for tenant services fit-out

X
- low head height under tenant services



02 indicative detail section aa

01 22mm T&G cement particle board flooring (plus sealant if used as floor finish)
02 38mm kingspan acoustideck
- pedestal system
03 100mm insulation
04 existing composite slab
05 mf ceiling w/resilient hangers
06 2 x 12.5 fireline board
07 svp offset zone
08 floor finish as required
09 120mm screed
10 new rc slab - 225mm
11 1 x 18mm fermacell
12 acoustic cradle and batten floor packed at each node to achieve level floor finish.
13 50mm insulation
14 18mm ply
15 strong floor construction - 250mm zone

√
- acoustic separation provided for commercial use
- flat slab construction slimmer + no soffit required - marginal improvement in floor to ceiling height
- drainage offset zone provided at first floor
- increased flexibility for tenant in installation of services
- longevity of acoustic performance + resilience during tenant fit-out

?
- possibility to increase head height further if drainage offset zone could be reduced

X
- existing slab removed / increased demolition

03.11 int 11 • retention of concrete wall

Change: Retention of existing unoriginal insitu concrete wall in commercial unit G5 (Minshull House)

At planning stage the intent was demolish the existing insitu concrete wall that had been part of a historic renovation of the buildings. The client reconsidered its demolition with a view to avoid unnecessary demolition works and retain as a feature.

As a result, the large aperture proposed to the gable elevation of the unit needed to adapt to suit, with the aperture sizes reduced to 2 smaller slot windows and less of the existing fabric removed.

Refer also to item 07 on external changes schedule.

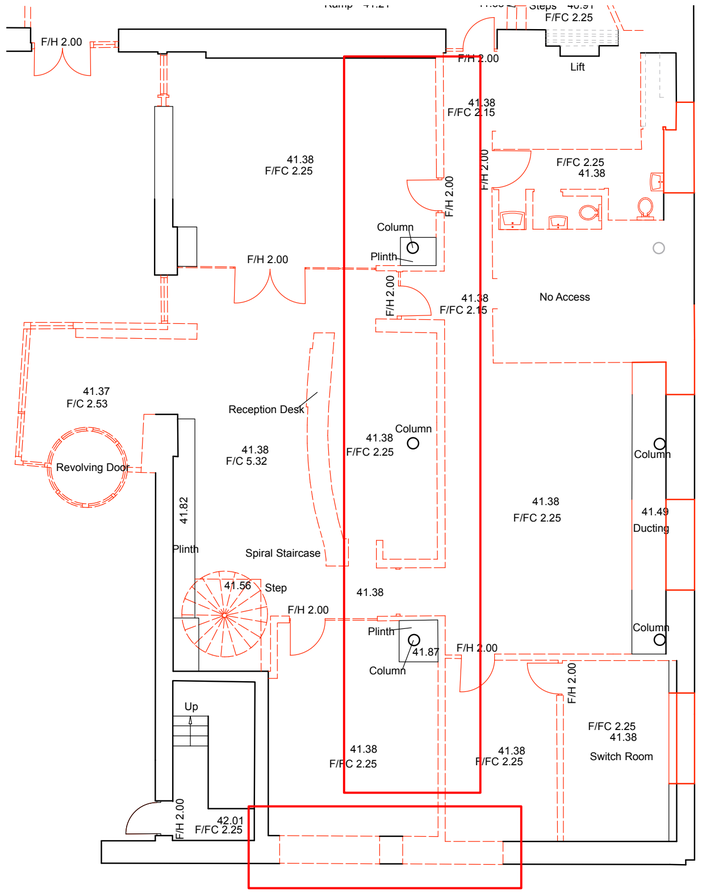


fig 86: minshull house proposed G5 unit demolition plan • planning stage

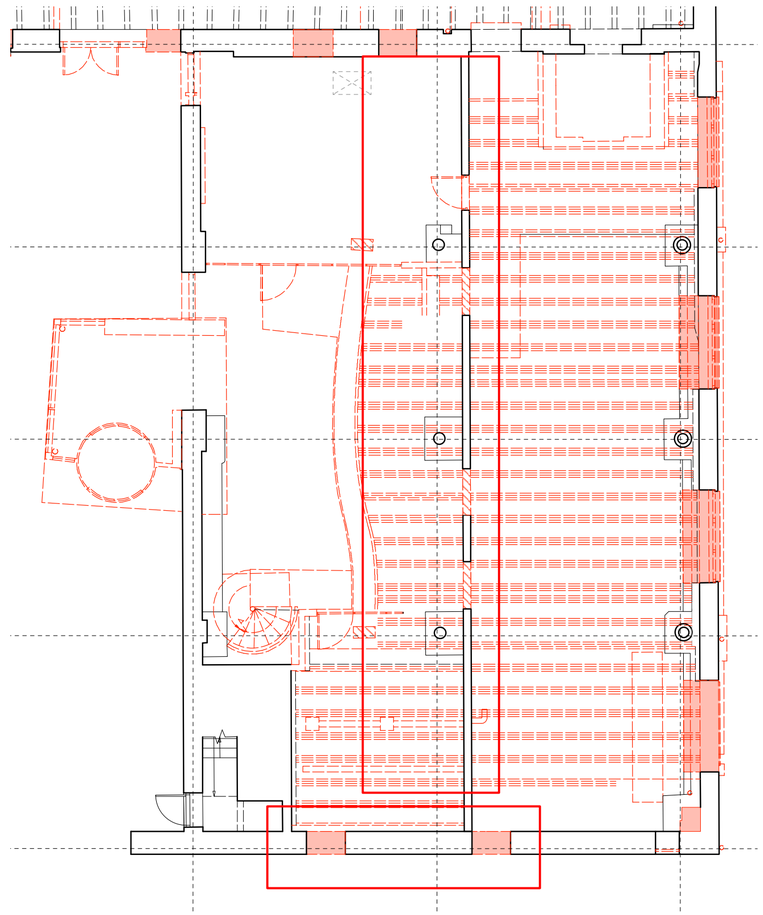


fig 87: minshull house proposed G5 unit demolition plan • amended scheme

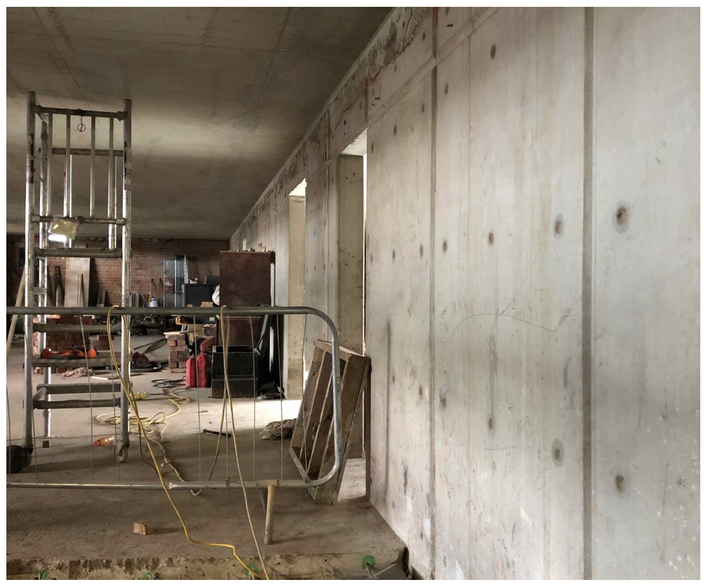


fig 88: minshull house proposed G5 unit • existing concrete wall